Attachment A

consor

CITY OF AUBURN WASHINGTON

CITY OF AUBURN, WA

Water System Plan

July 2025

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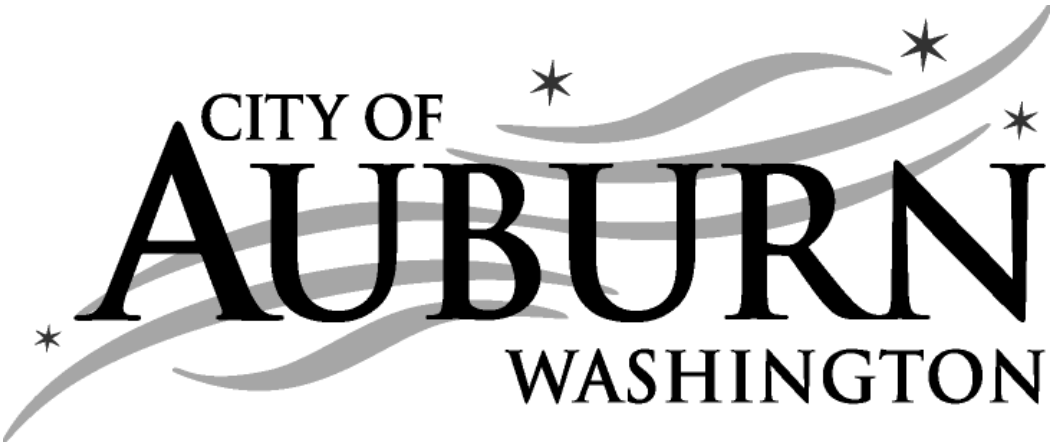

2024
Water System Plan

City of Auburn, Washington

July 2025

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Table of Contents

Executive Summary

Introduction ES-1

ES.1 Description of Water System ES-1

ES.2 Basic Planning Data ES-5

Water Service Connections and Usage *ES-5*

Water Supply and Production *ES-5*

Future Population and Demand Projections *ES-5*

ES.3 System Analysis and Asset Management ES-7

Asset Management *ES-7*

Water Quality *ES-7*

Design Standards *ES-7*

Capacity Analysis *ES-8*

ES.4 Water Use Efficiency Program ES-9

Source and Service Metering *ES-9*

Distribution System Leakage *ES-10*

Water Use Efficiency Program *ES-10*

Climate Change Resiliency *ES-11*

ES.5 Source Water Protection ES-11

ES.6 Operations and Maintenance Program ES-12

ES.7 Distribution Facilities Design and Construction Standards ES-14

ES.8 Capital Improvement Program ES-14

ES.9 Financial Program ES-15

Chapter 1 Description of Water System

1.1 Objective 1-1

1.2 Plan Content 1-1

1.3 Ownership and Management 1-1

1.4 System History and Background 1-4

1.4.1 Geography *1-4*

1.4.2 Existing System Overview *1-5*

1.4.3 History *1-5*
1.5 Related Plans and Studies 1-13
1.6 Service Area, Maps, and Land Use 1-16
1.6.1 Wholesale Interties *1-16*
1.6.2 Emergency Interties *1-21*
1.7 System Policies 1-22
1.8 Duty of Service 1-23
1.9 Local Government Consistency 1-24
1.10 Watershed Plan Consistency 1-24

Chapter 2 Basic Planning Data

2.1 Water Service Area Population 2-1
2.2 Water Service Connection and Usage 2-2
2.2.1 Historical Accounts *2-2*
2.2.2 Historical Consumption *2-4*
2.2.3 Water Use Per Connection and Equivalent Residential Units *2-6*
2.2.4 Largest Water Users *2-7*
2.3 Water Supply and Production 2-10
2.3.1 Historical Water Supply *2-10*
2.3.2 Average Day Demands and Maximum Day Demands *2-11*
2.3.3 Peak Hour Demand *2-12*
2.3.4 Seasonal Variations *2-13*
2.4 Distribution System Leakage 2-13
2.5 Water Supply Characteristics 2-14
2.6 Water Supply Reliability Evaluation 2-15
2.6.1 Use Impacts on Instream Flows *2-17*
2.6.2 Whole Interties *2-17*
2.6.3 Emergency Interties *2-18*
2.6.4 Potential Interties *2-18*
2.7 Future Population Projections and Land Use 2-18
2.7.1 Demographic Forecast *2-18*
2.7.2 Future Land Use and Zoning *2-19*
2.7.3 Projected Demographic Growth *2-23*
2.8 Future Water Demand 2-29

2.8.1 Projected Number of Connections *2-29*
2.8.2 Projected Water Demand *2-31*
2.8.3 Large User Demand Forecast *2-32*
2.8.4 Projected Retail ERUs *2-32*
2.8.5 Projected Retail Average Day and Maximum Day Demands *2-34*
2.8.6 Wholesale Demands *2-37*
2.8.7 Total Demands *2-38*

Chapter 3 System Analysis and Asset Management

3.1 Asset Management – Asset Inventory and Analysis 3-1
3.1.1 Distribution Facilities *3-6*
3.1.2 Water Source Facilities *3-14*
3.1.3 Water Treatment Facilities *3-17*
3.1.4 Storage Facilities *3-20*
3.1.5 Pump Station Facilities *3-22*
3.1.6 Facility Back-Up Power *3-23*
3.1.7 Facility Monitoring and Control *3-24*
3.1.8 2022 Sanitary Survey Findings *3-24*
3.2 Water Quality 3-25
3.2.1 Water Quality Treatment and Objectives *3-26*
3.2.2 Analysis of Source Water Quality *3-26*
3.2.3 Analysis of Distribution System Water Quality *3-28*
3.2.4 Recent Regulatory Changes *3-30*
3.3 Design Standards 3-33
3.4 Capacity Analysis 3-35
3.4.1 Water Rights *3-35*
3.4.2 Physical Capacity Analysis *3-37*
3.4.3 New Source of Supply Analysis *3-59*
3.5 Summary of System Deficiencies 3-59

Chapter 4 Water Use Efficiency Program

4.1 Source and Service Metering 4-2
4.1.1 Source Meters *4-2*
4.1.2 Service Meters *4-3*

4.2 Distribution System Leakage 4-4
4.2.1 Water Audits *4-5*
4.3 Water Use Efficiency Program 4-5
4.3.1 Program Requirements *4-6*
4.3.2 Mandatory Measures *4-7*
4.3.3 Program Goals *4-7*
4.3.4 2024-2034 Demand-Side Program Measures *4-8*
4.3.5 Reclaimed Water *4-10*
4.3.6 WUE Budget *4-10*
4.4 Water Use Efficiency Savings 4-11
4.5 Climate Change Resiliency 4-11
4.5.1 Expected Climate Changes for the City of Auburn *4-12*
4.5.2 Extreme Weather Events and Significant Challenges *4-12*
4.5.3 Assessment of Actions to Protect System *4-13*

Chapter 5 Source Water Protection

5.1 Sanitary Control Area 5-1
5.2 Wellhead Protection Program 5-1
5.2.1 Susceptibility Assessment *5-2*
5.2.2 Wellhead Protection Area Delineation *5-2*
5.2.3 Contaminant Source Inventory and Notification of Findings *5-4*
5.2.4 Contingency Plan *5-4*

Chapter 6 Operations and Maintenance Program

6.1 Water System Management and Personnel 6-1
6.1.1 Mission Statement *6-1*
6.1.2 Department Overview *6-1*
6.1.3 Internal and External Factors *6-1*
6.1.4 Water Utility Division Organization *6-2*
6.1.5 Communication System *6-4*
6.1.6 Operator Certification Program *6-5*
6.1.7 Education and Training Program *6-6*
6.2 Operations and Preventive Maintenance 6-6
6.2.1 Inspections, Preventive Maintenance, Repairs, and Replacement *6-7*

6.2.2 Reservoir Maintenance *6-9*
6.2.3 Pump Station Maintenance *6-9*
6.2.4 Treatment Facility Maintenance *6-10*
6.2.5 Pressure Reducing Valve Stations *6-10*
6.2.6 Utility Locating Service *6-10*
6.2.7 Fire Hydrant Inspection *6-10*
6.2.8 Dead-end Flushing *6-10*
6.2.9 Valve Exercising *6-11*
6.2.10 Unidirectional Flushing *6-11*
6.2.11 System Loss Program *6-12*
6.2.12 Distribution System Corrosion Inspection *6-13*
6.3 Comprehensive Water Quality Monitoring 6-14
6.4 Emergency Preparedness and Response 6-15
6.4.1 Vulnerability Assessment *6-16*
6.4.2 Wellhead Protection Program *6-16*
6.4.3 Water Shortage Contingency Plan *6-16*
6.5 Safety Procedures 6-16
6.6 Cross Connection Control Program 6-18
6.7 Sanitary Survey Findings 6-18
6.8 Customer Complaint Response Program 6-19
6.8.1 Customer Request Response Program *6-20*
6.9 Recordkeeping and Reporting 6-20
6.9.1 Cross Connection Control Program *6-21*
6.9.2 Water Meter Consumption *6-21*
6.9.3 Supervisory Control and Data Acquisition (SCADA) *6-21*
6.9.4 Water Meter Reading *6-21*
6.10 Summary of O&M Deficiencies and Recommended Improvements 6-22
6.10.1 Water Facilities Evaluation Study *6-22*
6.10.2 Recommended Improvements *6-22*

Chapter 7 Distribution Facilities Design and Construction Standards

7.1 Project Review Procedures 7-1
7.2 Policies and Requirements for Outside Parties 7-2

7.3 Design and Construction Standards 7-2
7.4 Construction Certification 7-4

Chapter 8 Capital Improvements Program

8.1 Prioritization 8-1
8.1.1 Project Identification 8-1
8.1.2 Prioritization Factors 8-2
8.1.3 Estimated Costs 8-2
8.2 Capital Improvement Program Summary and Schedule 8-4
8.2.1 Completed Projects 8-4
8.2.2 Active Projects 8-5
8.2.3 Capital Improvement Projects 8-8
8.3 CIP Summary and Schedule 8-18

Chapter 9 Financial Program

9.1 Introduction 9-1
9.2 Past Financial Performance 9-1
9.2.1 Comparative Financial Statements 9-1
9.3 Financial Plan 9-4
9.3.1 Capital Funding Plan 9-5
9.4 Available Funding Assistance and Financing Resources 9-6
9.4.1 City Resources 9-6
9.4.2 Outside Resources 9-8
9.4.3 Capital Financing Strategy 9-9
9.5 Financial Forecast 9-9
9.5.1 Current Financial Structure 9-10
9.6 Current and Projected Rates 9-14
9.6.1 Current Rates 9-14
9.6.2 Projected Rates 9-15
9.6.3 Conservation Based Rates 9-15
9.7 Affordability 9-15
9.8 Conclusion 9-16

List of Figures

ES-1 RWSA Vicinity Map ES-2

ES-2 Existing Facilities ES-3
ES-3 Hydraulic Profile ES-4
ES-4 Wellhead Protection Area Map ES-13
1-1 RWSA Vicinity Map 1-2
1-2 Water Utility – Organizational Chart 1-3
1-3 Existing Facilities 1-6
1-4 Adjacent Water Systems 1-18
1-5 Existing Land Use 1-19
1-6 Urban Growth Area 1-20
2-1 Comparison of Number of Connections to Annual Water Consumption per Customer Classification in 2022 2-5
2-2 Historical Annual Consumption of the Top 20 Largest Water Users in Million Gallons (MG) 2-9
2-3 Historical Water Production with Peaking Factor 2-12
2-4 Temperature Effects on Water Usage in 2022 2-13
2-5 Comprehensive Future Land Use and Zoning Map 2-22
2-6 Single Family Population Projections by Service Area 2-25
2-7 Multi-Family Population Projections by Service Area 2-26
2-8 Employment Projections by Service Area 2-27
2-9 Map of Projected Areas with Greatest Population Growth 2-28
2-10 Projected Retail Plus Firm Wholesale ADD and MDD 2-40
3-1 Map of Water System Assets and Pressure Zones 3-2
3-2 Hydraulic Profile 3-3
3-3 Hydraulic Profile - Detail A 3-4
3-4 Hydraulic Profile - Detail B 3-5
3-5 Water Main Leak and Break Repair Locations from 2014-2024 3-12
3-6 Low Pressure, Odor, and Discolored Water Complaints from 2014-2024 3-13
3-7 Illustration of Reservoir Storage Components 3-44
3-8 2024 PHD Scenario – Pressure and Velocity 3-50
3-9 2034 PHD Scenario – Pressure and Velocity 3-51
3-10 2044 PHD Scenario – Pressure and Velocity 3-52
3-11 MDD+FF Deficiency Locations for 2024, 2034 and 2044 Scenarios 3-54
3-12 Capital Improvement Projects Addressing Fire Flow Deficiencies 3-55
5-1 Wellhead Protection Area Map 5-3

6-1 Auburn Water Utility Organizational Chart 6-3

List of Tables

ES-1 ADD, MDD, and ERUs Summarized by Service Area with Wholesale Included ES-6
ES-2 Summary of Pump Station Capacity Results ES-8
ES-3 Summary Storage Capacity Analysis ES-9
ES-4 Source Susceptibility Assessment Ratings ES-11
ES-5 Water System Capital Improvement Program Budget 2024-2044 ..... ES-14
1-1 Water System Ownership Management 1-3
1-2 Water Facilities History 1-7
1-3 Emergency Interties 1-21
2-1 Historical Population 2-2
2-2 Historical Number of Connections per Customer Classification 2-3
2-3 Historical Consumption in Million Gallons (MG) by Customer Classification 2-4
2-4 Historical Annual Demand per ERU (gpd per ERU) 2-6
2-5 Historical Demand as Equivalent ERUs per Customer Classification 2-7
2-6 Historical Annual Consumption of the Top 20 Largest Water Users in Million Gallons (MG) 2-8
2-7 Historical Annual Water Supply by Source in Million Gallons (MG) 2-10
2-8 2022 Monthly Water Production by Source (MG) 2-10
2-9 Historical Annual ADD, MDD, Peak Day, and Peaking Factor 2-11
2-10 Historical Peak Hour Demand 2-12
2-11 Historical Distribution System Leakage 2-14
2-12 Summary of Source Water Pumping or Production Capacity Compared to 2022 Maximum Daily Production 2-16
2-13 Updated Zoning Districts and Fire Flow Requirements 2-20
2-14 Growth Rates by Customer Class and Service Area 2-23
2-15 Population and Employment Projections Calculated by Service Area 2-24
2-16 Connection Projections by Customer Classification and Service Area 2-29
2-17 Proposed Planning Values for Demand Projections 2-32
2-18 Large User Demand Projections 2-32
2-19 ERU Projections by Customer Class and Service Area 2-33
2-20 ADD Projections 2-34
2-21 MDD Projections 2-35
2-22 Wholesale Demand Projections 2-38

2-23 ADD, MDD, and ERUs Summarized by Service Area with Wholesale Included 2-39
3-1 Transmission and Distribution System Piping Inventory by Pipe Diameter 3-6
3-2 Transmission and Distribution System Piping Inventory by Material and Installation Decade .. 3-7
3-3 Pressure Reducing Valve (PRV) Inventory 3-8
3-4 Summary Customer Complaints 3-14
3-5 Source of Supply Well Pump Inventory 3-14
3-6 Water Treatment Facility Inventory 3-18
3-7 Inventory of Storage Reservoirs 3-21
3-8 Pump Station and Booster Pump Station Inventory 3-23
3-9 Back Up Power Inventory 3-23
3-10 Summary of 2022 Sanitary Survey Findings 3-24
3-11 Summary of Operator Certifications 3-26
3-12 EPA Primary Drinking Water Standards Results from 2015 through 2022 3-27
3-13 Total Chlorine Residuals Results from 2015 through 2022 3-29
3-14 Summary of Disinfection By-Product Rule Monitoring Results from 2015 through 2022 3-29
3-15 Summary of Lead and Copper Sampling Results from 2015 through 2022 3-30
3-16 PFAS State Action Levels and Monitoring Data 3-32
3-17 System Capacity Analysis Criteria 3-33
3-18 Summary of Existing Water Rights 3-35
3-19 Supply Analysis with Largest Source Out of Service 3-36
3-20 Buildings in Auburn with High Fire Flow Requirements 3-37
3-21 Pumps Station Capacity for Valley Service Area Open Pressure Zones 3-38
3-22 Pump Station Capacity for Lea Hill Service Area Open Pressure Zones 3-39
3-23 Pump Station Capacity for Lakeland Service Area Open Pressure Zones 3-39
3-24 Pump Station Capacity for Academy Service Area Open Pressure Zones 3-40
3-25 BPS Capacity for Lakeland Service Area Closed Pressure Zones 3-41
3-26 BPS Capacity for Academy Service Area Closed Pressure Zone 3-41
3-27 BPS Capacity for Lea Hill Service Area Closed Pressure Zone 3-42
3-28 BPS Capacity for Game Farm Park Closed Pressure Zone 3-43
3-29 System-Wide Storage Analysis for the 2024 Scenario 3-45
3-30 System-Wide Storage Analysis for the 2034 Scenario 3-45
3-31 System-Wide Storage Analysis for the 2044 Scenario 3-46
3-32 Final C-Factors for Piping Materials 3-48

3-33 Prioritized Pipeline Improvements to Address Fire Flow Deficiencies 3-56
3-34 System Capacity Analysis in ERU Basis 3-58
3-35 Summary of System Deficiencies 3-59
4-1 WUE Rule Requirements 4-1
4-2 Source Meter Details 4-3
4-3 Annual Average Day Demand (gpd) per Capita 4-7
4-4 Annual WUE Budget 4-10
4-5 Demand Forecast With and Without Projected WUE Savings 4-11
4-6 Predicted Increase in Demand from Baseline Due to Climate Change 4-12
5-1 Source Susceptibility Assessment Ratings Issued by DOH 5-2
5-2 State and Local Agencies Notified of CSI Findings 5-4
6-1 Water Operations and Distribution Staff and Certifications 6-5
6-2 Water Operations - Facility Inspection Schedule 6-8
6-3 Safety Policies and Procedures 6-17
6-4 Recommended Inspections 6-22
6-5 O&M Improvement Projects 6-23
7-1 Water Main Design and Construction Standards 7-3
8-1 Water Pipeline Construction Costs per Linear Foot 8-4
8-2 Reservoir Tank Construction Costs per Gallon 8-4
8-3 Prioritized Water Supply Improvement Projects 8-12
8-4 Storage Improvements Projects 8-14
8-5 Pump Station Improvement Projects 8-15
8-6 Water Repair & Replacements Cost Estimate 8-16
8-7 Distribution System Improvements Projects 8-17
8-8 General Water System Projects 8-18
8-9 Total CIP Cost by Project Category from 2024 through 2044 8-18
8-10 Capital Improvements Program Costs and Phasing 8-19
9-1 Summary of Historical Fund Resources and Uses Arising From Cash Transactions 9-2
9-2 Summary of Historical Comparative Statements of Net Position 9-3
9-3 10-Year and 20-Year CIPs 9-5
9-4 10-Year CIP (Escalated $) 9-6
9-5 10-Year and 20-Year Capital Financing Strategy 9-9
9-6 10-Year Financial Forecast 9-13

9-7 Ending Cash Balance Summary 9-14
9-8 Existing Schedule of Rates 9-14
9-9 Proposed Schedule of Rates 9-15
9-10 Community Affordability Test 9-16

Appendices

Appendix A Water System Policies and Criteria
Appendix B SEPA Checklist
Appendix C Local Government Consistency Determination Forms
Appendix D Public Meeting Documentation
Appendix E Ordinances and Approvals
Appendix F DOH (b)(3) Exemption Letter
Appendix G Water Service Area, Interlocal & Wholesale Water Agreements
Appendix H Water Facilities Inventory Form
Appendix I Water Rights Self-Assessment Form
Appendix J Water Rights Certifications
Appendix K Hydraulic Model Calibration Documentation
Appendix L Reclaimed Water Checklist
Appendix M Water Use Efficiency
Appendix N Consumer Confidence Reports
Appendix O Water Quality Monitoring Plan
Appendix P Design and Construction Standards
Appendix Q Cross Connection Control Program
Appendix R Water Shortage Contingency Plan
Appendix S Conceptual Mitigation Plan for Water Right Application G1-28404
Appendix T Wellhead Protection Plan
Appendix U Natural Hazard Vulnerability Summary
Appendix V Worksheet 4-1 ERU Capacity Summary
Appendix W CIP Cost Information

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Acronyms & Abbreviations

A	
AACE	American Association of Cost Estimators
AC	Asbestos-Cement
ACC	Auburn City Code
ac-ft/year	Acre-Foot Per Year
ADD	Average Day Demand
ADU	Accessory Dwelling Unit
AFY	Acre Feet Per Year
Algona	City of Algona
AMC	Auburn Municipal Code
AMI	Advanced Metering Infrastructure
APWA	American Public Works Association
ASR	Aquifer Storage and Recovery
AWC	Association of Washington Cities
AWWA	American Water Works Association
B	
BCA	Bilaterial Compliance Agreement
Bonney Lake	City of Bonney Lake
BPS	Booster Pump Station
C	
Cascade	Cascade Water Alliance
ccf	Centum Cubic Feet
CCI	Construction Cost Index
CCPP	Calcium Carbonate Precipitation Potential
CCR	Consumer Confidence Report
CCT	Corrosion Control Treatment
CCTF	Corrosion Control Treatment Facility
CDBG	Community Development Block Grant
CDPW	Community Development & Public Works
CEMP	Comprehensive Emergency Management Plan
CERB	Community Economic Revitalization Board
CEU	Continuing Education Units
cfs	Cubic Feet Per Second
cfm	Cubic Feet Per Minute
CFP	Capital Facilities Plan
City	City of Auburn
CIP	Capital Improvement Plan
CMP	Coliform Monitoring Plan
CPR	Conservation Planning Requirements
CSCSL	Confirmed and Suspected Contaminate Sites

CWD	Covington Water District
CWSP	Coordinated Water System Plan
D	
D	Distribution Improvements
DBPR	Disinfectants and Disinfection Byproducts Rule
DBP	Disinfection Byproducts
DHS	Department of Homeland Security
DI	Ductile Iron
DNS	Determination of Non-Significance
DOE	Department of Ecology
DOH	Washington State Department of Health
DSL	Distribution System Leakage
DWSRF	Drinking Water State Revolving Fund
E	
EDCS	Engineering Design and Construction Standards
ENR	Engineering News Record
EOC	Emergency Operation Center
EPA	United States Environmental Protection Agency
EPS	Extended Period Simulation
ERU	Equivalent Residential Unit
EWE	Energy and Water Efficiency
F	
FEMA	Federal Emergency Management Agency
FF	Fire Flow
ft/s or fps	Feet Per Second
G	
G	General Improvements
gal/ERU	Gallons Per Equivalent Residential Unit
GIS	Geographic Information System
gpd	Gallons Per Day
gpm	Gallons Per Minute
GMA	Growth Management Act
G.O.	General Obligation
GWMP	Ground Water Management Plan
GWR	Groundwater Rule
GWUI	Groundwater Under the Influence of Surface Water
H	
HAA5	Haloacetic Acids
HGL	Hydraulic Grade Line
HPC	Heterotrophic Plate Count
HP	Horsepower
HWD	Highline Water District

I	
IA2	Interlocal Agreement 2
IA3	Interlocal Agreement 3
ICS	Incident Command System
IDSE	Initial Distribution System Evaluation
IGEA	Investment Grade Efficiency Audit
L	
LCRMR	Lead and Copper Rule Minor Revisions
LFC	Local Facilities Charge
LIDs	Local Improvement Projects
LMWD	Lake Meridian Water District
LRAAs	Locational Running Annual Averages
LR	Larson Ratio
LSI	Langelier
LWSD	Lakehaven Water and Sewer District
M	
MAG	Electromagnetic
Manual	Public Works Emergency Response Manual
MCL	Maximum Contaminant Level
MCLGs	Maximum Contaminant Level Goals
M/DBP	Microbial/Disinfection By-Product
MDD	Maximum Day Demand
MDRLs	Maximum Disinfectant Residual Level
MFR	Multifamily Residential
MG	Million Gallon
mgd	Million Gallons Per Day
MG/year	Million Gallons Per Year
MIT	Muckleshoot Indian Tribe
M&O	Maintenance and Operations
MRSC	Municipal Research and Services Center of Washington
MSDS	Material Safety Data Sheets
N	
NIMS	National Incident Management System
NOM	Natural Organic Matter
O	
O&M	Operations & Maintenance
OSHA	Occupational Safety and Health Administration
P	
PAA	Potential Annexation Areas
PGG	Pacific Groundwater Group
PHD	Peak Hour Demand
PHG	Public Health Goal

PIC	Forest Villa Manor
PI	Parcel Insight
Plan	Comprehensive Water Plan
PLC	Programmable Logic Controller
PNR	Public Notification Rule
PR	Pressure Reducing
Project ID	Identification Number
PRV	Pressure Reducing Valve
psi	Pounds Per Square Inch
PSRC	Puget Sound Regional Council
PS	Pump Stations
PUD	Planned Unit Development
PW	Public Works
PWB	Public Works Board
Q	
Qaw	White River Alluvium
Qd	Vashon Recessional Deltaic Deposits
Qom	Osceola Mudflow
Qua	Undifferentiated Alluvium
Qu	Undifferentiated Glacial and Interglacial Deposits
R	
R	Storage Improvement
R5	Residential 5 Du/Acre
RAA	Running Annual Average
RWSA	Retail Water Service Area
RWSS	Regional Water Supply System
S	
S	Supply Improvement
SCA	Sanitary Control Area
SCADA	Supervisory Control and Data Acquisition
SDC	Standard Development Charge
SDS	Safety Data Sheets
SDWA	Safe Drinking Water Act
SEATAC	Seattle-Tacoma International Airport
SEPA	State Environmental Policy Act
SFR	Single-Family Residential/Duplex
SMP	Standard Monitoring Program
SOC	Synthetic Organic Chemical
SOS	Save Our Streets
SSS	System-Specific Study
SWTR	Surface Water Treatment Rule

T	
Tacoma	City of Tacoma
TAZ	Transportation Analysis Zone
TCR	Total Coliform Rule
TPU	Tacoma Public Utility
TTHM	Total Trihalomethanes
U	
UCM	Unregulated Contaminant Monitoring
UDF	Unidirectional Flushing
UGA	Urban Growth Area
ULID	Utility Local Improvement District
USGS	United States Geological Survey
USEPA	United States Environmental Protectional Agency
UTC	Utilities And Transportation Commission
V	
VA	Vulnerability Assessment
VFD	Variable Frequency Drive
VOC	Volatile Organic Compound
W	
WAC	Washington Administrative Code
WCIA	Washington Cities Insurance Authority
WD#111	King County Water District #111
WETRC	Washington Environmental Training Resource Center
WFI	Water Facilities Inventory
WHP	Wellhead Protection
WHPA	Wellhead Protection Areas
WHPP	Wellhead Protection Plan
WISHA	Washington Industrial Safety and Health Act
WSP	Water System Plan
WSSIP	Water System Security Improvement Plan
WUE	Water Use Efficiency

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Executive Summary

Introduction

This Water System Plan (WSP) has been developed in accordance with Chapter 426-290 of the Washington Administrative Code (WAC), as presented in the Washington State Department of Health (DOH) regulations for Group A Public Water Systems. This WSP supersedes the City of Auburn's (City) 2015 WSP, approved by DOH on May 11, 2016, and the 2021 Limited WSP Update approved by DOH on December 16, 2021. The City's water system identification number is 03350V.

Th purpose of this WSP is to develop a long-term planning strategy for the City's Retail Water Service Area (RWSA). Updated every ten years per DOH, the WSP evaluates the existing system and its ability to meet the anticipated requirements for water source, treatment, transmission, storage, and distribution over a 20-year planning period. Historical data through the year 2022 were used for the analyses throughout the WSP. The ten-year planning period is 2024-2034. The long-term planning period is 2034-2044. Water system improvement projects have been developed to meet the changing demands of regulatory impacts, population growth, and necessary infrastructure repair and replacement. The WSP also identifies planning-level costs of the improvement projects and provides a financial plan for funding the projects.

ES.1 Description of Water System

The City limits are within both King County and Pierce County in the Puget Sound Region of Washington. Figure ES-1 shows the City's RWSA which encompasses approximately 30 square miles. Several water purveyors adjoin the City's RWSA, including the cities of Algona, Bonney Lake, Federal Way, Kent, Pacific, and Sumner. Also included are the Covington Water District (CWD), Lakehaven Water and Sewer District (LWSD), Lake Meridian Water District (LMWD) (formerly known as King County Water District #111), Highline Water District (HWD), and the Muckleshoot Indian Tribe (MIT). The City also provides internal staffing for the management, operations, and maintenance of the Braunwood Estates satellite system.

The City's water system consists of groundwater wells, springs, and interties with adjacent purveyors as water sources, chlorination and corrosion control treatment facilities, pump stations, pressure reducing valve stations, steel and concrete enclosed reservoirs for storage, and transmission and distribution pipelines to provide potable water to customers. The RWSA is further divided into four service areas (Valley, Lea Hill, Lakeland, and Academy) that include a total of 28 pressure zones. The City's four service areas and the location of key components of the water system are shown in Figure ES-2.

Interties provide a tool that water utilities use to move water between systems to meet supply needs, to increase reliability and respond to emergencies. The City maintains wholesale supply interties with three water systems: City of Tacoma (Tacoma), Algona, and LMWD. The City also has a supply contract with the MIT and the Indian Health Service, dating from 1972, for services along a pipeline at SE 368th PL extending from the City limits into the reservation. The City has emergency interties with seven water systems, Algona, Bonney Lake, Kent, Pacific, LWSD, LMWD and Tacoma.

A hydraulic profile of the City's water system is presented in Figure ES-3, showing all service areas, pressure zones, supplies, interties, reservoirs, and pump stations.

Figure ES-1 | RWSA Vicinity Map

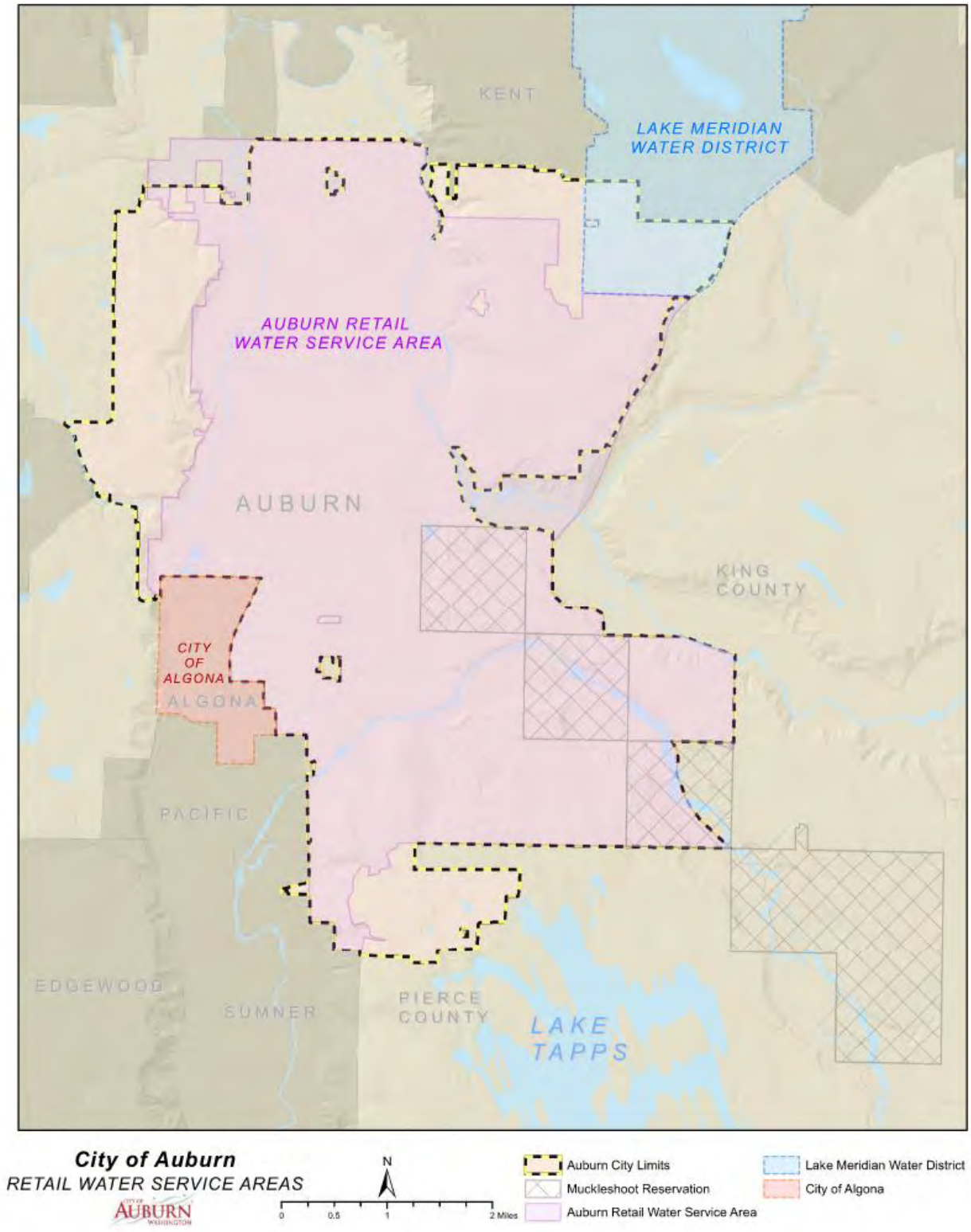


Figure ES-2 | Existing Facilities

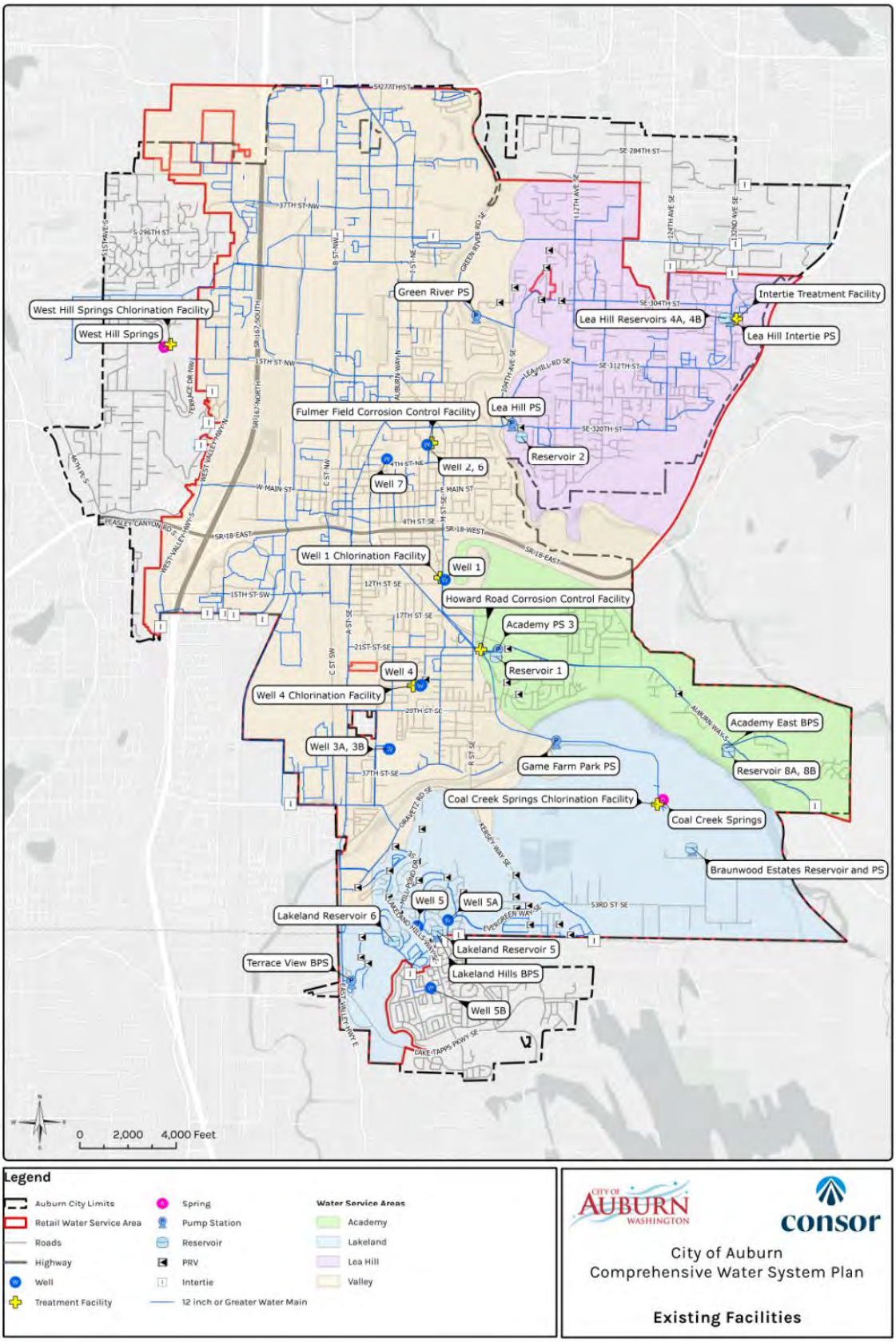
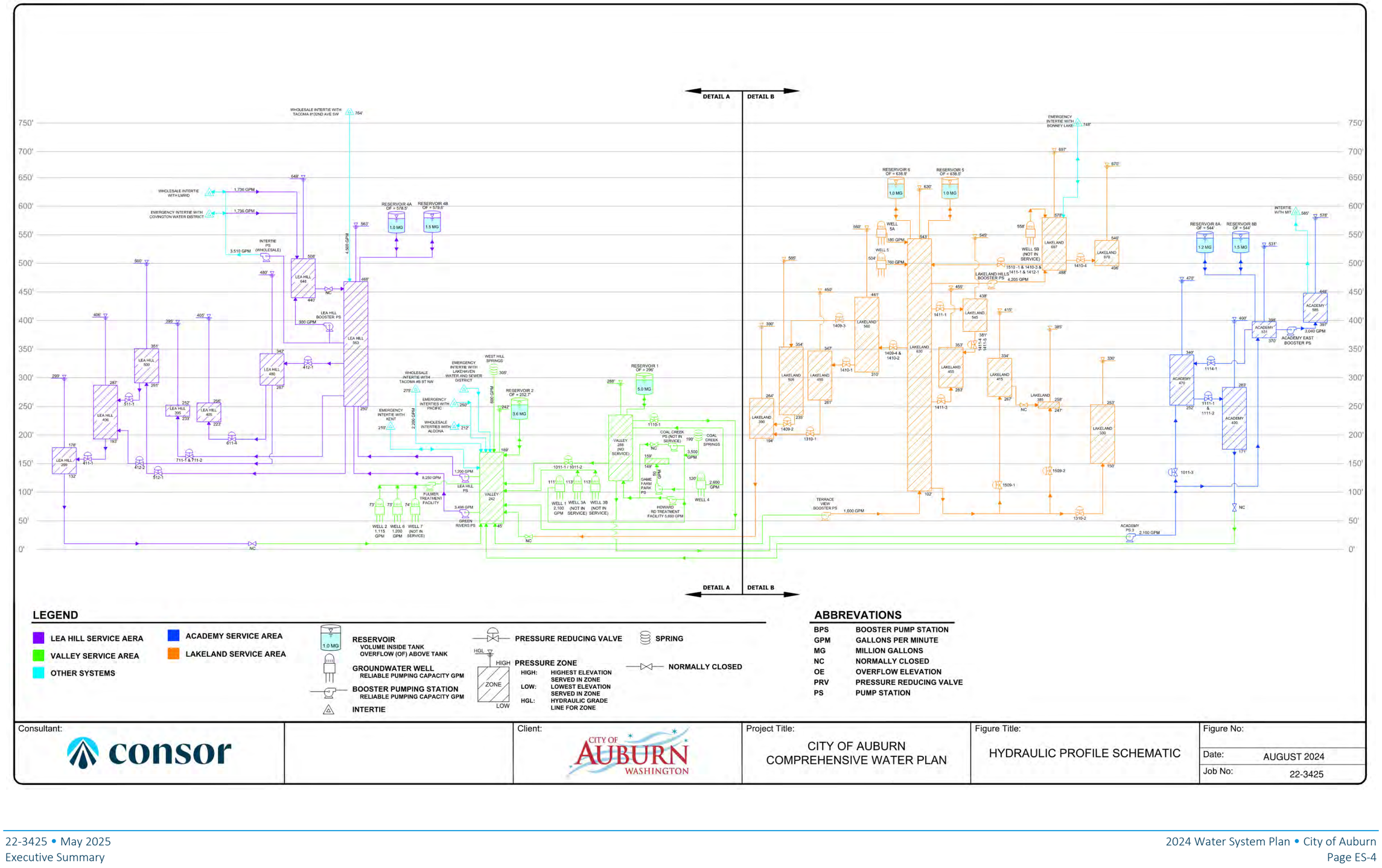


Figure ES-3 | Hydraulic Profile



ES.2 Basic Planning Data

Water Service Connections and Usage

The City's current and future water demand requirements were projected for each customer class (single-family residential/duplex, multifamily residential, commercial, manufacturing/industrial, schools, city accounts, irrigation, and wholesale). The water consumption, or demand, of each customer classification can be expressed in terms of equivalent residential units (ERUs) for forecasting and planning purposes. One ERU is defined as the average quantity of water used by one average, full-time, single-family residence per day. The quantity of water used by other customer classes, or by the entire system, can be expressed in terms of equivalent ERUs. The historical average and maximum water demands are important parameters when performing system and supply analyses. The Average Day Demand (ADD) is typically used in operational evaluations. The Maximum Day Demand (MDD) represents the single largest day water demand during the year and is a key parameter for infrastructure sizing.

The City provided water to approximately 63,450 customers through 15,046 connections as of the end of 2022. Between 2015 and 2022 the ADD ranged from 6.32 million gallons per day (mgd) on the low end in 2020 to 7.67 mgd on the high end in 2016. The MDD has ranged from 11.25 mgd in 2019 to 12.43 mgd in 2020. The total number of connections increased by approximately three percent between 2015 and 2022. The City has two active wholesale water agreements, one with the City of Algona and the other with LMWD that is interruptible.

Water Supply and Production

The City has a diverse water supply consisting of two springs, ten wells and an intertie with the City of Tacoma. Wells 1, 2, 3A, 3B, 4, 6, and 7 are in the lower alluvial aquifer in the Auburn Valley, referred to as the Valley Wellfield. Wells 3A, 3B and 7 are currently offline due to high manganese concentrations. Wells 5, 5A, and 5B are in the Upland Wellfield within the Lakeland Service Area. Once Well 5B came online, the City discovered that the aquifer was not recovering and Well 5B has been offline since 2006. The safe yield of Wells 5 and 5A have been decreased from their design capacity due to a drop in the aquifer's capacity. The City has sufficient water rights to meet current demands as well as 10- and 20-year demand projections, as shown in the Water Rights Self-Assessment Form provided in Appendix I. Additional information on the City meeting future demands is mentioned in the Capacity Analysis Section under ES.3 (System Analysis and Asset Management).

West Hill Springs draws from an unnamed confined aquifer. The spring source water flows by gravity into the Valley Service Area, although flows vary depending on aquifer conditions. Coal Creek Springs is the largest active water supply for the City and draws from a confined aquifer, however its flow varies depending on aquifer conditions. The City also owns two additional wells: the Algona Well 1, which is not operational and the Braunwood Well which serves the Braunwood satellite system.

Future Population and Demand Projections

Demographic projections are based on the Puget Sound Regional Council's (PSRC) 2044 forecasts for population and employment within the City's RWSA. Total population is projected to increase by 1.5 percent annually from 2021 to 2044 and total employment is projected to increase by 1.9 percent annually over the same period. Overall, the City is planning for an additional 24,987 residents and 20,525 employed people by 2044 within the RWSA. The Valley Service Area is projected to represent 64 percent of the system's population and 93 percent of the system's employment in 2044.

The projected ADD and MDD, along with wholesale demands, are summarized in **Table ES-1.** To be conservative, an ERU planning value higher than the average was used for demand forecasting. The 75th percentile of the historical ADD per ERU between 2015 and 2022 was used to select the planning ERU value of 182 gpd. The peak demands can be expressed as an MDD/ADD peaking factor, which is the relative magnitude of MDD compared to ADD. The City's MDD/ADD peaking factor was 1.77. Distribution system leakage and authorized unbilled consumption are accounted for in the projections.

Table ES-1 | ADD, MDD, and ERUs Summarized by Service Area with Wholesale Included

	2024	2034	2044
Lea Hill			
Average Day Demand (mgd)	1.00	1.04	1.09
Maximum Day Demand (mgd)	1.77	1.84	1.92
Equivalent Residential Units	5,506	5,729	5,966
Valley			
Average Day Demand (mgd)	5.11	5.84	6.72
Maximum Day Demand (mgd)	9.02	10.31	11.88
Equivalent Residential Units	28,034	32,037	36,920
Lakeland			
Average Day Demand (mgd)	0.51	0.59	0.67
Maximum Day Demand (mgd)	0.91	1.04	1.19
Equivalent Residential Units	2,815	3,217	3,684
Academy			
Average Day Demand (mgd)	0.43	0.48	0.54
Maximum Day Demand (mgd)	0.76	0.85	0.95
Equivalent Residential Units	2,375	2,642	2,946
Total Retail Customers			
Average Day Demand (mgd)	7.05	7.95	9.02
Maximum Day Demand (mgd)	12.47	14.04	15.94
Equivalent Residential Units	38,731	43,626	49,515
Algona (Firm Wholesale)			
Total Average Day Demand (mgd)	0.365	0.386	0.409
Total Equivalent Residential Units, ADD	2,005	2,120	2,246
Total Maximum Day Demand (mgd)	0.692	0.732	0.775
Total Equivalent Residential Units, MDD	3,800	4,018	4,256
Retail with Algona			
Total Average Day Demand (mgd)	7.42	8.33	9.43
Total Maximum Day Demand (mgd)	13.16	14.77	16.71
Retail with Firm Wholesale (Algona and MIT)			
Average Day Demand (mgd)	9.92	10.83	11.93
Maximum Day Demand (mgd)	14.66	16.27	18.21
Retail with Firm & Interruptible Wholesale (Algona, MIT, and LMWD)			
Average Day Demand (mgd)	12.42	13.33	14.43
Maximum Day Demand (mgd)	17.16	18.77	20.71

ES.3 System Analysis and Asset Management

Asset Management

The City actively assesses and plans for the maintenance, repair, and replacement of its assets while preventive maintenance practices keep assets in good condition, thereby extending their useful life. For asset management, the City utilizes CarteGraph in conjunction with the geographic information system (GIS). GIS is updated using as-builts as projects are completed and CarteGraph is auto-populated from this information. CarteGraph is used to track and schedule maintenance activities and track material and labor costs and project timelines.

An inventory of the City's existing water system assets including distribution system components, treatment, reservoirs, supply facilities, pump stations, backup power, and the telemetry system is presented in Chapter 3.

Water Quality

The DOH requires that source water be monitored for primary and secondary contaminants. Primary contaminant levels are not to be exceeded for health reasons and secondary contaminants should not be exceeded for aesthetic reasons. Distribution system water quality testing requirements include monitoring of many contaminants for which the DOH determines maximum contaminant levels.

Historically, the City has relied on groundwater supplies from wells and springs, which have been determined are not under the direct influence of surface waters. For these water sources, the City is required to meet the United States Environmental Protection Agency's (EPA's) Groundwater Rule. The treatment objectives of the City are to treat source water to contaminant concentrations below the maximum contaminant levels (MCLs) established by the EPA and WAC. All constituents are currently below their respective MCLs.

The required frequency of monitoring of inorganic chemical and physical parameters varies by source, however, the City typically monitors these constituents every 12 months. Within the study period, the maximum detected concentrations of these parameters did not exceed the MCLs published by the EPA.

All active sources are disinfected with chlorine prior to entering the distribution system except for Well 5. The City has a capital project discussed in Chapter 8 that will include the addition of a chlorination facility to Well 5. Corrosion control treatment is required on the water produced by Coal Creek Springs, Well 1, Well 2, Well 6, and Well 7 to limit the corrosion of lead and copper in the system. Since the corrosion control treatment facilities were constructed, the lead and copper levels in the City's system have been well below the action level. There were no water quality violations in the distribution system between 2015 and 2022.

Design Standards

The City's most recent Engineering Design and Construction Standards are available on the City's website and are provided as Appendix P.

The City's water quality design standards follow the design standards set forth by the EPA and the Washington DOH.

Capacity Analysis

The City's water supply (production) capacity compared with demand projections and DOH and City criteria indicate that the City has the supply facilities necessary to meet demand projections under current and future projections for all required criteria.

The City's Water Rights Self-Assessment Form is provided in **Appendix I** and was used to assess the City's water rights and includes supply that is available to the City through firm wholesale interties with Tacoma. The form includes a comparison of the available water rights to the existing, 10-year and 20-year demand projections for the "High Demand Scenario" provided in **Chapter 2**. The calculations presented in the Water Rights Self-Assessment Form conclude that the City's existing water rights are anticipated to be adequate to meet the current, 10-year, and 20-year projections for Qi and Qa.

The City does not currently have the infrastructure necessary to withdraw from all water rights (i.e., Wells 3A, 3B, 5B, and 7 are not currently operational). Additionally, some sources have underlying aquifer or infrastructure restrictions that limit the capacity of the source (i.e., Well 2, Well 6, and Coal Creek Springs). Several facility improvement projects are necessary for the City to maximize water production capacity to meet future demands, and planned supply related capital projects to meet this need are discussed further in **Chapter 8**.

Table ES-2 provides an overview of pump station supply analysis results expressed as either having a capacity surplus or deficit for open and closed zones. Open zones are pressure zones that are fed by gravity from a reservoir. Pressure zones that do not include a storage facility are analyzed as a closed zone. A closed zone in the Lea Hill Service Area and the Game Farm Park closed zone have a BPS capacity deficit identified in all planning scenarios. The City has planned a capital project to resolve the deficiency at the Intertie Pump Station/Lea Hill BPS. The Game Farm Park Pump Station only provides service to a recreational area with no residential or commercial property connections supplied by this facility. The City has reviewed the deficit with the Fire Marshal and the deficiency is not critical to address, therefore no actions are currently planned to resolve the deficiency at the Game Farm Park Pump Station. As further development progresses in and around the Game Farm Park Pump Station, modifications will be considered to address the deficiency.

Table ES-2 | Summary of Pump Station Capacity Results

	2024	2034	2044
Valley Open Zone Pump Station Capacity	Surplus	Surplus	Surplus
Lea Hill Open Zone Pump Station Capacity	Surplus	Surplus	Surplus
Lakeland Open Zone Pump Station Capacity	Surplus	Surplus	Surplus
Academy Open Zone Pump Station Capacity	Surplus	Surplus	Surplus
Lakeland Closed Zone BPS Capacity	Surplus	Surplus	Surplus
Academy Closed Zone BPS Capacity	Surplus	Surplus	Surplus
Lea Hill Closed Zone BPS Capacity	**Deficit**	**Deficit**	**Deficit**
Game Farm Park Closed Zone BPS Capacity	**Deficit**	**Deficit**	**Deficit**

The City's water storage facilities were analyzed to determine if they have sufficient capacity to meet the existing and future storage requirements. A summary of the results is provided in **Table ES-3**. New sources and pump stations allow for reliable and redundant operation of the system as an interconnected whole, rather than separate Service Areas. As such, excess storage in one service area can be used to

offset a deficit in another area of the system. The results of the storage analysis indicate that there is sufficient capacity to meet the projected 2024 and 2034 storage requirements, however additional storage is projected to be necessary in 2044. The City has a planned capital project to add a new reservoir in the Valley Service Area to address this deficiency.

Table ES-3 | Summary Storage Capacity Analysis

	Total Usable Storage	2024		2034		2044	
		Total Required Storage (MG)	Surplus/ (Deficit) (MG)	Total Required Storage (MG)	Surplus/ (Deficit) (MG)	Total Required Storage (MG)	Surplus/ (Deficit) (MG)
Academy	2.66	1.53	1.13	1.59	1.07	1.66	1.00
Lakeland	1.17[1]	1.22	0.12	1.34	(0.17)	1.48	(0.31)
Lea Hill	2.12	2.26	(0.14)	2.32	(0.20)	2.37	(0.25)
Valley	7.96	7.58	0.38	8.52	(0.56)	9.67	(1.71)
RWSA	**13.91[1]**	**12.59**	**1.49**	**13.77**	**0.14**	**15.18**	**(1.27)**

Note:

1. Algona has requested an additional storage capacity of 170,000 gallons of storage, anticipated to begin in 2025. The Lakeland and RWSA Total Usable Storage figures reflect this additional storage.

The City's existing distribution system was analyzed to determine if they have sufficient capacity to meet the existing and future demands and fire flow requirements using an updated and calibrated version of the City's hydraulic model. A low-pressure analysis was performed in the hydraulic model to confirm that pressures throughout the system were above 30 psi during under peak hour demand (PHD) conditions for 2024, 2034, and 2044. The results of this analysis indicated that all areas of existing and future system have pressures meeting this condition and were compliant with requirements.

An individual fire flow analysis was performed for each hydrant node in the hydraulic model to determine the available fire flow during MDD plus fire flow (FF) conditions, while maintaining a minimum residual pressure of 20 psi. The results of this analysis indicate that multiple pipeline improvement projects are necessary to address the distribution system deficiencies.

An analysis of the water system's overall physical capacity in terms of ERU using DOH Worksheet 4-1 is provided in Appendix V. The analysis indicates that the existing system has sufficient capacity to serve the current and projected water demands through 2034 (10-year planning horizon). Under 2024 and 2034 demand conditions, storage is the limiting system component for growth and development. In 2044 (20-year planning horizon) storage is deficient, which is consistent with the other analysis findings.

ES.4 Water Use Efficiency Program

Source and Service Metering

Each of the City's sources are metered to measure the amount of water produced. The meters are calibrated annually. If a meter cannot be calibrated properly, it is replaced with a new one. Propeller source meters are being replaced with electromagnetic (MAG) meters as part of on-going operation and maintenance (O&M) improvements.

Service meters are installed on every service line to measure the quantity of water used by a customer per WAC 246-290-496 and City Code Chapter 13.06.320. In 2015, the City began installing an Automated Metering Infrastructure (AMI) system, as a part of the Water Meter and Billing System Improvements

project, which was completed in 2018. With the new AMI system, the City automatically receives meter reads via radio transmission and can integrate the data into the billing software.

Distribution System Leakage

Distribution System Leakage (DSL) represents the difference between production and documented water use (retail, wholesale, and authorized unmetered). The City's historical DSL performance complies with the DOH requirement that the three-year average DSL be under ten percent to minimize water waste. To further reduce DSL, the City has ongoing leak detection, meter calibration, and an active repair and replacement program for water system infrastructure.

Water Use Efficiency Program

The City's Water Use Efficiency (WUE) Program provides for efficient water use and supports stewardship of the City's resources. The selected program measures are interrelated and will help the City achieve its goals to both reduce average water use and peak water use per customer. Per the WUE requirements, the following measures implemented as part of the 2024-2034 WUE program:

- Install production (source) meters.
- Install consumption (service) meters.
- Perform meter calibration.
- Implement a water loss control action plan to control leakage if the three-year rolling average exceeds ten percent.
- Educate customers about water use efficiency practices.

Additionally, the following measures that must be evaluated are:

- Rates that encourage water demand efficiency (discussed in **Chapter 9**).
- Reclamation opportunities (discussed in detail in **Chapter 4**).

The DOH requires that the City estimate the amount of water saved through implementation of the system's WUE program over the last six years. Water use per-capita dropped from 112 gpd per capita in 2017 to 105 gpd per capita in 2022. The net water savings over this period equates to approximately 148 million gallons or 29.6 million gallons of savings per year.

The City has chosen to focus on implementing voluntary measures to decrease both the average and peak water usage. The City's goals are as follows:

- Decrease the planning ERU value (gpd/ERU) one percent annually from the current planning ERU value of 182 gpd/ERU,
- Decrease the planning peaking factor from the current 1.77 to 1.68, or less, and
- Maintain three-year average DSL under ten percent.

The City is committed to wastewater reuse and rainwater reclamation, as stated in its official water system policies summarized in **Appendix A**. Currently, there are no reclaimed water users in the City.

Climate Change Resiliency

To estimate the impact of climate change on the City's water demands, results from the Water Supply Forum's 2009 Regional Water Supply Outlook (WSF 2009 Outlook) were used. The impacts of climate change on sources that rely on groundwater are mostly unknown due to the variability between aquifers and site-specific effects. No changes to demand projections were made for the 20-year planning period to account for potential climate change due to the uncertain magnitude and timing of local effects. However, it is recognized that demand has the potential to increase in the future given these changes. In the event the City experiences such an increase, the City will use a model to compute firm yield from streamflow data, replacing historic inflows with projected inflows from three climate change scenarios as described by the WSF 2009 Outlook.

This WSP discusses short and long-term actions the City can take to improve the resiliency of the water system from the impacts of climate change. The short-term measures can improve resiliency within three to five years while the long-term measures may require decades to be fully implemented.

ES.5 Source Water Protection

Sanitary Control Areas (SCAs) have been established for each of the City's water sources per WAC 246-290-135(2). The standard SCA for wells has a minimum radius of 100 feet from the wellhead. The standard SCA for spring sources has a minimum radius of 200 feet from the spring head. All City water sources have SCAs that were established and approved by DOH, and are documented in the susceptibility forms provided in Appendix T.

The DOH has developed regulations that require Group A water systems using groundwater sources to develop and implement a Wellhead Protection Program (WHPP) in accordance with WAC 246-290-135. The City maintains its WHPP for 12 groundwater sources. A WHPP was prepared in 2014 for the City's 2015 WSP; this remains the current WHPP for the City.

Susceptibility Assessment Forms have been completed by the City and submitted to the DOH. The DOH's susceptibility assessment rating for each source is summarized in Table ES-4

Table ES-4 | Source Susceptibility Assessment Ratings

Source	DOH Issued Susceptibility Rating
Coal Creek Springs	High
West Hill Springs	High
Well 1	Moderate
Well 2	High
Well 3A	Low (Off-line)
Well 3B	Low (Off-line)
Well 4	Low
Well 5	Low
Well 5A	Low
Well 5B	Low (Off-line)
Well 6	High
Well 7	High (Off-line)

The Wellhead Protection Area (WHPA) defines the area around a groundwater source that has the potential to contaminate the source. This area is based on the source's capture zones, which are the zones of the source aquifer and ground surface that can contribute water to the source in six months, one year, five years, or ten years of time of travel. The established WHPAs are shown in ES.6
Operations and Maintenance Program

The Auburn Water Utility is operated as a utility enterprise under the direction of the Public Works (PW) Director. Specific water utility management responsibilities within the PW Department fall under either the Utilities-Water Section of Engineering Services or the Water Division of Maintenance and Operations Services. The Utilities-Water Section of Engineering Services is responsible for comprehensive water system planning, development of a Capital Improvement Program (CIP), as well as programming the design, construction, and inspection of projects related to the water system. The Water Division of Maintenance and Operations Services is responsible for operating and maintaining the water system, performing daily operation and inspection, water quality monitoring as required by DOH, and line management of the Water Utility.

The mission statement of the City's Water Utility is to provide for the efficient, environmentally sound, and safe management of the existing and future water system within the City's service area. Operations staff provide daily O&M of wells, corrosion control treatment facilities, pump stations, and reservoirs. They also implement the cross connection control program and provide locating services for all City utilities. Distribution staff maintains the complete distribution system including water mains, valves, hydrants, pressure reducing stations, and meters.

Primary operation of the water system is maintained via the Supervisory Control And Data Acquisition (SCADA) computerized control system. Wonderware software works in association with SCADA to provide real time graphical display of system data for staff interpretation and control.

The Water Operations staff maintains an active and ongoing program of water quality monitoring and reporting to ensure a safe, high quality water supply. Two staff members are responsible for water quality monitoring, sampling, control, and record keeping as outlined in the City's Water Quality Monitoring Plan provided in Appendix O.

The City has prepared an electronic Public Works Emergency Response Manual (Manual) as a guide for management of emergency situations, with the objective of protecting life and property and restoration of essential services, such as providing clean water, as quickly as possible. The Emergency Response Plan is updated annually at the first of the year. The master response program for the entire City is documented in the Comprehensive Emergency Management Plan (CEMP), which provides guidance to the Emergency Management Organization for mitigation, preparedness, responsibilities, recovery operations, training, and community education activities. The CEMP also describes the functions of local government and incorporation of essential non-governmental organizations into the Emergency Management Organization.

The City has a comprehensive safety program that meets Occupational Safety and Health Administration (OSHA) and Washington Industrial Safety and Health Act (WISHA) regulations. The safety policies and procedures for the water department are documented in this WSP and cover the full range of hazards staff may experience while operating the water system.

Figure ES-4.

A summary of potential contaminant sources for the City's water sources was updated in July 2024 and is included in Appendix T.

ES.6 Operations and Maintenance Program

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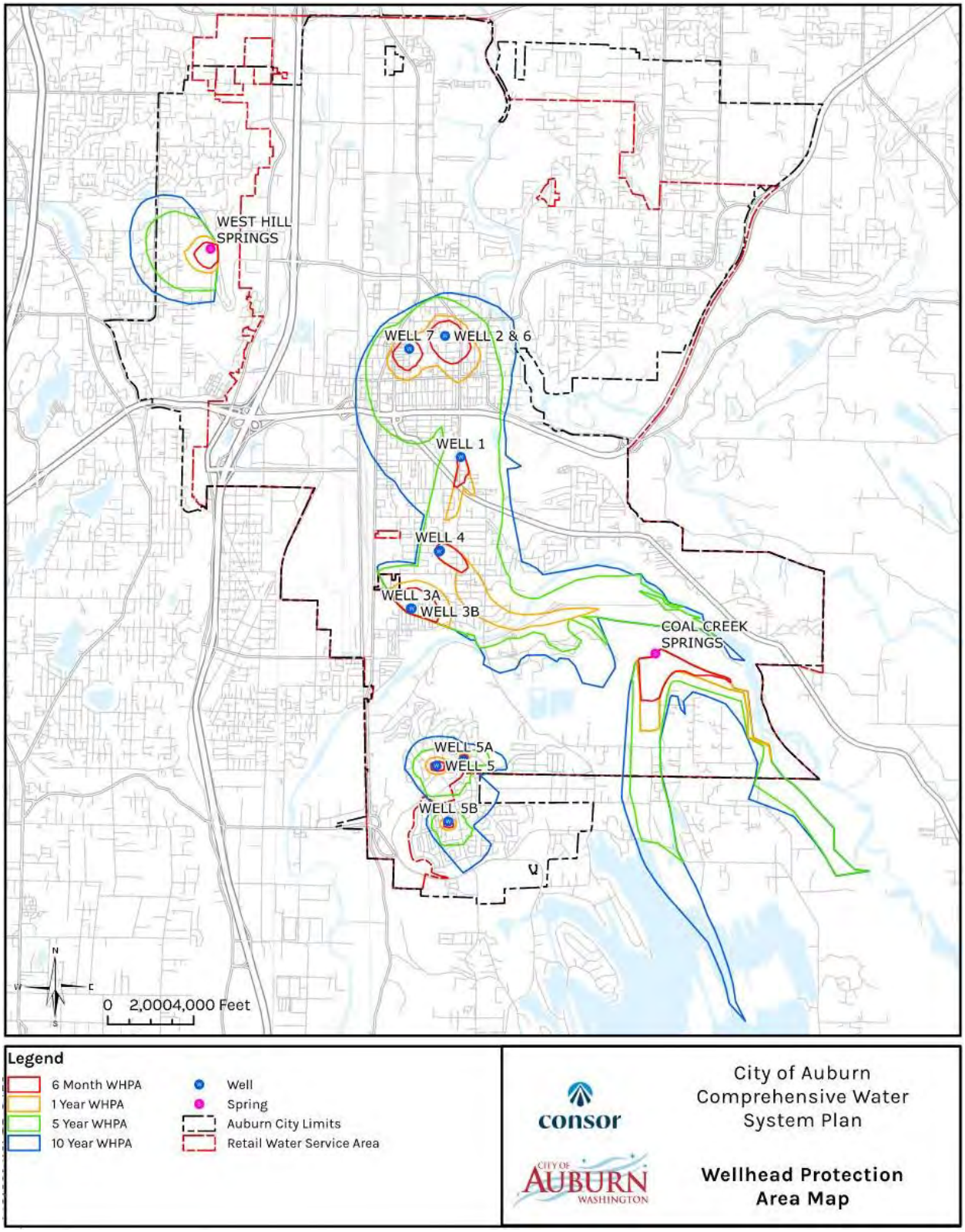
Figure ES-4 | Wellhead Protection Area Map



The City's Cross Connection Control Program (provided in **Appendix Q**) protects the public water system from contamination via cross connection hazards. It describes minimum operating policies, provides guidelines for installation, testing, and maintenance of approved backflow prevention assemblies, permitting process, inspection, and survey requirements for existing and new water service connections. The findings of the 2022 Sanitary Survey are also summarized in this WSP, along with the actions completed or in progress to address the deficiencies. The next DOH sanitary survey is scheduled for 2027.

ES.7 Distribution Facilities Design and Construction Standards

The Engineering Design and Construction Standards (EDCS) encompass policies and procedures governing project review and approval. To ensure the highest level of water system reliability, integration of the EDCS into the broader City infrastructure is essential. The integration of the EDCS in this WSP empowers the City to employ an alternative review process for distribution main projects, through the submittal exception process, which permits the City to approve project reports and construction documents without written approval from the DOH.

The City's Utilities-Water Section of Engineering Services reviews plans, including calculations, reports, and AutoCAD files, to verify conformity with development requirements, City standards, City policies, as well as other federal, state, and local requirements. Compliance with Washington State Department of Transportation (WSDOT) "Standard Specifications for Road, Bridge, and Municipal Construction," and relevant City, State, and Federal regulations is also evaluated during the review process.

ES.8 Capital Improvement Program

The CIP was developed to identify system improvements needed to meet customer demands throughout the 20-year planning horizon. The capital projects identified are categorized as water supply (S), storage (R), pump stations (PS), distribution (D), and general improvements (G). Planning-level cost estimates were developed for each of the recommended projects for budgeting purposes.

The capital projects for the facilities improvements were prioritized based on existing capacity deficiencies, safety concerns, maintenance or capacity requirements, and regulatory requirements. A summary of the total planned CIP cost is provided in **Table ES-5.** All costs are presented as total project costs in March 2024 dollars. For future budgeting purposes, the latest Engineering News Record (ENR) Construction Cost Index (CCI) can be used to project current estimates to the year of implementation. The cost estimates for the Auburn area used the ENR Seattle CCI. The March 2024 CCI is 15,477. Overall, the City anticipates total projects costs of $214M over the next 20 years, with more than 50 percent of the cost being for distribution system improvements.

Table ES-5 | Water System Capital Improvement Program Budget 2024-2044

Capital Improvement Category	Total for 20-Year Period From 2024-2044 (2024 USD)
Distribution	$121,858,681
Supply	$60,416,013
Storage	$21,579,621
Pump Station	$9,230,000
General	$1,750,000
TOTAL	**$214,834,315**

ES.9 Financial Program

Chapter 9 was prepared by FCS GROUP to provide a financial program that allows the City to remain financially viable during the 20-year planning horizon. This viability analysis considers the financial condition of the utility of the past six-year period (2017-2022), current and identified future financial and policy obligations, O&M needs, and the financial impacts of the capital projects identified in Chapter 8. A review of the water utility's current rate structure with respect to rate adequacy and customer affordability is also included.

The City's water charges for services increased from $14.8M in 2017 to $16.5M in 2022, averaging an annual increase of approximately 2.2 percent per year. Operating expenditures increased by $1.7M across the six years with an average annual increase of 2.8 percent. Despite total operating expenses outpacing growth in operating revenues, operating income has been positive in all years observed.

The financial forecast indicates that at existing rate levels the utility will become deficient in 2025 as growth in expenses outpaces growth in revenues and the utility takes on additional debt obligations to fund capital infrastructure investments. The City has adopted a 7.50 percent increase for 2025 to resolve the remaining projected deficiency. Rates will need to potentially increase by 9.50 percent annually from 2026 through 2030, before decreasing to 3.00 percent annually through 2033. A detailed rate study is planned for completion in 2025. It is recommended that the City regularly review and update the key underlying assumptions that compose the multi-year financial plan to confirm that adequate revenues are collected to meet the City's total financial obligations.

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CHAPTER 1

Description of the Water System

1.1 Objective

This Water System Plan (Plan) for the City of Auburn (City) has been prepared to serve as a guide for planning and designing future water system infrastructure and to assist the City in the efficient use of its water resources. The Plan identifies system improvements intended to meet the anticipated growth and changing needs of the City while maintaining reliable and quality water service to customers.

The Plan is designed to meet state, county, and local requirements. It complies with the requirements of the Washington State Department of Health (DOH) as set forth in the Washington Administrative Code (WAC) 246-290-100, Water System Plan. This Plan supersedes the City's 2015 Water System Plan, approved by DOH on May 11, 2016, and the 2021 Limited Water System Plan Update approved by DOH on December 16, 2021.

A 10-year approval period is desired for this Plan, and therefore the Plan analyzes the 10-year and 20-year planning periods. This Plan contains a framework for future funding decisions and capital projects. However, the timeframes are estimates and do not represent actual commitments by the City, which may depend on funding, resources availability, and/or other unidentified factors.

1.2 Plan Content

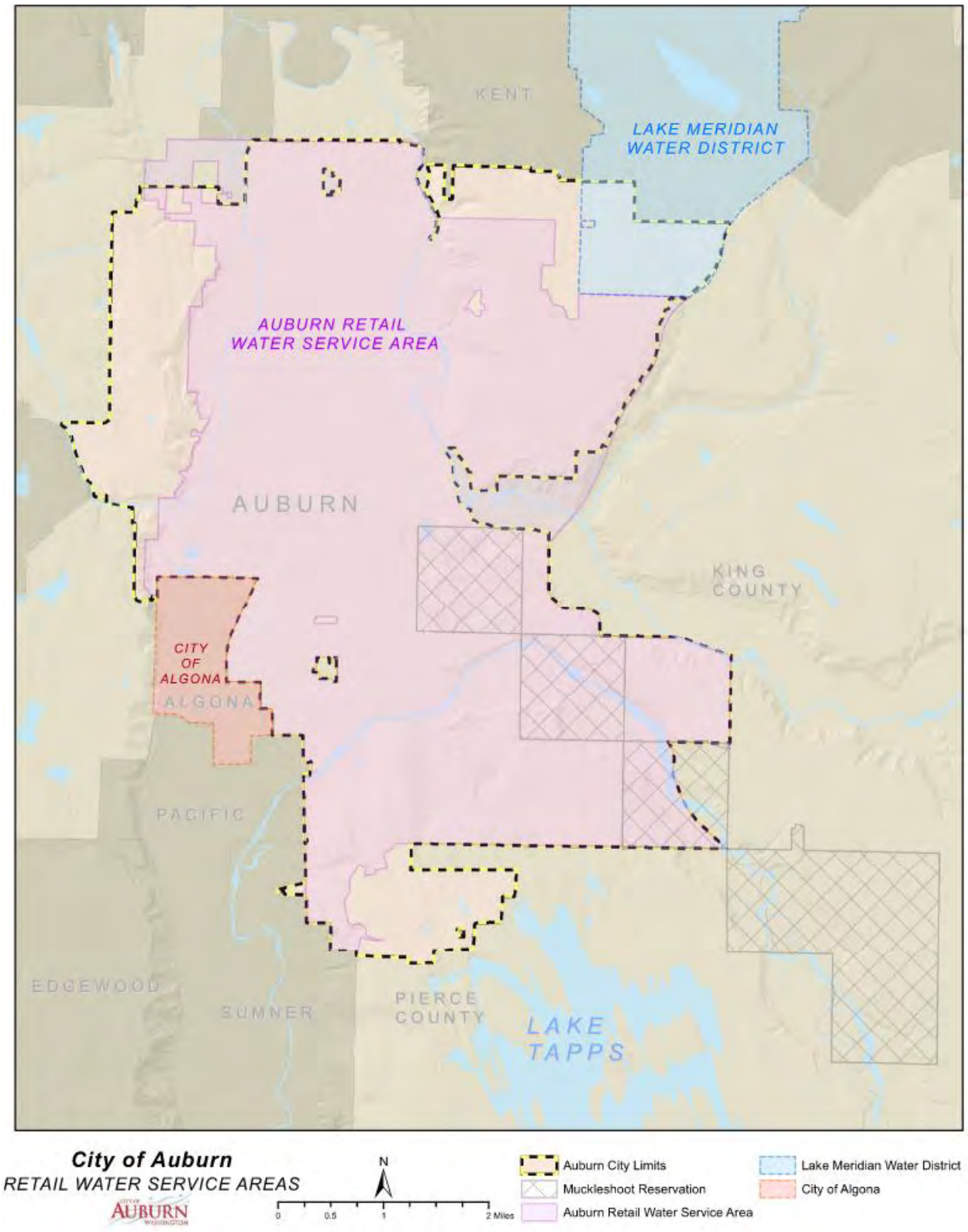
This chapter addresses the following topics:

1.3 Ownership and Management
1.4 System History and Background
1.5 Related Plans and Studies
1.6 Service Areas, Maps, and Land Uses
1.7 System Policies
1.8 Duty to Serve
1.9 Local Government Consistency
1.10 Watershed Consistency

1.3 Ownership and Management

The City owns and operates its water system and serves most of the City as delineated by the Retail Water Service Area (RWSA). The City also provides firm wholesale water supply to the City of Algona (Algona), and interruptible wholesale water supply to Lake Meridian Water District (LMWD) (formally known as King County Water District #111). The City RWSA boundary is further described in Section 1.4 and Figure 1-1 shows the City RWSA with wholesale customers.

Figure 1-1 | RWSA Vicinity Map



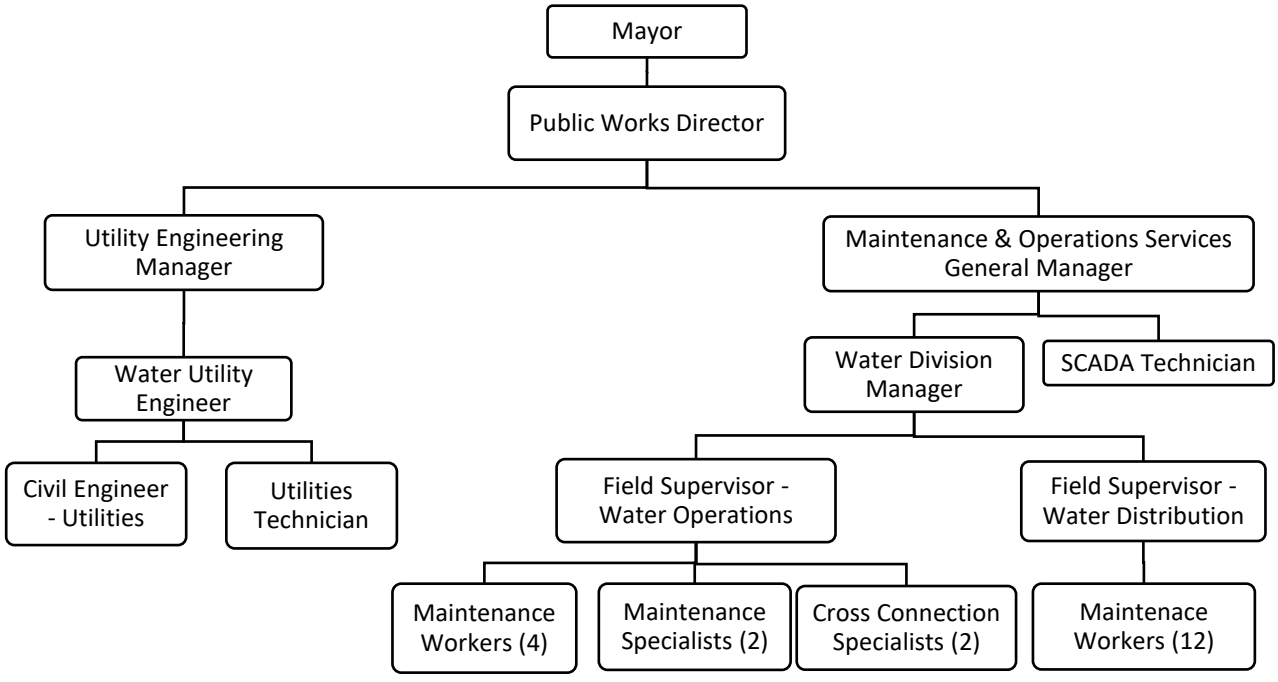
The City provides internal staffing for the management, operations, and maintenance of the water system and the Braunwood Estates satellite system. The DOH's data on these water systems, managed by the City, is presented in **Table 1-1**. The water management structure is presented in **Figure 1-2** and further elaborated in **Chapter 6**.

Chapter 3 provides details on the existing water facilities, while **Appendix H** includes a copy of the current Water Facility Inventory (WFI) form.

Table 1-1 | Water System Ownership Management

Information Type	Description
System Names	City of Auburn Braunwood Estates (Satellite System)
System Type	Group A - Community Public Water System
County	King County and Pierce County
City of Auburn System ID Number	03350V
Braunwood Estates System ID Number (Satellite System)	03336E
Address	25 W Main St Auburn, WA 98001
Primary Contact	Josh Flanders, Water Division Manager
Owner Contact	(253) 876-1998

Figure 1-2 | Water Utility – Organizational Chart



The City's water system is publicly owned, under the jurisdiction of the local government. As a result, it is exempt from regulation by the Washington Utilities and Transportation Commission (UTC), which is

responsible for overseeing some private water companies. There are no plans to bring the City's water utility service under UTC's regulatory authority during this planning period.

1.4 System History and Background

1.4.1 Geography

The City is centrally located between Seattle and Tacoma in both King and Pierce Counties, Washington. It encompasses approximately 30 square miles. Adjacent cities include Pacific, Algona, Bonney Lake, Federal Way, Kent, Sumner, and Covington.

1.4.1.1 Topography

The City's RWSA is dominated by a broad valley surrounded by uplifted plateaus. The Green River enters from the eastern City limit and then runs north cutting through the center of the City. Mill Creek, a tributary of the Green River, parallels the western corporate limits. The White River flows through the southern part of the City before turning south to join the Puyallup River. The topography of the service area is a result, in part, of the glaciation of the region.

Most of the City lies on a two to three-mile wide plain bound by Mill Creek on the west and the Green River on the east. Ground elevations in the area range between 50 to 100 feet and slope upward generally to the north. The terrain rises sharply to elevations of 400 to 500 feet on either side of the valley as well as in the southern portion of the City, south of the White River and between the White and Green Rivers.

The topographic features of the RWSA provide for a necessary divide of the water system into four major service areas serving the valley and the surrounding plateaus. The following are the major service areas and associated elevations:

- Valley Service Area (service elevation from 39 to 235 feet)
- Lea Hill Service Area (service elevation from 129 to 513 feet)
- Academy Service Area (service elevation from 171 to 444 feet)
- Lakeland Service Area (service elevation from 122 to 578 feet)

Each service area is further subdivided into smaller hydraulic operating areas based on topographic elevations, called pressure zones. Additional details on the City's major service areas are provided in Chapter 2.

1.4.1.2 Climate

The RWSA has a West Coast, marine-type climate caused by the influence of air masses coming from the Pacific Ocean. In late fall and winter, orographic lifting, and cooling cause moist air masses to create clouds and precipitation throughout the area. The average annual rainfall is approximately 40 inches, generally occurring between October and March. The average annual snowfall is 8.6 inches. The temperatures typically range from mid-70 degrees Fahrenheit in the summer to 38 degrees Fahrenheit during the winter, with an overall average of 54 degrees Fahrenheit.

Water consumption is notably impacted by climate conditions, as customers adjust their usage based on weather patterns. In periods of hot and dry weather, consumption rises, driven by activities such as lawn watering and outdoor water use. Conversely, consumption tends to decrease during wet weather.

1.4.1.3 Geology

The geology of the City is the result of glacial and interglacial processes acting over millions of years. During the periods when large continental glaciers, not rivers nor lakes, occupied the Puget Sound area, landslides created deposits and erosion through glacial and interglacial deposits. Generally, the uplands surrounding the City are composed of glacial and interglacial deposits and the valleys are filled with more recent deposits overlying older ones.

Five major geologic units lie within the White and Green River Valleys: White River Alluvium (Qaw), Osceola Mudflow (Qom), Undifferentiated Alluvium (Qua), Vashon Recessional Deltaic Deposits (Qd) and Undifferentiated Glacial and Interglacial Deposits (Qu). Bedrock is known to lie approximately 1,280 feet beneath the valley floors.

The Pacific Groundwater Group (PGG) completed an extensive geological and hydrogeological study within the City's RWSA, known as the Auburn Water Resources Program Study, and the results are documented in several volumes:

- 1996 Preliminary Hydrogeologic Characterization
- Summary of 1997 Hydrogeologic Investigations
- The 1997-1998 Test Well Drilling and Installation Program
- The 1999 Hydrogeologic Characterization Report and Appendices

The general groundwater flow system in the City's vicinity is characterized by recharge within uplands and discharge to the rivers in the lowland valleys. Precipitation and Lake Tapps are sources of groundwater recharge. Lake water flows from the lake bottom into the groundwater system. Contrary to recharge in other upland areas, recharge from Lake Tapps is not totally dependent upon precipitation because water is routed to the lake from outside the area. The main discharge zone for the City's area is the Green River Valley. Some groundwater discharges into the river in the City's vicinity and further downstream.

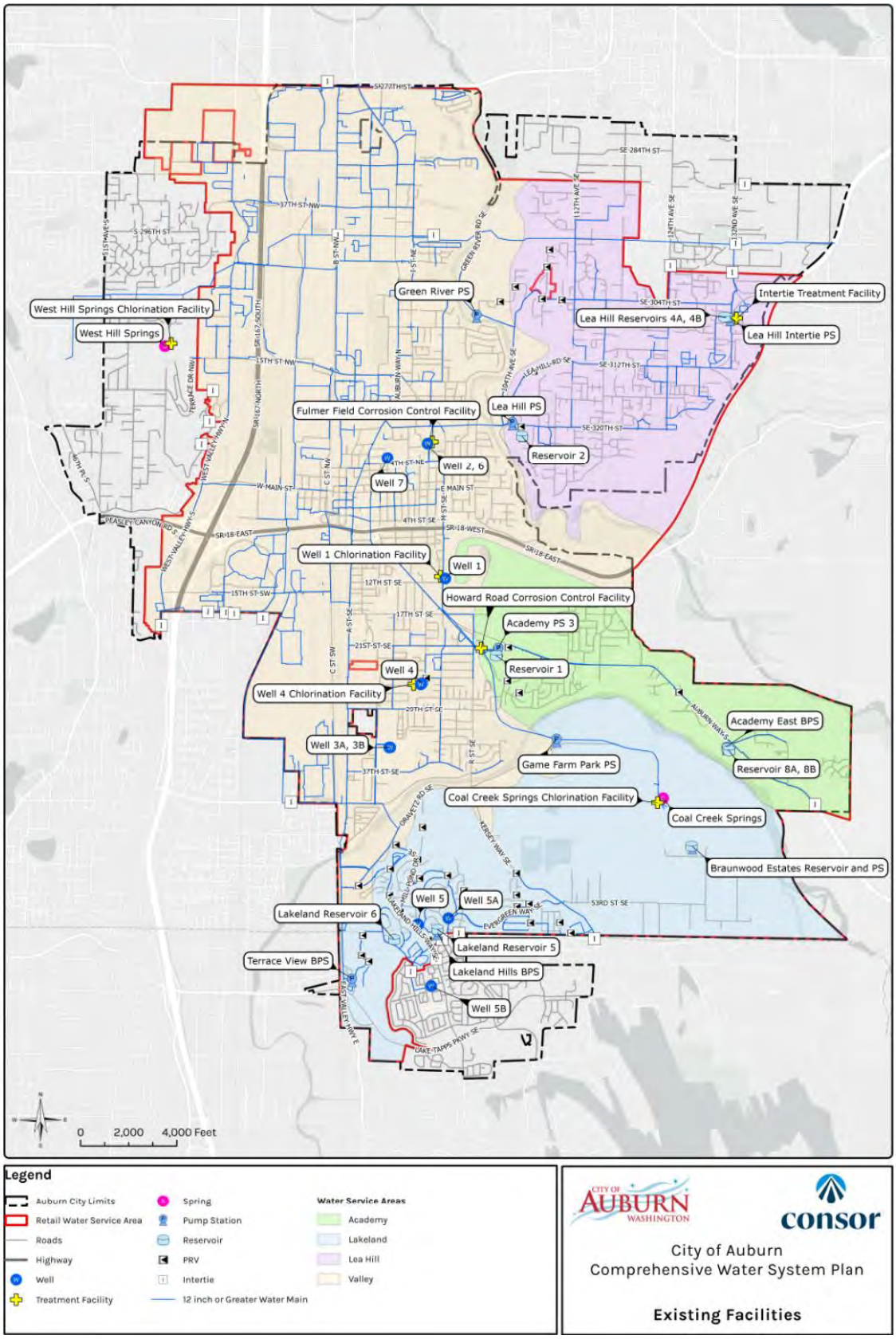
1.4.2 Existing System Overview

The City's water system consists of wells, springs and interties as water sources, chlorination stations and corrosion control facilities for water treatment, pump stations, pressure reducing stations, steel and concrete enclosed reservoirs for storage, and transmission and distribution pipelines to provide potable water to customers. Service is provided to four major service areas (Valley, Lea Hill, Lakeland, and Academy). Each major service area is further divided into pressure zones as required by local topography. The City's four major service areas and the location of key elements of the water system are shown in **Figure 1-3**. A more detailed inventory of assets and system hydraulic profile is presented in **Chapter 3**.

1.4.3 History

The earliest record of a potable water system for the City of Auburn traces back to 1884 with the establishment of the Peasley Canyon supply. Initially serving the City, then called Slaughter, a 4-inch wood-stave pipe connected Peasley Canyon Reservoir to deliver surface water. The year 1907 marked a pivotal moment as the City acquired West Hill Springs for $2,000, a source that continues to yield approximately 1 million gallons of water per day (600 gpm) and remains active.

Figure 1-3 | Existing Facilities



As the City's population grew to a few thousand by 1922, the demand for water prompted the introduction of groundwater wells alongside the existing West Hill Springs. These wells, strategically drilled in the downtown area, were complemented by pump stations, with one situated at the present site of City Hall. Despite their longstanding service, these early wells and pump stations have since been decommissioned.

The evolution of Auburn's water distribution system saw a transition from wooden pipes to the installation of the first recorded steel water main in 1924 - a 10-inch pipeline connecting West Hill Springs to the valley floor. The Coal Creek Springs water collection system, which included a 24-inch steel main under the White River was constructed in 1925, along with the construction of Reservoir 1 (later replaced in 1975), to meet the escalating water needs of the growing City.

By 1946, the population had increased, prompting construction of the Coal Creek Pump Station, to pump water from Coal Creek Springs to the distribution system.

In 1960, the City embarked on further enhancements by supplementing its two springs with a well system, beginning with Well 1 and then Well 2 in 1969.

In 1961, water system facilities were constructed in the Academy Service Area.

Expansion into the Lea Hill Service Area occurred between 1964 and 1965, coinciding with extensive modifications to the Coal Creek supply system and the implementation of a Supervisory Control and Data Acquisition (SCADA) system.

The early 1980s saw the extension of the water system into Lakeland Service Area.

A key development occurred in 1991 with the acceptance of Braunwood Estates (now called Hidden Valley) as a satellite water system operating independently outside the City's distribution network.

The late 1990s marked significant construction under the Interlocal Agreement 2 (IA2) project, a water supply project between LMWD, Covington Water District (CWD) and the City to provide LMWD and CWD with wholesale water supply, and as a result expanding the water system. Expansion into Pierce County and service agreement modifications characterized the late 1990s and early 2000s.

Table 1-2 summarizes key construction and enhancements related to the City's wells, springs, reservoirs, pump stations, treatment, water pipelines, and system upgrades. Notably, the water pipelines improvements focus on transmission mains, excluding distribution mains installation and replacements (due to the extensive list), with exceptions for distribution improvements mandated by environmental (water quality) regulations. The table provides a documented history of the water system, recognizing occasional gaps.

Table 1-2 | Water Facilities History

Springs	
West Hill Springs	• Before 1907: Established as a potable water supply for the City. • 1915: Construction of 210,000-gallon concrete reservoir to store water from West Hill Springs. • 1924: Installation of the first recorded steel water main (10" pipeline from West Hill Springs to the valley floor). • 1960: Ongoing use, with a replacement of collection boxes. • 1988: Removal of reservoir. West Hill Springs water flows continuously into the system.

	• 2000: Partial fencing of the watershed carried out according to the 2000 Water Comprehensive Plan. • 2017: Flow Control Improvements, including installation of an electromagnetic meter and flow control valve for automatic shutdown. • Current: The spring has a capacity of 600-gpm, with varying supply based on aquifer conditions. Equipped with chlorination station.
Coal Creek Springs	• 1925: Construction of Collection system. • 1925: Installation of 24" wood-stave supply pipeline connecting the Coal Creek Springs collection system to a booster pump station (present Howard Road site) and 14" transmission main to Reservoir 1, including installation of 24" steel pipe under the White River • 1964: Construction of south and middle collectors in the system. • 1964: Replacement of the 24" wood-stave supply pipeline connecting the Coal Creek Springs collection system to a booster pump station (present Howard Road site) with 24-inch concrete pipe. • 1998: Addition of the north collector for enhanced system performance. • 2023: Coal Creek Springs Transmission Main Replacement underway to install a new transmission main suspended from a utility/pedestrian bridge over the white river to replace a portion of the old main crossing the river. • Current: Flows by gravity to Howard Road Corrosion Control Treatment Facility (CCTF) and pumped into Reservoir 1, with typical production capacity of 3,000-gpm. Equipped with chlorination station.
Wells	
Well 1	• 1960: Construction of Well 1, within Valley Service Area. • 1998: Shutdown due to reduced well output and water levels. • 2010: The well was brought back into service temporarily to meet summer demands. • 2015: Phase 1 improvements to bring the facility back online. Construction of transmission main in M St SE, 17th St SE, R St SE & Howard Road SE to convey supplies from Well 1 to Howard Road CCTF. • 2016: Phase 2 improvements to bring the facility back online. Improvements included new well house, pumping system (2,200-gpm), disinfection with sodium hypochlorite, on-site emergency power, and upgraded electrical and SCADA controls. • Current: Operational and pumps to Howard Road CCTF, then boosted to Reservoir 1.
Well 2	• 1969: Construction of Well 2 (3,000-gpm capacity), within Valley Service Area. • 2000: Replacement with a new masonry building, pump (1,600-gpm) and associated equipment. • 2014: Installation of Variable-frequency Drive (VFD). • 2023: Rehabilitation and replacement of well pump and motor. • Current: Operational with the Fulmer Field CCTF, providing chlorination and emergency power.
Well 3A	• 1983: Construction of Well 3A (1,650-gpm) with automatic standby generator, pumps directly into Valley Service Area. • 1984: Installation of chlorination system. • Current: Inactive since mid-1990's (Est. 1995 – 1997) due to elevated manganese levels.
Well 3B	• 1984: Construction of Well 3B (1,650-gpm) adjacent to Well 3A, with chlorination system. • Current: Inactive since mid-1990's (Est. 1995 – 1997) due to elevated manganese levels.
Well 4	• 1985: Construction of Well 4 (2,600-gpm), to pump directly into Reservoir 1 and capable of feeding south end of Valley distribution system through pressure-reducing station. • 2016: Emergency Power Improvements project added a diesel-fueled generator and hypochlorite chlorination equipment.

	• 2018: Upgrade of Well soft starter. • 2023 (ongoing): Well 4 Facility Improvements project underway to replace aging mechanical equipment and electrical improvements. • Current: Pumps directly to Reservoir 1 and to south end of Valley Service Area through PRVs.
Well 5	• 1983: Construction of Well 5 (1,000-gpm) to serve the Lakeland Hills Development. • Current: Maximum production capacity of 650-gpm, not chlorinated and pumps directly into Lakeland Service Area and supplies Reservoirs 5 and 6.
Well 5A	• 1990: Construction of Well 5A (180-gpm) to supplement Well 5. • Current: Equipped with chlorination facilities and a manual transfer switch. Pumps directly into Lakeland Service Area and supplies Reservoirs 5 and 6.
Well 5B	• 2005: Construction of Well 5B (600-gpm) with hypochlorite generation and ATEC media filters, to remove iron and manganese prior to disinfection. • Current: Removed from service in 2006 due to irrecoverable aquifer.
Well 6	• 1998-2000: Construction of Well 6 (3,500-gpm) within Valley Service Area. • 2014: Replacement of pump bowl and installation of VFD. • 2000: Rehabilitation with a new masonry building, well pump (1,600-gpm), and associated equipment. • Current: Operational with the Fulmer Field CCTF, providing chlorination and emergency power.
Well 7	• 1997: Construction of Well 7 (3,500-gpm) within Valley Service Area. • Current: Inactive as of 2012, due to elevated manganese levels.
Reservoirs	
West Hill Springs Reservoir	• 1915: Construction of 210,000-gallon concrete reservoir to store water from West Hill Springs. • Current: Reservoir removal (1988). West Hill Springs water flows continuously into the system.
Academy Reservoir	• 1961: 500,000 gallons steel reservoir, supplied by Academy Pump Station. • Current: Reservoir removed (1978-1980) when Reservoir 8B was constructed.
Reservoir 1	• Est. 1925: Construction of 3.0 million gallons to store water from Coal Creek Springs. • 1975: Replacement of uncovered reservoir with covered 5-MG concrete reservoir. • 2019: Seismic isolation control valve installed on outlet piping. • Current: Primary storage for Coal Creek Springs and can also be filled with water from Well 4. Serves as water supply for the Academy Pump Station and Valley Service Area.
Reservoir 2	• 1975: Construction of a 3.6-MG pre-stressed concrete underground reservoir (dual-purpose facility with tennis court on top) in Lea Hill. • Current: Supplied with several City sources and Reservoir 1. Serves as water supply for Valley Service Area. Design for the addition of a seismic isolation control valve in 2024 with construction expected in 2025.
Reservoir 4A	• 1965: Construction of 1.0-MG steel reservoir in Lea Hill. • 1965: Installation of 12-inch ductile iron pipeline from Porter (8th St NE) Bridge to Reservoir 4A. • 1998: Replacement of exterior and interior protective coatings. • Current: Supplied by Valley Service Area through Lea Hill & Green River Pump Stations. Serves as water supply for Lea Hill Service Area. Addition of a seismic isolation control valve underway with construction anticipated in 2024.
Reservoir 4B	• 1983: Construction of 1.5-MG steel reservoir in Lea Hill. • 1998: Replacement of exterior protective coatings. • 2002-2003: Replacement of interior protective coatings

	• Current: Supplied by Valley Service Area through Lea Hill & Green River Pump Stations. Serves as water supply for Lea Hill Service Area. Addition of a seismic isolation control valve underway with construction anticipated in 2024.
Reservoir 5	• 1981: Construction of 1.0-MG steel reservoir for Lakeland Service Area. • 2015: Painting of the Interior and exterior, installation of seismic isolation control valve and addition of ladder. • Current: Supplied with wells 5, 5A and Terrace View Booster Pump Station. Serves as water supply for Lakeland Service Area.
Reservoir 6	• 2012: Construction of 1.0-MG reservoir in Lakeland Service Area (also provides storage for City of Algona). • Current: Supplied with wells 5, 5A and Terrace View Booster Pump Station. Serves as water supply for Lakeland Service Area and City of Algona.
Reservoir 8A	• 1973: Construction of 1.2-MG steel reservoir in Academy Service Area. • 2002-2003: Recoating of the reservoir's exterior and interior. • Current: Supplied with Reservoir 1 through the Academy Pump Station. Serves as water supply for Academy Service Area. Addition of a seismic isolation control valve underway with construction anticipated in 2024.
Reservoir 8B	• 1980: Construction of 1.5-MG steel reservoir in Academy Service Area. • 2002-2003: Recoating of the reservoir's exterior and interior. • Current: Supplied with Reservoir 1 through the Academy Pump Station. Serves as water supply for Academy Service Area. Addition of a seismic isolation control valve underway with construction anticipated in 2024.
Pump Stations	
Howard Road Site Pump Station	• 1925: Construction of Howard Road Site Pump Station with 5 hydraulic ram-type pumps to move water from coal creek springs to Reservoir 1 & distribution system. • Current: (1962) Operation of ram-type pumps ended.
Coal Creek Springs Pump Station	• 1946: Construction Coal Creek Springs Pump Station to pump water to Reservoir 1 and distribution system (consisted of pump house and an electric pump). • 1947-1952 (exact year unknown): Addition of second pump (2,000-gpm). • 1953: Addition of third pump (3,000-gpm) • 1964: Replacement of two pumps with new 1,500-gpm and 2,500-gpm pumps. • 1999: Replacement of Diesel fuel storage tanks for emergency generators with above-ground, double-walled fuel tanks (easier to inspect for fuel leakage). • Current: Pump station removed in 2003 to make way for Howard CCTF.
Academy Pump Station	• 1960: Construction of Academy Pump Station 1, housing Pumps 1 and 2 (300-gpm and 500-gpm capacity). • 1961: Installation of 2 miles 10" cast iron transmission main from Academy Pump station 1 to Academy reservoir. • 1980: Construction of Academy Pump Station 2, housing Pumps 3 and 4 (750-gpm capacity each), with emergency power generator. • 1980: Installation of 2 miles 14" ductile iron transmission main, connecting Academy Pump Station 2 to Reservoirs 8A & 8B. • 1999: Replacement of Diesel fuel storage tanks for emergency generators with above-ground, double-walled fuel tanks (easier to inspect for fuel leakage). • 2022: Academy Pump Stations 1 and 2 replaced with a single pump station, Academy Pump Station 3, that consists of 4 vertical turbines, variable speed drive pumps with firm pumping capacity of 2,100-gpm. • Current: Pumps water to the Academy Reservoirs (Reservoirs 8A & 8B)
Green River Pump Station	• 1999: Construction of the Green River Pump Station, equipped with 4 pumps (1,170-gpm capacity each), as part of the Interlocal Agreement 2 (IA2) to supply water to CWD & LMWD.

	• 2020: Facility improvements for emergency generator and associated electrical equipment. • Current: Pumps water to the Lea Hill Reservoirs (Reservoirs 4A & 4B).
Game Farm Park Pump Station	• 1988: Construction of the Game Farm Wilderness Park Pump station for water supply and fire protection of the park. • 1992: Installation of 60-gpm domestic pump. • 1993: Installation of 1,000-gpm fire pump. • Current: Pumps water to the Game Farm Wilderness Park from the Coal Creek gravity supply line.
(Lea Hill) Intertie/Booster Pump Station	• 1998-2000: Construction of Intertie Pump Station near Lea Hill Reservoirs, designed to operate in conjunction with Green River Pump Station to serve IA2 partners (using 4 pumps) and to also serve small area at the top of Lea Hill using a "package type" booster-pump station. • Current: Pumps water to small higher elevation service area in Lea Hill. Equipped with a hypochlorite chlorination system.
Lea Hill Pump Station	• 1965: Construction of Lea Hill Pump station with two 600-gpm and one 800-gpm pumps, to boost water from Valley Service Area to Lea Hill Service Area. • 1999: Replacement of Diesel fuel storage tanks for emergency generators with above-ground, double-walled fuel tanks (easier to inspect for fuel leakage). • Current: Pumps water to the Lea Hill Service Area.
Lakeland Hills Booster Pump Station	• 1990: Construction of Lakeland Hills Booster Pump Station, consisting of a three-pump pressure sustaining package system and two large-capacity fire pumps, to pump water from Lakeland Hills Reservoir to Lakeland Service Area. • 2013: Replaced for improved service to boosted Lakeland Service Area, using three low flow pumps (720-gpm capacity each) and two fire flow pumps (3,125-gpm capacity each). • Current: Pumps water to higher elevation service area in Lakeland.
Terrace View Booster Pump Station	• 2010: Construction of Terrace View Booster Pump Station with firm capacity of 1,100-gpm, to supply water from Valley 242 to Lakeland 630 pressure zone. • Current: Pumps Valley Service Area water to Lakeland Service Area. Equipped with hypochlorite feed pump.
Academy East Booster Pump Station	• 2014: Construction of the Academy East Booster Pump Station replaced the single pump Janssen's Addition Pump Station, equipped with three domestic pumps with firm capacity ranging from 750 to 1,250-gpm. • Current: Pumps water from Reservoirs 8A and 8B into Academy Service Area.
Treatment	
Howard Road Corrosion Control Treatment Facility (CCTF)	• 2004: Construction of the Howard Road CCTF (6,300-gpm capacity), to treat water from Coal Creek Springs and Well 1 and boost to Reservoir 1, using three 2,100-gpm booster pumps. • Current: Pumps water to Reservoir 1.
Fulmer Field CCTF	• 2004: Construction of the Fulmer Field CCTF (9,600-gpm capacity), to treat water from Well 2, 6 and 7 and boost to Reservoir 2 and distribution system, using four 3,200-gpm booster pumps. • 2013-2018: Evaluation of Fulmer Field CCTF (along with Wells 2, 6 and 7) to identify improvements to increase the supply and treatment capacity of the existing facilities and infrastructure. • Current: Pumps water to Reservoir 2 and the Valley Service Area.
Distribution Main Improvements (mandated by Environmental Regulations) & Interties	
Intertie with City of Algona	• After 1996: Construction of wholesale interties (combined 1.1-mgd capacity) at: o 1149 Industry Drive SW o Boundary Boulevard and Milwaukee Ave

	○ Iowa Drive and West Valley Highway ○ 1st Avenue • Emergency Interties at ○ Boundary Boulevard and Celery Ave ○ Boundary Boulevard and O Street
Intertie with City of Bonney Lake	• 2002: Construction of 8" emergency intertie at Evergreen Way, southwest of Lakeland Hills Way • After 2010: Construction of emergency interties at ○ Lakeland Hills Way & 59th Avenue ○ Evergreen Way and Nathan Avenue ○ Olive Avenue, south of Evergreen Loop
Intertie with City of Pacific	• After 2003: Construction of emergency interties at ○ Ellingson Road near Pacific Ave ○ A St SE, north of White River
Intertie with City of Kent	• After 2001: Construction of emergency intertie with 78th Avenue S and S 277th Street
Intertie with LMWD	• Est. 1996 – Construction of 12" wholesale intertie at 30502 132nd Avenue SE (5-mgd capacity) • 1996 – 2002: Construction of emergency interties in ○ 127th Place SE, south of SE 299th Place ○ 124th Avenue SE and SE 300th Way ○ SE 300th & 132nd Ave SE ○ 1998-2000 at SE 288th St & 132nd Ave SE
Intertie with Lakehaven Water & Sewer District (LWSD)	• Est. 1995: Construction of the Aaby Dr. emergency intertie with LWSD at R St. NW (named Intertie #2). • 2004: Transfer of Aaby Dr. pump station and service from City to LWSD. • 2006: Emergency intertie with LWSD at R St. NW (Intertie #2) was removed from service • After 2010: Installation of water meter and control valve vault for 6" emergency intertie at Aaby Dr. and Knickerbocker Dr. (reinstating Intertie #2)
Intertie with City of Tacoma	• Est. 2012: Construction of wholesale interties at: ○ 3240 B St NW (2,200-gpm max. instantaneous flow rate) ○ 29598 132nd Ave SE (4,500-gpm max. instantaneous flow rate) ○ Combined max. flow rate of 5.12 MGD (3,555 gpm) in a 24 hour period (the interties could flow at a higher rate for a portion of the day so long as the 24-hour average meets the contractual peak period flow)
Distribution Main Improvements (mandated by environmental (water quality) regulation)	• 2015: Replacement of 2,760 linear feet of Asbestos Cement (AC) water main with ductile iron main. • 2022: Removal and replacement of approximately 186 service lines with lead goosenecks and approximately 7,075 linear feet of distribution water main with ductile iron main.
System Upgrades	
Supervisory Control and Data Acquisition (SCADA) system	• 1975: Addition of SCADA/telemetry, to control all reservoirs, wells and pumps from the Maintenance and Operations building. • 2015: Extensive upgrade of the SCADA/telemetry system, to improve control of the water utility facilities and replace obsolete components. • 2024: Updated System Platform to AVEVA. Major components and new hardware were replaced to provide more reliable service.
Metering	• 2016: Installation of two master meters for Muckleshoot Indian Tribe (MIT) Casino, to facilitate City and MIT account administration.

	• 2017-2018: Installation of Advanced Metering Infrastructure (AMI) for all customers. The AMI allowed for more accurate meter reads, daily information for quicker detection of leaks, and improved efficiency of billing operations. • 2020 - 2022: Replacement of deduct meters used for irrigation purposes with separate water service tap on the city's main.

1.5 Related Plans and Studies

In preparing this Plan, related studies and plans were reviewed to ensure coordination with adopted documents that affect system planning and operations. The related plans are categorized into two groups for clarity: Internal Studies/Plans Specific to the City and External Plans Influencing City-Wide Water Management. A brief synopsis of these studies and plans are presented below.

Internal Studies/Plans Specific to the City:

Wellhead Protection Plan, City of Auburn, 2014: The City developed a Wellhead Protection Plan to identify and protect groundwater sources. The initial plan was created in 2000 by Pacific Groundwater Group (PGG) and subsequently updated by Robinson Noble in 2008 and 2014. The plan maintains existing wellhead protection areas (WHPAs) and contributes to hazard assessments within these zones. It aligns with county ordinances, impacting land use planning and reflecting in critical aquifer recharge areas as outlined in the King County Comprehensive Plan. Additionally, the plan developed a monitoring system for groundwater sampling, which enhanced operational readiness by providing early warnings of potential contaminations.

City of Auburn Water Resources Program, Pacific Groundwater Group, Inc., 1995-1999: Pacific Groundwater Group conducted a comprehensive groundwater study in response to recommendations of the 1995 Comprehensive Water Plan. The study was documented in a series of reports (listed below), collectively known as the Auburn Water Resources Program Study. The Auburn Water Resources Program assessed the long-term potential for the City's continued use of groundwater for its water supply. The study confirmed substantial quantities of groundwater underlying the valley area and provided the basis for the water supply conclusions for this Plan. This comprehensive program, spanning several years, strategically addresses water rights acquisition by delving into technical studies of the local groundwater system. Two key elements of the program were the installation of monitoring wells and river gauges, and the assessment of the existing City wells in the deep aquifer. The installation of monitoring wells and river gauges not only aids in system planning by understanding groundwater dynamics but also enhances operational efficiency through real-time data collection. The program also included the development of a regional ground-water model (MODFLOW), using the United States Geological Survey (USGS) model program. This provided a tool for analyzing potential withdrawal scenarios, offering valuable insights into optimizing water system operations.

- 1996 Existing Data Hydrogeologic Characterization
- 1996 Preliminary Hydrogeologic Characterization
- Summary of 1997 Hydrogeologic Investigations
- 1997-1998 Test Well Drilling and Installation Program
- 1999 Hydrogeologic Characterization Report and Appendices
- Regional Groundwater Model Report

Bilateral Compliance Agreement (BCA), 1996: This agreement, entered with the Department of Health (DOH) due to copper levels that exceeded the action levels in samples collected in 1993, outlined treatment options and schedules for corrosion control facilities. As a result, new corrosion facilities at the Howard Road/Coal Creek Springs Pump Station and Fulmer Field Park were completed in 2004. The completion of

these facilities in 2002 directly impacts operational efficiency, ensuring compliance with health standards and safeguarding water quality in the long term.

City of Auburn – Public Works Emergency Response Manual, 2022: This electronic manual is only one element of the City's overall Emergency Response Plan, which serves as a guide for management of emergency situations. It was first developed in 1999 in response to the potential impact of Y2K and it is updated annually at the first of the year. The manual is not all-inclusive for every type of disaster that could occur, but it is a valuable tool for dealing with many of the emergency situations that most water utilities could face.

City of Auburn Comprehensive Plan, 2015 and Amendments: This current plan, originally adopted in 2015 in accordance with the State Growth Management Act (GMA) is the City's comprehensive land use plan and policy document. It consists of goals, land use policies, and the Comprehensive Plan maps. The plan may be amended annually as needed. The update of the comprehensive plan is taking place concurrently with the revision of this water system plan.

City of Auburn 2015 Comprehensive Water Plan, City of Auburn Public Works, 2015: The previous Comprehensive Water Plan provided evaluation of needs and recommended improvements to the City system for 2015-2022. In 2021, DOH extended the approval period for the 2015 WSP until May 11, 2026. The plan adopted in 2015 constitutes the basis for this Plan.

Capital Facilities Plan (2023-2028), City of Auburn Finance Department, 2022: Adopted in 2022, this plan is instrumental in both planning and operations. It outlines goals, policies, and implementation programs mandated by the State GMA, providing a roadmap for capital improvements. This directly influences the operational landscape by defining necessary infrastructure enhancements and improvements, aligning with the city's capital improvements program.

Engineering Design and Construction Standards, City of Auburn, 2024: The City updates its Design and Construction Standards as needed, typically on an annual or bi-annual basis. These standards not only guide the planning of new infrastructure but also enhance day-to-day operations by ensuring adherence to the latest industry practices and regulations. The City of Auburn Design and Construction Standards are attached in Appendix P.

Water Shortage Contingency Plan, City of Auburn, 2024: The plan establishes actions and procedures for implementing Auburn City Code (ACC) 13.14 during impending or actual water shortages, to maintain levels of service essential for public health and safety, minimize adverse impacts on economic activity, and protect customer's lifestyle; refer to Appendix R.

Water Cost of Service Rate Update Study, City of Auburn, 2022: This study informs strategic decisions related to water rates and influences the operational budget.

System Development Charge Study, City of Auburn, 2014: Completed in 2014, this study examines system development charges, offering insights for future infrastructure development. Its findings directly influence the planning of new systems and infrastructure projects and provide a financial basis for expansion.

External Plans Influencing City-Wide Water Management:

King County 2016 Comprehensive Plan, King County Department of Local Services, 2016: The King County Comprehensive Plan establishes land use zoning for areas outside the City limits, but within the RWSA. Additionally, King County provides critical area ordinances and critical aquifer recharge areas that support

the City's wellhead protection efforts. The current King County Comprehensive Plan was first adopted on December 5, 2016, and was later amended in 2020.

Pierce County Comprehensive Plan, 2015 and Amendments: This is a comprehensive plan and policy document for Pierce County. The plan was developed in accordance with the GMA and is amended every two years. This plan influences planning by offering insights into regional policies.

Pierce County Coordinated Water System Plan, 2021: In 1983, all of Pierce County was declared a Critical Water Supply Service Area. In response to this declaration, Pierce County established the first Coordinated Water System Plan to coordinate planning and establish water service areas. The current Coordinated Water System Plan, adopted in 2021 through Ordinance 2018-39s2, influences both regional water planning and City's operational coordination with other systems in the county.

Pierce County White River Basin Plan, 2013: This plan provides a comprehensive guide to storm drainage and surface water management in portions of the White River Basin. Given that the City of Auburn utilizes this basin, the plan significantly influences operational considerations and emergency response strategies during storm events.

South King County Coordinated Water System Plan (CWSP), 1989: This plan, adopted in 1989, defined the initial service area boundaries for the water systems within the Critical Water Supply Area of South King County. The City of Auburn Comprehensive Water Plan, upon adoption, becomes an element of the CWSP.

South King County Ground Water Management Plan (GWMP), 2003: The GWMP was initiated by Ecology with the intent to develop methods to protect the quality and quantity of ground water, meet future resource needs while recognizing existing water rights and provide effective and coordinated management of ground-water resources. This plan is considered in planning for and operation of the City's water system.

Tribal Land Use Plan, Muckleshoot Indian Tribe, 1978: The adoption of the MIT's Zoning Ordinance in 1979, which influences land use within the Muckleshoot Indian Tribe, affects water-related considerations. This plan plays a crucial role in ensuring collaborative water management efforts that respect tribal land use.

USGS Hydrogeologic Framework, Groundwater Movement, and Water Budget in the Puyallup River Watershed and Vicinity, Pierce and King Counties, Washington: Scientific Investigations Report 2015-5068: A collaborative effort involving various entities (Cities of Auburn, Milton, Puyallup, Sumner, and Tacoma; Pierce Conservation District; DOH; Cascade Water Alliance; Lakehaven Utility District; Summit Water & Supply Company; Mt. View-Edgewood Water Company; and The Russell Family Foundation), this report contributes valuable insights into the hydrogeologic framework, groundwater movement, and water budget in the Puyallup River Watershed. It significantly influences both regional water planning and operational considerations, providing a scientific basis for understanding the water dynamics in the watershed.

Other Plans

In addition to the studies listed above, the current Water Comprehensive Plans from the following neighboring water systems (City of Algona, Bonney Lake, Kent, Pacific, CWD, LWSD, LMWD and Highline Water District (HWD)) were considered during the preparation of this Plan.

1.6 Service Area, Maps, and Land Use

The City's RWSA boundaries were initially defined and documented through the South King County CWSP in 1989. The boundaries of the RWSA have been adjusted since 1989. An area of Pierce County was incorporated into the RWSA through the Pierce County Coordinated Water System Planning process (1997) and interlocal agreements with Bonney Lake (1998 and 2016), LWSD (2004), Kent (2006), and LMWD (2006). Copies of the Water Service Area Agreements are provided in **Appendix G.** The RWSA covers a total area of 16,193 acres; 15,877 acres are in King County and the remaining 316 acres are in Pierce County within Auburn City Limits. A total of 700 acres (4.3 percent) of the RWSA is in unincorporated King County urban and rural areas.

Several water purveyors adjoin the City of Auburn RWSA, as shown in **Figure 1-4**. These include the cities of Algona, Bonney Lake, Kent, Pacific, and Sumner. Also included are the CWD, LWSD, LMWD, HWD, and MIT. Purveyors with wholesale water agreements and interties are discussed in **Section 1.6.1**.

The City currently does not plan to update its service area boundaries unless the need arises in the future. The City will continue to evaluate its service area boundaries and will consider updates if future needs or circumstances warrant changes.

Figure 1-5 reflects the City's current land use designations. The City includes a wide range of residential, commercial, institutional, and industrial land uses. Public and quasi-public land uses include parks, open space, and public recreation as well as institutional uses such as schools. Commercial and industrial uses occur primarily in the valley; however, large areas of residential land use and the Downtown Urban Center (DUC) also exist in the valley area.

The Academy and Lakeland Service Areas are primarily residential, although some commercial development is located along Auburn Way South (SR 164) in the Academy Service Area. The Lea Hill Service Area is also primarily residential although other uses include small amounts of commercial and open spaces, and Green River College.

Areas within the RWSA, but outside the City limits, are governed by unincorporated King County land uses which include agricultural, rural and residential land use types as shown in **Figure 1-5**. The unincorporated King County land uses shown in **Figure 1-5** were obtained from King County's open data portal which reflects the current adopted land use designations established in the Comprehensive Plan. Those land use designations reflect the intended long-range use of land of the 20-year planning horizon of the plan.

Figure 1-6 shows the Urban Growth Area (UGA), which is comprised of both the current City limits and potential annexation areas (PAA).

1.6.1 Wholesale Interties

Interties provide a tool that water utilities use to move water between systems to meet supply needs, to increase reliability and respond to emergencies. The City maintains wholesale supply interties with three water systems: City of Tacoma, Algona, and LMWD. The City also has a supply contract with the MIT and the Indian Health Service, dating from 1972, for services along a pipeline at SE 368th PL extending from the City limits into the reservation.

1.6.1.1 City of Tacoma

In 2012, Tacoma agreed to provide water to the City in the quantity of up to 1.0 mgd average day use, 1.8 mgd peak day use, and 1.62 mgd four-day peak use. Two interties were constructed to supply the City: located at 3200 B Street NW and 29600 132nd Avenue SE in Auburn. This agreement will remain in force as long as Tacoma (or its successors in interest of its water system) remains in the business of providing water, and as long as the City meets the terms and conditions of the agreement.

In 2014, Tacoma amended and restated the 2012 agreement with the City to provide a total of 3.5 mgd (2,430 gpm) of average use and 5.12 mgd (3,555 gpm) of peak use combined from the interties. The B Street NW Intertie is limited to a maximum flowrate of 2,200 gpm and the 132nd Avenue SE Intertie is limited to a maximum flowrate of 4,500 gpm. However, the combined use of the interties cannot exceed 5.12 mgd (3,555 gpm) in a 24 hour period.

Figure 1-4 | Adjacent Water Systems

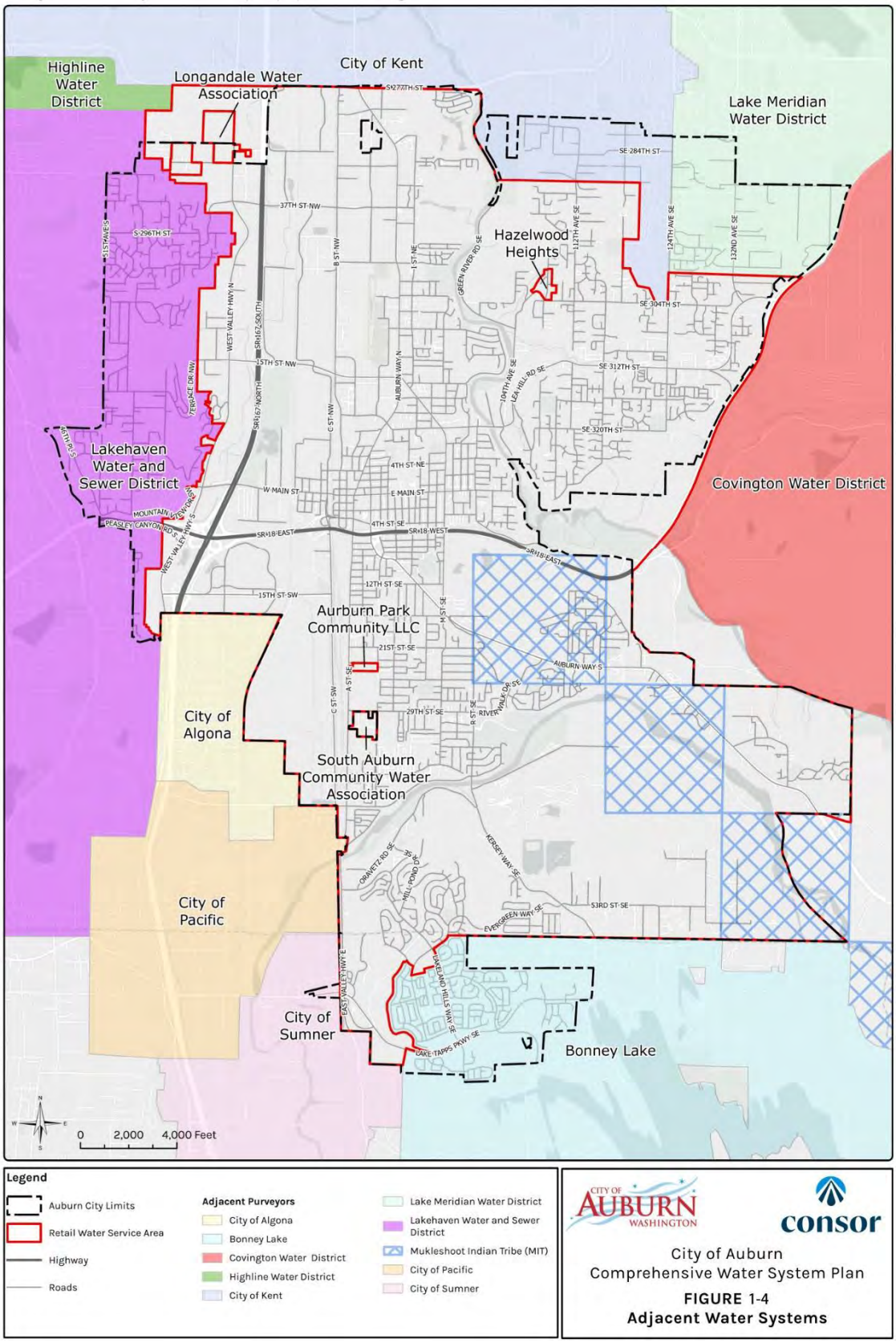


Figure 1-5 | Existing Land Use

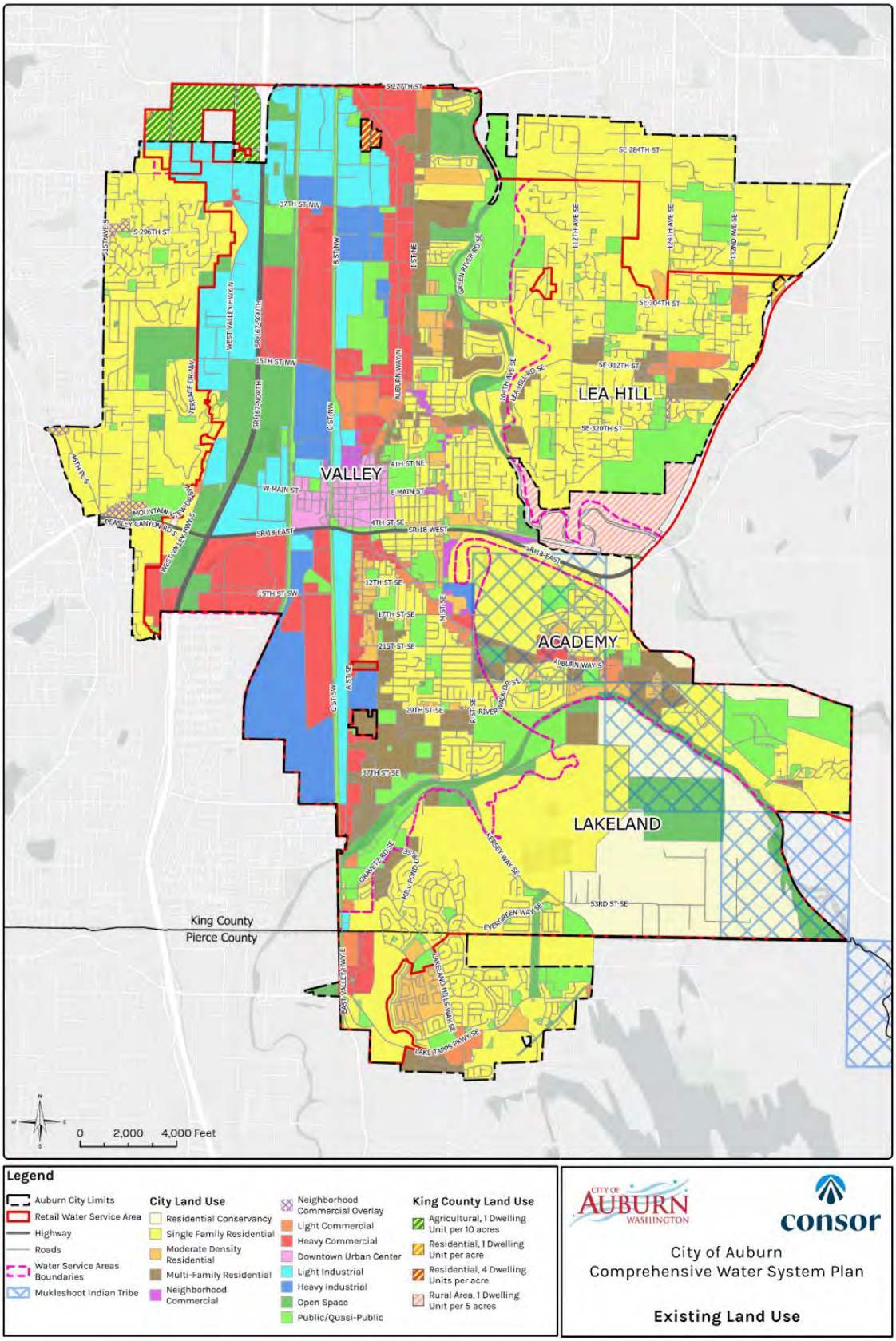
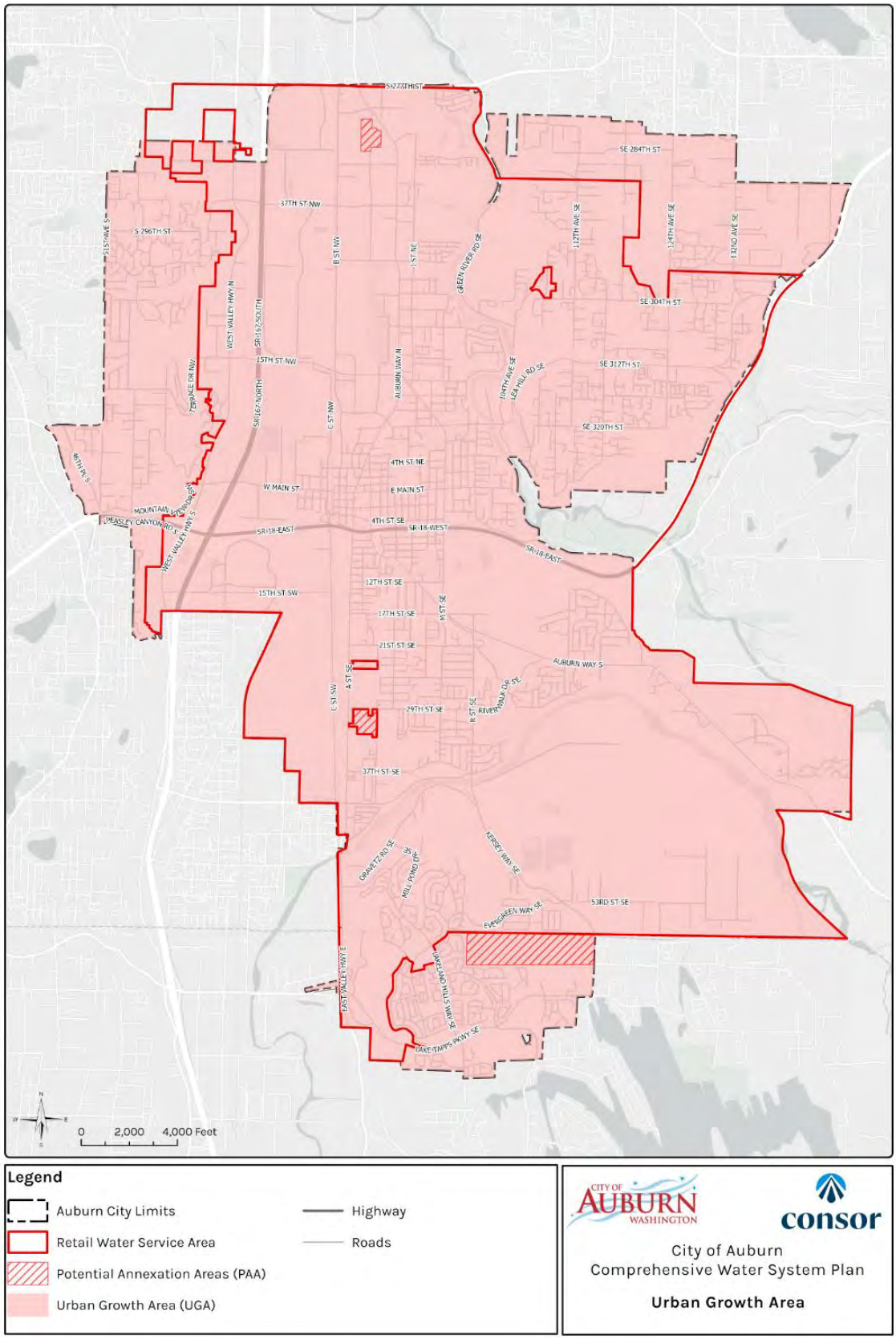


Figure 1-6 | Urban Growth Area



1.6.1.2 City of Algona (Algona)

In 1996, the City and Algona entered into a water supply interlocal agreement (IA3) for the City to provide wholesale water supply to Algona. In 2002, the agreement was superseded with Interlocal Agreement 3A (IA3A). IA3A called for the City to provide for a firm quantified (uninterruptible) wholesale water supply and Algona would provide the City its groundwater rights from the failed well located at the intersection of 3rd Avenue and Washington Boulevard. Per IA3A, Algona also agreed to maintain its 100,000 gallons of system storage and financially participate in an additional 180,000-gallon share of the City's Reservoir 6 storage capacity. Per request in 2016, Algona elected to increase its participation in Reservoir 6 by 100,000 gallons, which accounted for a total share of 280,000-gallon storage capacity. If the City experiences any failure or decreased capacity, the supply of water to Algona may be decreased by the same percentage that is experienced by the City.

Algona is served (per agreement IA3A) through 8-inch meter located at 1st Avenue and by two 8-inch intertie meter stations located at 1149 Industry Drive SW, and at Boundary Boulevard and Milwaukee Avenue. A fourth 8-inch master meter is located near Iowa Drive and West Valley Highway. All the interties are connected to the City's 242 zone.

1.6.1.3 Lake Meridian Water District (LMWD)

An intertie between the City and LMWD was constructed in 1996 as part of Interlocal Agreement 2 (IA2), to enable the District to purchase water from the City. The intertie also allows the City to provide an emergency supply to Kent's East Hill Service Area through LMWD. A provision of the IA2 agreement calls for the district to provide an emergency supply to the City when needed for the Lea Hill Service Area. As part of the IA2, the City agrees to provide up to 2.5 mgd of MDD to LMWD (total maximum day demand of 5.0 mgd).

Per the 2017 Amendment to the IA2, LMWD discontinued regular purchase of water from the City and instead switched their primary supply to CWD. The amendment maintained the intertie with LMWD but modified the conditions of service to interruptible.

1.6.2 Emergency Interties

The City has emergency interties with seven water systems as summarized in

Table 1-3.

Table 1-3 | Emergency Interties

Water System	Receiver	Location	Auburn Pressure Zone	Mode of Operation	Meter Size	Operated by
City of Algona	City of Algona	Boundary Boulevard and Celery Ave	Valley 242	Manual	N/A	City of Auburn
City of Algona	City of Algona	Boundary Boulevard and O Street	Valley 242	Manual	8"	City of Auburn
City of Bonney Lake	City of Bonney Lake	Evergreen Way SE (southwest of Lakeland Hills Way)	Lakeland 697	Manual	8"	City of Bonney Lake
City of Bonney Lake	Two-way	Lakeland Hills Way & 59th Avenue	Lakeland 697	Manual	N/A	City of Auburn/ Bonney Lake
City of Bonney Lake	Two-way	Evergreen Way and Nathan Avenue	Lakeland 697	Manual	N/A	City of Auburn/ Bonney Lake

Water System	Receiver	Location	Auburn Pressure Zone	Mode of Operation	Meter Size	Operated by
City of Bonney Lake	Two-way	Olive Avenue, south of Evergreen Loop	Lakeland 697	Manual	N/A	City of Auburn/ Bonney Lake
City of Kent	Two-way	78th Avenue S and S 277th Street	Valley 242	Manual	6"	City of Auburn/ Kent
City of Pacific	City of Pacific	Ellingson Road near Pacific Ave	Valley 242	Manual	4"	City of Pacific
City of Pacific	City of Pacific	A St SE (north of White River)	Valley 242	Manual	N/A	City of Pacific
Lakehaven Water & Sewer District (LWSD)	City of Auburn	Aaby Drive and Knickerbocker Drive	Valley 242	Manual	6”	LWSD
LMWD	Two-way	127th Place SE, south of SE 299th Place	Lea Hill 648	Manual	N/A	City of Auburn
LMWD	Two-way	124th Avenue SE and SE 300th Way	Lea Hill 648	Manual	N/A	City of Auburn
LMWD	LMWD	SE 300th & 132nd Ave SE	Lea Hill 648	Manual	8”	City of Auburn
LMWD	LMWD	SE 288th St & 132nd Ave SE	Lea Hill 648	Manual	8”	City of Auburn

1.7 System Policies

The City manages the water utility in accordance with established water system policies that govern various facets of utility operations. The water system policies are established to support a vision or mission and to provide a framework for the design, operation, and ongoing wellbeing of the City’s water utility. The policies establish consistency and ensure that adequate levels of service are provided throughout the system. The policies also provide documentation to current water-system customers, as well as those considering service from the City.

The City’s Water Comprehensive Plan is based upon the following mission statement for the water utility:

“The City will provide for the efficient, environmentally sound and safe management of the existing and future water system within Auburn’s service area.”

For areas outside its municipal boundaries, the City maintains water franchises that allow for construction, operation, and maintenance of its facilities. Water system design and construction in the franchise areas are consistent with franchise requirements and the design and construction standards included in this Plan.

The City’s water system policies and criteria, provided in Appendix A, are grouped within goal statements that are headlined under seven categories: Business Practices, Service Area, Operations and Maintenance, Financial, Planning, Environmental Stewardship, and Design and Construction.

1.8 Duty to Serve

The City recognizes its duty to serve all new service connections within its RWSA when the following thresholds are met per WAC 246-290-106.

- The water system has sufficient capacity to serve water in a safe and reliable manner.
    - To ensure the water system's capacity for safe water delivery, hydraulic analysis is conducted. This involves assessment of peak demand patterns, pressure requirements, and potential system expansions. The goal is to establish and maintain a water supply infrastructure that can reliably and securely accommodate the needs of new connections.
- The service request is consistent with adopted local plans and development regulations.
    - Service requests undergo a comprehensive review to ascertain their alignment with local plans, including the City's Design and Construction Standards.
- The water system has sufficient water rights to provide service.
    - Assessment of water production data is performed for all sources to confirm the water system's capacity and compliance with available water rights.
- The water system can provide service in a timely and reasonable manner.
    - The assessment of the water system's capability to provide service promptly and reasonably encompasses evaluating infrastructure readiness, adherence to construction timelines, and minimizing disruption to existing customers. The City incorporates Washington State DOH recommendations for timely and reasonable service, which is defined as providing water service within 120 days of receiving a complete application, barring any extenuating circumstances.
    - If a customer or applicant is dissatisfied with a decision made by the City Engineer concerning water service, they may file a written objection with the Public Works Director within 15 working days of receiving the decision. The Director will respond within 15 working days. If the response is unsatisfactory, the appellant may request a hearing with the City's hearing examiner within 30 days.
    - The hearing examiner's decision is final, but can be appealed in superior court following RCW 34.05.510 through 34.05.598.
    - For customers in the city's RWSA located within unincorporated areas of King County, if all city-level appeals are exhausted and unresolved, the dispute may be escalated to the King County Utilities Technical Review Committee (UTRC) in accordance with King County Code (KCC) 13.24.080.

The City will plan to provide water service to all customers within its RWSA, in accordance with the WAC requirements and City Code. Revisions to the City's RWSA will be made only by written agreement and in accordance with local, county and state regulations.

1.9 Local Government Consistency

The City has submitted this plan to DOH, King and Pierce Counties, adjacent utilities, and local governments as part of the Agency Review process. Local government consistency review is completed in accordance with WAC 246-290-100(7) and WAC 246-290-108 to confirm consistency between the water system plan and local comprehensive plans, development regulations, and other local codes.

The consistency review also supports planning and development, minimizing conflicts and legal entanglements. The completed and signed Local Government Consistency Determination forms (DOH 331-568) are provided in Appendix C.

1.10 Watershed Plan Consistency

The City is in the Duwamish-Green (WRIA 9) and Puyallup-White Watershed (WRIA 10). The City currently has no plans to expand water rights place of use to include any portion of the service area that was not previously within the place of use for the water right when documented in an approved planning or engineering document and as identified in this Plan.

If the City expands water rights place of use, the new area within the water rights place of use service area will be formed in compliance with the terms of WAC 246-290-107 and consistent with the Watershed Plan approved for WRIA 9 or WRIA 10, under RCW 90.54.040(1).

CHAPTER 2

Basic Planning Data

This chapter's objective is to meet the requirements of WAC 246-290-100 (4)(b), incorporating basic planning data into this 2024 Water System Plan (WSP). It provides current population and water demand information; estimates future population and water demand; validates data; and compares future population and water demand estimates with locally adopted plans.

Projecting realistic future water requirements, or demand, is necessary for planning infrastructure projects and securing adequate water supply to meet future growth. Future water demands are a key component of the water system analyses presented in this WSP and in the City's Capital Improvement Program (CIP). Accurate demand projections require a thorough review of historical water use, predicting where and how much growth will occur, and estimating the future water use for existing and new customers.

The following topics are addressed in this chapter:

2.1 Water Service Area Population
2.2 Water Service Connections and Usage
2.3 Water Supply and Production
2.4 Distribution System Leakage
2.5 Water Supply Characteristics
2.6 Water Supply Reliability Evaluation
2.7 Future Population Projections and Land Use
2.8 Future Water Demand

2.1 Water Service Area Population

The City's current area within the RWSA boundary is smaller than its City limits, with adjacent purveyors serving the portion of the City's population that is outside its RWSA boundary, as shown in **Figure 1-1** presented in **Chapter 1**. As a result, historical City population data does not accurately represent the population served by the City's water system. To calculate the RWSA population, the Housing Unit Method was used, which is presented as an acceptable option for population determination in the Washington State Department of Health's (DOH) Water System Planning Guidebook 2020 Revision. The Housing Unit Method calculates the population based on the number of residential units and the area's average person's per household ratio.

The historical population data for the water system, as calculated using the Housing Unit Method, is presented in **Table 2-1**. These calculated populations are consistent with the numbers the City has reported on its Water Facilities Inventory (WFI), included in **Appendix H.**

Table 2-1 | Historical Population

	2015	2016	2017	2018	2019	2020	2021	2022
Persons per household[1]	2.73	2.75	2.76	2.77	2.79	2.80	2.81	2.82
Single-Family Residential Connections[2,3]	11,600	12,128	11,852	11,857	11,883	11,894	11,985	11,980
Multi-Family Residential Connections[2]	1,045	1,070	1,035	1,044	1,054	1,054	1,064	1,052
Calculated Multi-Family Units[4]	10,450	10,700	10,350	10,440	10,540	10,540	10,640	10,520
Calculated Population Served[5]	60,259	62,704	61,294	61,872	62,535	62,876	63,576	63,450
City Population[6]	78,210	80,362	82,058	84,352	86,353	87,256	88,080	88,750
City Employment (Non-Residential Population)[7]	37,298	39,466	29,487	40,855	41,985	39,092	37,871	N/A

Notes:

1. Persons per household per Washington State Office of Financial Management (OFM). 2021 and 2022 values are projected since OFM data is only available for the census period of 2010-2020.
2. Single and Multi-Family connections per City's water system billing records.
3. Single-Family Residential connections include duplexes per the City's design standards.
4. Assumed units per multi-family connection is 10 per the City's WFI, updated on 3/15/2022.
5. Calculated Population Served is calculated as the number of single-family connections plus the number of multi-family units multiplied by the persons per household.
6. City population per the Washington State OFM records.
7. Employment data is from the United States Census OnTheMap data source using a City-defined selection area.

Based on the calculated historical water system population presented in **Table 2-1**, the City's water system has seen growth in population between 2015 and 2022 averaging a one percent increase annually. The number of connections peaked in 2016 (along with the calculated population), however this was during the time when the City was transferring services to AMI metering, resulting in some apparent fluctuations of reported connections during the switchover that could not be easily rectified. The last row in **Table 2-1** provides the City population as reported by the Office of Financial Management (OFM). The City population has had a similar, steady growth to the calculated water system population, with an average annual growth rate of 1.8 percent annually. The City population as reported by the OFM is larger than the calculated water system population because the RWSA is smaller than the City limits as shown in the Water System Map (**Figure 1-3**). Additionally, growth in parts of the City beyond the RWSA has been greater than the rate of growth experienced within the RWSA. The OFM City population information is provided for reference; the calculated population served will be used for the purposes of this WSP.

2.2 Water Service Connections and Usage

Historical water use, or consumption, data was obtained from City records to characterize the demands of the City's customers. Annual water use data for the years 2015 to 2022 was used to develop historical demand patterns and parameters, which represent current and likely future water use. Two key demand parameters were generated from the data: typical water use per customer classification, and typical water use per equivalent residential unit. These parameters were used as the basis of future demand projections.

2.2.1 Historical Accounts

The City's water customers are divided into eight customer classifications, which are:

- Single-family Residential (SFR).
- Multi-family Residential (MFR).
- Commercial.

- Manufacturing and Industrial.
- Schools.
- Municipal (City Accounts).
- Irrigation.
- Wholesale.

The number of connections for each customer classification is summarized in Table 2-2. Unmetered, also referred to as non-revenue water, also accounts for a portion of the City's water use, however, this classification is not included in Table 2-2. Please note that per the City's standards, SRF connections include duplexes.

Table 2-2 | Historical Number of Connections per Customer Classification

	2015	2016	2017	2018	2019	2020	2021	2022
Single-Family Residential	11,600	12,128	11,852	11,857	11,883	11,894	11,985	11,980
Multi-Family Residential	1,045	1,070	1,035	1,044	1,054	1,054	1,064	1,052
Commercial	1,317	1,386	1,340	1,339	1,333	1,328	1,284	1,244
Manufacturing & Industrial	50	4	4	3	2	2	2	2
Schools	70	64	60	60	60	60	58	55
Municipal (City Accounts)	32	34	33	33	33	33	33	33
Irrigation	459	499	484	499	514	514	620	675
Wholesale	8	8	8	7	5	5	5	5
Number of Connections, Total	**14,581**	**15,193**	**14,816**	**14,842**	**14,884**	**14,890**	**15,051**	**15,046**

As summarized in Table 2-2, SFR connections make up approximately 80 percent of all accounts. The total number of connections has increased by approximately three percent between 2015 and 2022. Variation in the total number of water service connections in 2016 is linked to the rollout of AMI technology from 2016 to 2017. Throughout this transitional phase, there may have been instances of double counting meters in 2016, leading to an inflated number of connections. Subsequently, there was a notable decrease in 2017 as the number of connections were normalized.

A significant change in manufacturing and industrial accounts occurred between 2015 and 2016 due to some meters being reclassified as commercial connections. Manufacturing and industrial services are classified as businesses engaging in the manufacture of products, materials, equipment, machinery, and supplies with a meter size of two inches or larger and a monthly annual average water consumption equal to or greater than 30,000 cubic feet. There were several accounts that did not meet the criteria for this classification and were changed to Commercial classification rate following 2015. The total number of connections from 2016 to 2017 decreased due to low and high flow meters (two meters) being replaced with one meter; this impacted Commercial, Manufacturing and Industrial, and School connections.

The number of SFR, MFR, and commercial connections peaked in 2016, however, as mentioned in the opening paragraph, this is likely due to the fluctuations in the City's transition to AMI metering. Municipal connections remained constant over this period.

Wholesale connections were reduced in 2019 when Covington Water District (CWD) and Lake Meridian Water District (LMWD), formerly known as King County Water District # 111, discontinued regular purchase of water from the City.

2.2.2 Historical Consumption

The City's historical annual water consumption based on City billing data for each customer classification is presented in **Table 2-3** in million gallons (MG); the table does not include non-revenue (unmetered) water.

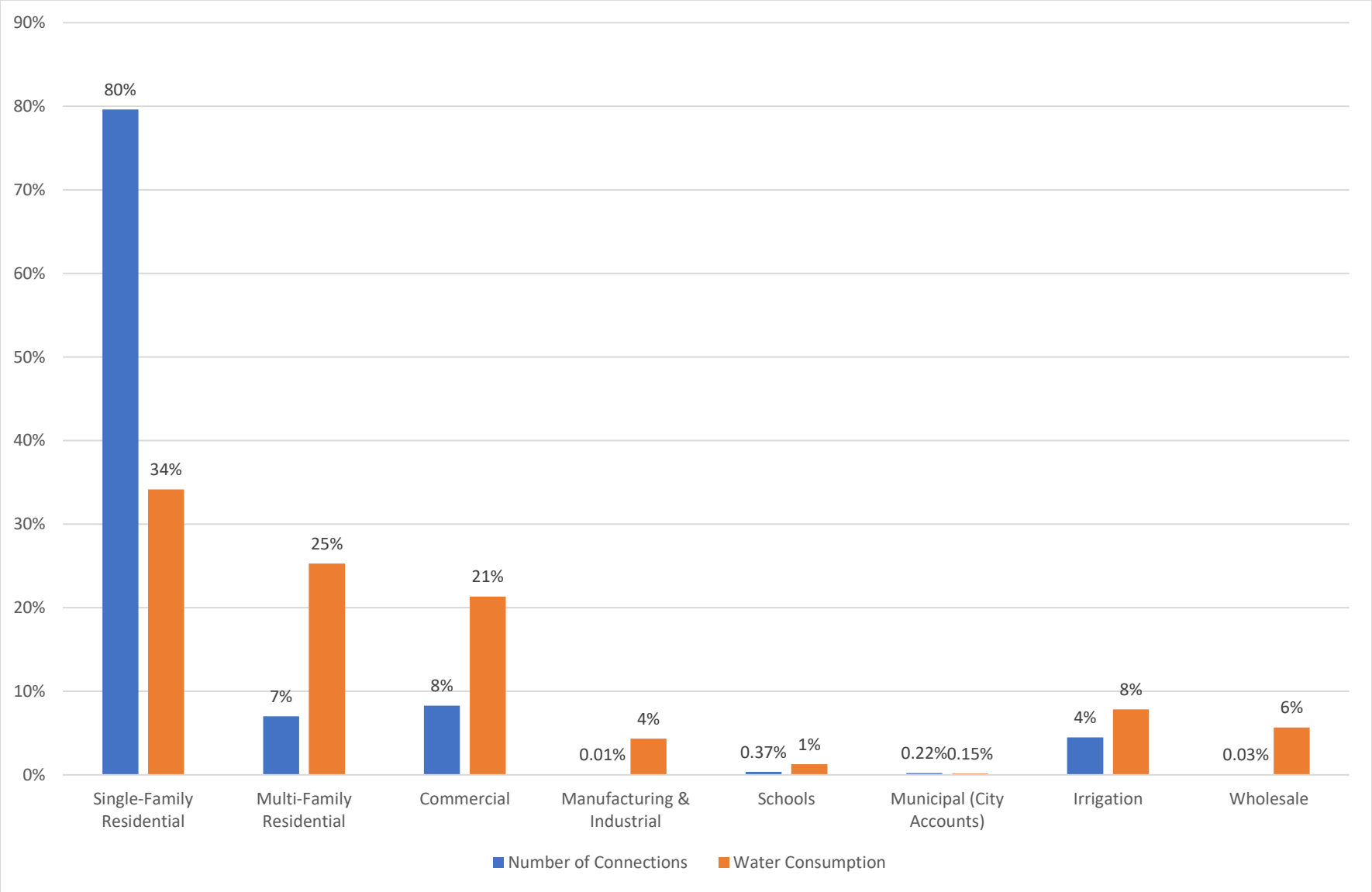
Table 2-3 | Historical Consumption in Million Gallons (MG) by Customer Classification

	2015	2016	2017	2018	2019	2020	2021	2022
Single-Family Residential	774	753	759	836	729	777	796	755
Multi-Family Residential	537	546	523	587	536	553	559	559
Commercial	501	581	595	594	585	461	470	472
Manufacturing & Industrial	170	153	123	124	121	101	94	96
Schools	41	49	56	49	42	30	33	28
Municipal (City Accounts)	5	4	5	5	5	4	4	3
Irrigation	163	162	160	102	102	118	173	173
Wholesale	425	428	153	137	130	131	128	125
Total Consumption, MG	**2,616**	**2,676**	**2,374**	**2,433**	**2,251**	**2,175**	**2,257**	**2,211**

Consumption has slightly declined over the period of record. While SFR and MFR consumption varied from year to year, it generally saw a slight increase during the study period which is correlated to the steady increase in the number of connections presented in **Table 2-2**. SFR and MFR consumption peaked in 2018, which is likely due to AMI meters implementation. Manufacturing and industrial demands decreased between 2015 and 2022 which is attributed to the reduced number of connections (reclassification) presented in **Table 2-2** as well as reduced consumption from Boeing which is the City's only current manufacturing and industrial customer. Commercial and school consumption decreased in 2020 through 2022 which is likely correlated with remote working and schooling that resulted during the COVID-19 pandemic. Wholesale demands also decreased over the planning period since LMWD and CWD discontinued purchase of water from the City. Additionally, no wholesale water was supplied to the Muckleshoot Indian Tribe (MIT) for the future fish hatchery; refer to **Section 2.8** for additional information.

Figure 2-1 presents the percentage of customer connections and annual billed water consumption by customer classification in 2022. Comparing the number of connections and water consumption illustrates the differences in water consumption between the different customer classifications. For example, SFR customers represent 80 percent of the connections, yet only 34 percent of the total consumption in 2022. Conversely, MFR customers represent seven percent of the connections, but 25 percent of the total consumption in 2022. Wholesale customers have six accounts in 2022 (0.04 percent of the total connections), but account for six percent of the total consumption in 2022. Similarly, manufacturing and industrial have two connections in 2022 (0.01 percent of the total connections), but account for four percent of the total consumption in 2022.

Figure 2-1 | Comparison of Number of Connections to Annual Water Consumption per Customer Classification in 2022



2.2.2.1 Historical Wholesale Consumption

Wholesale consumption decreased between 2015 and 2022. From 2015 to 2016 wholesale consumption represented 16 percent of the City's annual water consumption. In 2017 wholesale consumption decreased to six percent and remained relatively constant through 2022.

The City has two wholesale water agreements, one with the City of Algona and the other with LMWD. These agreements are described below, and copies of the agreements are included in Appendix G.

The City of Algona relies on the City of Auburn for water supply under the Water System Intertie Agreement, Algona/Auburn Intertie Agreement No. 3A (Agreement 3A). Agreement 3A was amended in 2002 to continue the agreement for the City of Auburn to provide a portion of the City of Algona's long-term water supply needs. Additionally, in 2016 the City of Algona purchased 100,000 gallons of additional storage in Lakeland Reservoir 6, bringing their total storage capacity to 280,000 gallons. Algona's consumption increased in 2018. Water consumption averaged 0.33 mgd between 2015 and 2017, and 0.36 mgd between 2018 and 2022. See Table 2-6 for annual usage totals.

The City's Interlocal Agreement 2 (IA2) outlines the agreement with LMWD. The City's agreement with LMWD is on an interruptible basis and allows sales up to 2.5 mgd. This agreement was executed in October of 1996 and amended as Resolution 5332 in 2017. The agreement will remain in full force unless terminated by mutual agreement of the participants. LMWD did not purchase wholesale water during the planning period since they discontinued regular purchase of water from the City of Auburn in 2017 per the amendment to IA2. Instead, LMWD switched their primary supply to CWD, however, LMWD still maintains intertie with the City to use as a wholesale water supply on an as-needed basis.

The first amendment to IA2 also included the termination of CWD's wholesale agreement with the City; CWD did not purchase wholesale water during the planning period.

2.2.3 Water Use Per Connection and Equivalent Residential Units

The water use, or demand, of each customer classification can be expressed in terms of equivalent residential units (ERUs) for forecasting and planning purposes. One ERU is defined as the average quantity of water beneficially used by one average, full-time, SFR per day. The ERU calculation does not include non-revenue water or distribution leakage. Table 2-4 summarizes the annual demand per ERU from 2015 to 2022 in gpd.

Table 2-4 | Historical Annual Demand per ERU (gpd per ERU)

	2015	2016	2017	2018	2019	2020	2021	2022
SFR Consumption (MG)[1]	774	753	759	836	729	777	796	755
Number of SFR Connections[2]	11,600	12,128	11,852	11,857	11,883	11,894	11,985	11,980
ERU_{ADD} (gpd)[3]	**183**	**170**	**176**	**193**	**168**	**179**	**182**	**173**

Notes:
1. Per annual residential consumption from **Table 2-3.**
2. Per residential connections from **Table 2-2.**
3. Calculated as annual consumption divided by number of connections.

To be conservative, an ERU planning value higher than the average was used by the City for demand forecasting. The 75th percentile of all the eight-year values was used to select the planning ERU value of 182 gpd. This methodology is consistent with the City's 2015 Plan. The ERU value of 182 gpd is seven percent lower than the 2015 Plan's ERU planning value of 195 gpd per ERU.

The conversion of total water consumption to ERUs provides a means to express water consumption by non-residential customers as an equivalent number of SFR accounts. The number of ERUs per account is obtained by dividing the water consumption per account by the water use per ERU (182 gpd for this planning period). Table 2-5 presents the number of ERUs per account for each customer classification based on the planning value of 182 gallons per ERU.

Table 2-5 | Historical Demand as Equivalent ERUs per Customer Classification

	2015	2016	2017	2018	2019	2020	2021	2022
Single-Family Residential(ERUs)[1]	11,600	12,128	11,852	11,857	11,883	11,894	11,985	11,980
Multi-Family Residential (ERUs)	8,078	8,194	7,864	8,832	8,067	8,295	8,403	8,411
Commercial (ERUs)	7,542	8,709	8,947	8,933	8,806	6,920	7,066	7,096
Manufacturing & Industrial (ERUs)	2,561	2,298	1,857	1,864	1,817	1,510	1,412	1,437
Schools (ERUs)	614	730	842	742	624	448	497	420
Municipal (City Accounts) (ERUs)	69	62	69	72	82	56	67	49
Irrigation (ERUs)	2,454	2,431	2,412	1,528	1,534	1,775	2,608	2,603
Wholesale (ERUs)	6,395	6,414	2,299	2,057	1,949	1,966	1,925	1,884
Annual Demand Equivalent (ERUs)	**39,314**	**40,967**	**36,141**	**35,884**	**34,762**	**32,863**	**33,963**	**33,881**

Note:

1. The number of Single-Family Residential ERUs is equivalent to the actual number of connections. For all other customer classifications, the planning value of one ERU is equivalent to 182 gpd.

2.2.4 Largest Water Users

The top 20 largest water users for the City's water system are summarized in Table 2-6 and Figure 2-2 with rank assignments based on 2022 consumption. Total consumption values are presented in MG. This list, in conjunction with the information above, provides information on where water is consumed in the system. It is important to note the type of customer classification, because the top 20 water users consume a significant percentage of the total consumption. As mentioned above, SFR connections make up most of the total connections and water consumption for the system, but no individual SFR connections are listed within the top 20 largest water users. Though the City of Algona is comprised of individual SFR's, the City of Algona is one of the top 20 largest water users because it is a wholesale customer supplied via a limited number of connections.

The top 20 water users in the City's water system accounted for approximately 24 percent of the total water system consumption in 2022. LMWD was the largest water user in 2015 and 2016, purchasing over 300 MG per year, but discontinued regular purchase of consumed water from the City in 2017. Copper Gate, Promenade Apartments, and Villas/Reserve are developments that were constructed after 2015, which pushed Tall Cedars and Leisure Manor multi-family users out of the top 20. Boeing and the City of Algona make up almost 50 percent of the top 20 water users' consumption.

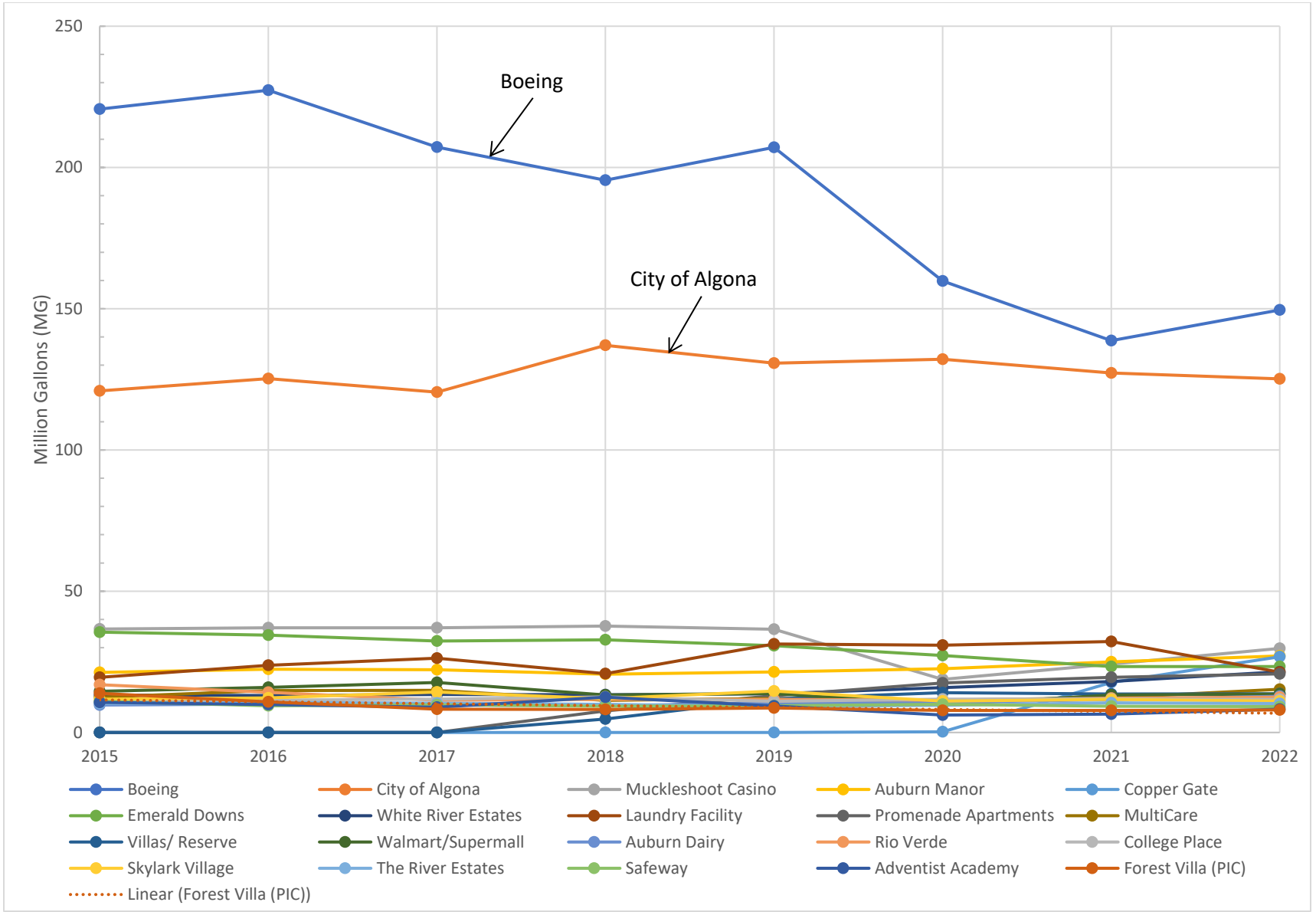
Table 2-6 | Historical Annual Consumption of the Top 20 Largest Water Users in Million Gallons (MG)

Rank[1]	Customer Name	Classification	Service Area	2015	2016	2017	2018	2019	2020	2021	2022
1	Boeing	Manufacturing/Commercial	Valley	220.67	227.34	207.23	195.48	207.15	159.83	138.70	149.57
2	City of Algona	Wholesale	Valley	120.93	125.29	120.46	137.04	130.75	132.07	127.22	125.18
3	Muckleshoot Casino	Commercial	Academy	36.65	37.04	37.08	37.66	36.49	18.79	24.24	29.79
4	Auburn Manor	Multi-Family	Valley	21.25	22.367	22.24	20.61	21.45	22.59	25.03	27.10
5	Copper Gate[2]	Irrigation/Multi-Family	Valley	-	-	-	-	-	0.22	17.70	26.80
6	Emerald Downs	Commercial/Irrigation	Valley	35.51	34.48	32.40	32.81	30.69	27.28	23.33	23.36
7	White River Estates	Multi-Family	Valley	13.24	13.09	13.42	13.36	13.66	15.87	18.06	21.47
8	Laundry Facility	Commercial	Valley	19.52	23.73	26.25	20.81	31.31	30.87	32.19	21.32
9	Promenade Apartments[2]	Commercial/Irrigation/Multi-Family	Lea Hill	-	-	-	7.58	13.00	17.53	19.48	20.74
10	MultiCare	Commercial/Irrigation	Valley	12.45	14.86	14.95	11.35	12.04	11.48	12.32	15.30
11	Villas/Reserve[2]	Commercial/Irrigation/Multi-Family	Valley	-	-	-	4.75	11.84	14.09	13.62	13.66
12	Wal-mart/Supermall	Commercial/Irrigation	Valley	14.54	15.98	17.70	13.31	13.78	9.79	13.26	13.58
13	Auburn Dairy	Commercial	Valley	9.73	10.03	9.73	9.49	10.38	10.63	11.58	12.82
14	Rio Verde	Multi-Family	Valley	16.91	14.21	11.41	11.72	11.72	11.46	12.12	12.48
15	College Place	Multi-Family	Lea Hill	10.81	11.46	11.75	12.59	10.99	11.77	11.89	11.74
16	Skylark Village	Multi-Family	Valley	11.80	12.23	14.30	11.93	14.65	11.13	11.73	11.11
17	The River Estates	Multi-Family	Valley	10.23	10.59	10.38	9.97	9.17	9.59	10.49	10.27
18	Safeway	Commercial	Valley	11.01	9.48	9.81	9.27	9.44	9.95	9.32	9.14
19	Adventist Academy	School/Multi-Family	Academy	10.66	9.92	8.89	12.49	9.33	6.17	6.50	8.26
20	Forest Villa (PIC)	Multi-Family	Academy	13.86	10.83	8.24	8.13	8.63	7.80	7.82	8.00
-	LMWD[3]	Wholesale	Lea Hill	302.89	303.02	29.40	-	-	-	-	-
		TOTAL CONSUMPTION (MG)[3]		**905.86**	**918.45**	**618.85**	**588.28**	**613.31**	**545.32**	**546.66**	**571.67**

Notes:

1. Rank assignments are based on 2022 consumption data.
2. Service location was constructed after 2015 WSP was published.
3. LMWD was the largest water user in 2015 and 2016 but discontinued purchase of water from the City in 2017. Included to contribute to the total consumption.
4. The annual total is the sum of the top 20 largest users from each year; Tall Cedars and Leisure Manor consumption data is not shown but is included in the total.

Figure 2-2 | Historical Annual Consumption of the Top 20 Largest Water Users in Million Gallons (MG)



2.3 Water Supply and Production

The historical average and maximum water demands are important parameters when performing system and supply analyses. The term "water demand" refers to all the water requirements of a system including metered customers, unmetered water use, and unaccounted for water loss such as leakage and theft. For this reason, the City's supply data, which accounts for all water demand, was used to calculate the Average Day Demand (ADD) and Maximum Day Demand (MDD) for each year.

2.3.1 Historical Water Supply

The City produces water through its springs, wells, and, when needed, wholesale water purchases. **Table 2-7** summarizes the amount of water produced and purchased by the City between 2015 and 2022 as MG. The City has not purchased water from the City of Tacoma since 2016.

Table 2-7 | Historical Annual Water Supply by Source in Million Gallons (MG)

	2015	2016	2017	2018	2019	2020	2021	2022
Lakeland Well 5	4.9	0.1	0.2	0.5	1.0	0.9	1.2	3.3
Lakeland Well 5A	54	45	64	76	68	65	72	59
Lakeland Well 5B	-	-	-	-	-	-	-	-
Valley Well 1	-	200	336	93	143	143	57	73
Valley Well 2	-	-	-	270	296	235	305	314
Valley Well 3A	-	-	-	-	-	-	-	-
Valley Well 3B	-	-	-	-	-	-	-	-
Valley Well 4	302	430	421	121	96	84	88	66
Valley Well 6	-	-	-	402	445	349	438	468
Valley Well 7	-	-	-	-	-	-	-	-
Coal Creek Springs	1,456	1,613	1,510	1,315	1,208	1,268	1,338	1,225
West Hill Springs	173	198	114	176	136	133	140	157
Algona Well 1	-	-	-	-	-	-	-	-
Total Production (MG)[1]	2,033	2,487	2,506	2,464	2,410	2,313	2,443	2,395
Total Purchased (MG)	732	321	-	-	-	-	-	-
Total Supply (MG)	**2,765**	**2,808**	**2,506**	**2,464**	**2,410**	**2,313**	**2,443**	**2,395**

Note:

1. Small differences exist between the total production value and the sum of individual production values by source. This is due to the use of raw unprocessed data for individual sources, which was subsequently processed to identify and remove outliers, correct data entry errors and account for anomalies that could distort the overall results. These adjustments ensure that the . Total Production values presented depict the most accurate information available.

Table 2-8 | 2022 Monthly Water Production by Source (MG)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
Lakeland Well 5	0.4	0.2	0.2	0.2	0.2	0.2	0.9	0.6	0.1	0.1	0.1	0.1
Lakeland Well 5A	6	5	6	6	6	6	5	6	6	6	-	1
Lakeland Well 5B	-	-	-	-	-	-	-	-	-	-	-	-
Valley Well 1	3	1	-	1	-	3	19	41	5	-	-	-
Valley Well 2	27	25	29	28	29	25	30	29	24	23	21	24

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
Valley Well 3A	-	-	-	-	-	-	-	-	-	-	-	-
Valley Well 3B	-	-	-	-	-	-	-	-	-	-	-	-
Valley Well 4	3	2	2	3	-	2	18	27	8	1	-	-
Valley Well 6	41	37	44	41	43	36	44	44	37	35	31	35
Valley Well 7	-	-	-	-	-	-	-	-	-	-	-	-
Coal Creek Springs	90	71	77	62	83	110	129	159	153	112	89	90
West Hill Springs	13	11	13	12	13	13	13	15	14	14	13	13
Algona Well 1	-	-	-	-	-	-	-	-	-	-	-	-

2.3.2 Average Day Demands and Maximum Day Demands

Table 2-9 summarizes the historical ADD and MDD based on production from 2015 through 2022.

To calculate the ADD, the total annual supply was divided by the number of days in the year.

Historical values of MDD are equivalent to the highest production and purchase in one day each year, usually during the summer when irrigation use is highest. The MDD is a key parameter used for supply capacity, pump station discharge rates, reservoir capacity, and pump sizes. The peaking factor is also a key parameter in developing the future MDD projections.

Table 2-9 | Historical Annual ADD, MDD, Peak Day, and Peaking Factor

	2015	2016	2017	2018	2019	2020	2021	2022
Annual Supply (MG)[1]	2,765	2,808	2,506	2,464	2,410	2,313	2,443	2,395
Average Day Demand (mgd)	7.57	7.67	6.87	6.75	6.60	6.32	6.69	6.56
Maximum Day Demand (mgd)	11.62	12.56	11.76	11.60	11.25	12.43	11.77	11.78
Max Day Date (month/day)	6/28	8/25	8/22	7/27	8/1	7/29	7/27	7/29
MDD/ADD Peaking Factor	1.53	1.64	1.71	1.72	1.70	1.97	1.76	1.80

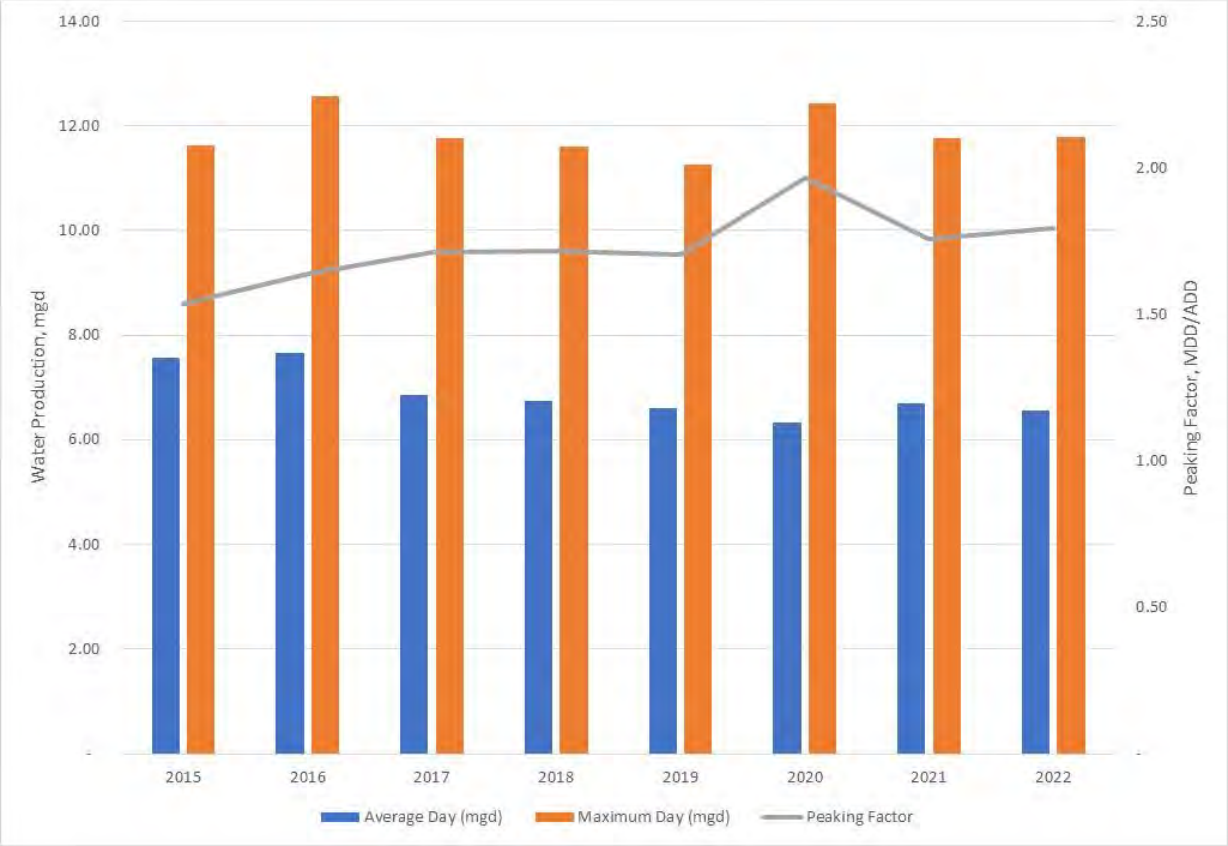
Note:
1. Value is from **Table 2-7.**

The last row of **Table 2-9** presents the historical MDD to ADD peaking factor, which normalizes the historical data to compare between years. The minimum MDD factor was 1.53 in 2015, and the maximum MDD was 1.97 in 2020.

Due to variability of the peaking factor, the City has chosen to use the 75th percentile of the historical peaking factors in demand projections, which is 1.77. This factor provides a better representation of the peaking factors observed historically for water supply predictions.

Figure 2-3 shows that from 2015 to 2022 the ADD has decreased, which is correlated with improved water use efficiency, but the MDD and MDD/ADD peaking factor have increased. This is likely due to warmer and drier summer months and a reduction in the ADD after CWD opted out of their original agreement with the City, terminating their purchase of water, and LMWD stopped regular purchase of consumed water from the City, switching to interruptible supply.

Figure 2-3 | Historical Water Production with Peaking Factor



2.3.3 Peak Hour Demand

Peak Hour Demand (PHD) is the amount of water used, excluding fire flow, during the largest use hour of the year. Because the City does not track hourly production data, PHD was estimated based on Equation 3-1 from the DOH Water Design Manual, which is as follows:

$PHD = (ERU_{MDD}/1440)\ [(C \times N) + F] + 18$

Where **PHD =** Peak Hourly Demand, total system (gpm)
C = Coefficient Associated with Ranges of ERUs (1.6 for systems with more than 500 ERUs)
N = Number of ERUs based on MDD
F = Factor Associated with Ranges of ERUs (225 for systems with more than 500 ERUs)
ERU_{MDD} = Maximum Day Demand per ERU (gpd)

The calculated annual PHD for the system is summarized in **Table 2-10**.

Table 2-10 | Historical Peak Hour Demand

	2015	2016	2017	2018	2019	2020	2021	2022
ERU_{MDD} (gpd)	279	298	312	313	310	358	320	327
Number of ERUs based on MDD	41,586	42,115	37,692	37,068	36,253	34,696	36,747	36,025
PHD (gpm)	12,973	14,019	13,135	12,950	12,567	13,881	13,140	13,159
PHD to MDD Factor	1.61	1.61	1.61	1.61	1.61	1.61	1.61	1.61

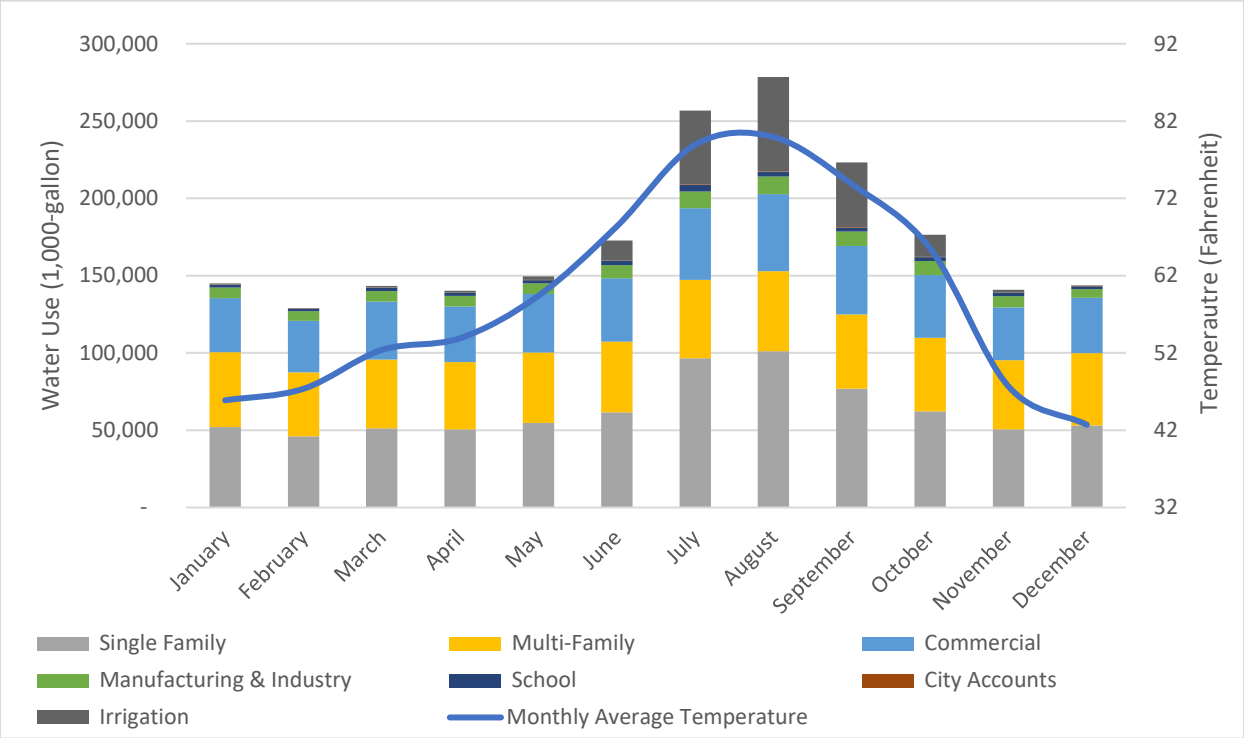
The last row of **Table 2-10** provides the calculated PHD to MDD factor, which normalizes the historical data to compare between years. The calculated PHD factor remained consistent at 1.61 between 2015-2022. Due to this consistency, the City has elected to use the PHD factor of 1.61 in future demand projections.

2.3.4 Seasonal Variations

The pattern of water consumption differs between the customer classifications. Water use increases significantly during the summer when daylight hours are longer, and lawn and landscape watering is prominent. Other outdoor uses, including car washing, pools, and recreation, are also at their highest during summer months.

Figure 2-4 presents the effect that temperature has on water usage by comparing 2022 monthly consumption data per customer classification to the average monthly temperature.

Figure 2-4 | Temperature Effects on Water Usage in 2022



As seen in **Figure 2-4**, SFR and irrigation customers show a significant peak in total consumption during the summer months. Other customer classifications show a smaller similar peak during these months. MFR customers do not show a significant peak during summer monthly because City's policy dictates the use of separate irrigation accounts for all non-SFR accounts. These monthly variations can be used to target water use efficiency efforts and/or to project future water-use patterns for planning purposes.

2.4 Distribution System Leakage

Distribution System Leakage (DSL) represents the difference between production and documented water use (retail, wholesale, and authorized unmetered). It may include inaccurate master and service connection meters, unaccounted-for non-revenue water use, pipeline leakage, and unauthorized use. DSL does not include authorized water usage such as water used for fire protection, flushing, construction, and other

maintenance and operations practices. However, to be credited, this must be accounted for by metering or estimating using credible means.

DSL is calculated as the difference between the total amount of water produced and the sum of water sold and authorized unbilled water usage. DOH requires the three-year average DSL to be under 10 percent to minimize water waste.

The City's estimated DSL for 2015 through 2022 is presented in **Table 2-11**. Revised DSL values have been provided to DOH for 2020, 2021 and 2022 that are lower than the values presented in **Table 2-11**. However, the revised values are not utilized for projections, as the revisions were made after the demand projections and system analysis were completed. Since the values used for demand projections and system analysis are slightly higher than the revised values, the projections are slightly more conservative than would have been necessary otherwise.

Table 2-11 | Historical Distribution System Leakage

	2015	2016	2017	2018	2019	2020	2021	2022
Total Water Supply[1] (MG)	2,765	2,808	2,506	2,464	2,410	2,313	2,443	2,395
Billed Consumption[2] (MG)	2,616	2,676	2,374	2,433	2,251	2,175	2,266	2,214
Authorized Non-Billed Consumption (MG)	7	4	6	13	7	4	5	5
Total Authorized Consumption (MG)	2,623	2,679	2,380	2,446	2,257	2,179	2,271	2,219
DSL (MG)	142	128	126	18	153	133	172	176
Annual Percent DSL	5.1%	4.6%	5.0%	0.7%	6.3%	5.8%	7.1%	7.4%
3-Year Rolling Average (Percent)	6.8%	5.1%	4.9%	3.4%	4.0%	4.3%	6.4%	6.7%
3-Year Rolling Average (MG)	183	139	132	91	99	101	153	161

Notes:
1. From **Table 2-7.**
2. From **Table 2-3.**

For the City's water system, the total three-year rolling average DSL ranged from 3.4 percent to 6.8 percent of the total production meeting DOH requirements and the City's goal. The City's annual average DSL over the period was 5.2 percent. During this period the City maintained a DSL below 10 percent on an annual basis, which is an improvement from the last planning period. Abnormally high authorized non-billed consumption was recorded in 2018 due to unidirectional flushing for the Valley Service Area. Starting in 2021, the billed consumption was updated to track hydrant water used during construction.

The City is committed to maintaining a 3-year rolling average DSL below 10 percent and actively works to identify and eliminate DSL throughout the system through its ongoing leak detection, meter calibration, and repair and replacement programs for water system infrastructure, as detailed in **Chapter 6 – Operations and Maintenance**. Additionally, the City has maintained efforts to reduce non-payment bills and water theft.

2.5 Water Supply Characteristics

The City has a diverse water supply consisting of two springs, ten wells and an emergency intertie with the City of Tacoma; refer to the Existing Facilities Figure provided in **Chapter 1** (**Figure 1-3**). The City's aquifer characteristics are described in several sources; this section draws mainly from the Conceptual Mitigation Plan (CMP) for Water Right Application G1-28404, provided in **Appendix S**.

Wells 1, 2, 3A, 3B, 4, 6, and 7 are in the lower alluvial aquifer in the Auburn Valley, referred to as the Valley Wellfield. This wellfield is mostly confined by the Osceola Mudflow, an important aquitard in the Auburn Valley depicted in Figure 4 of the CMP. Groundwater discharge from the upland aquifers is the primary source of recharge to the lower alluvial aquifer, which hosts all the City's wells. Groundwater generally moves upward in the valley aquifers and moves horizontally at approximately one to four feet per day. Alluvial groundwater from the White River also recharges the Green River alluvial aquifer. Groundwater in the vicinity of Wells 2, 6, and 7 discharges into the Puget Sound via the Green River and the Duwamish River valley. Wells 2, 6, and 7 are located northeast of downtown Auburn and collectively referred to as the Fulmer Wellfield. Wells 1, 3A, 3B, and 4 are in the White River Drainage Basin and Wells 2, 6, 7 and West Hill Springs are in the Green River Drainage Basin.

Wells 3A, 3B and 7 are not currently in use due to high manganese concentrations, however the City plans to install manganese treatment at each of these facilities to bring them back online. The City has a pending water right application for 13,443 acre-feet per year from the existing Wells 6 and 7 and a future Well 8. The City has sufficient water rights to meet current demands, 10-year, and 20-year demand projections, as shown in the Water Rights Self-Assessment Form provided in Appendix I. Mitigation obligations due to the proposed water right for Wells 6, 7, and 8 are listed below and are described in detail in the CMP:

- Mitigation of impacts to Green River,
- Mitigation of impacts to White River, and
- Mitigation of impacts to Mill Creek.

Wells 5, 5A, and 5B are in the Upland Wellfield and constructed within the Lakeland Service Area. The upland aquifers are recharged through precipitation and leakage from Lake Tapps and discharge into the White River system. Once Well 5B came online, the City discovered that the aquifer was not recovering. Well 5B has been offline since 2006. The safe yield of Wells 5 and 5A have been decreased from their design capacity due to a drop in the aquifer's capacity. Specific information on the individual wells and their associated water rights are provided in Section 3.4.1.

West Hill Springs draws from an unnamed confined aquifer. The spring source water flows by gravity into the Valley Service Area, although flows vary depending on aquifer conditions, and discharges into Mill Creek, which flows into the Green River.

Coal Creek Springs is the largest active water supply for the City and draws from a confined aquifer, however its flow varies depending on aquifer conditions. Coal Creek Springs collection system is located at the base of Lake Tapps Upland and is in the White River Drainage Basin. Further aquifer details are provided within the Wellhead Protection Program (WHPP) provided as Appendix T.

The City also owns two additional wells: the Algona Well 1 and the Braunwood Well. Algona Well 1 was acquired by the City in 1996 but has since been taken offline due to operational issues.

The City plans to use a groundwater flow model being developed by the USGS to predict potential impacts to surface water.

2.6 Water Supply Reliability Evaluation

The City's active water sources have maintained current production capacities and are deemed reliable, as they have back-up power sources available. The production of some water sources is limited by pump or intake capacity, as mentioned in Section 2.5, however all production is managed to be within available water rights and is managed by the physical capacity of each facility as summarized in Table 2-12.

Table 2-12 | Summary of Source Water Pumping or Production Capacity Compared to 2022 Maximum Daily Production

Source	Service Area	Pumping/Production Capacity (gpm)	Maximum Daily Production[1] (gpm)
Well 5	Lakeland	760	640
Well 5A	Lakeland	180	180
Well 5B	Lakeland	--[2]	--
Well 1	Valley	2,100	2,100
Well 2	Valley	1,600[4]	1,470
Well 3A	Valley	--[2]	--
Well 3B	Valley	--[2]	--
Well 4	Valley	2,600	1,796
Well 6	Valley	1,800	1,777
Well 7	Valley	--[2]	--
Coal Creek Springs	Valley	3,500[3]	4,383
West Hill Springs	Valley	600	563
Algona Well 1	--	--[2]	--
TOTAL		**13,140**	**12,909**

Notes:

1. Maximum daily production per source is the maximum production rate recorded in 2022.
2. The facility is currently offline. No production capacity is available without facility improvements.
3. Water rights for Coal Creek Springs allow for a Qi of 6,732 gpm. 3,500 gpm is the typical historical production capacity limitation experienced. The City is currently investigating the possible factors influencing the feasible withdrawal from this source.
4. The pump at Well 2 was replaced in 2023 and now has a capacity of 1,115 gpm.

Calculations presented in the Water Rights Self-Assessment Form (**Appendix I**) conclude that the City's existing water rights are anticipated to be adequate to meet the current, 10-year, and 20-year projections for maximum instantaneous flows (Qi) and total annual withdrawal (Qa).

However, the City does not have the infrastructure required to withdraw from all water sources, and some sources have underlying production restrictions that require further evaluation. Several facility improvement projects are required to maximize production and obtain the full water rights. Furthermore, potential demand from LMWD was not included in the assessment, as they have an interruptible wholesale agreement with the City which is a secondary priority to the City's demand. Currently, the City's interties with the City of Tacoma provide additional wholesale water for purchase if necessary to meet demands, however the City has not purchased water from Tacoma since 2016.

The City has established a policy of maintaining the capability to supply the MDD while the largest water source is out of service. The system analysis documented in **Chapter 3** confirms that with projected demands over the 20-year planning period, the City will maintain the capability to meet MDD if the largest pumping source is out of service. This evaluation includes the Tacoma interties as available sources to meet this need and excludes the capacity of facilities that are offline or not operational.

Of the twelve sources, only Wells 5 and 7 are currently without a standby power source. Standby power will be added to Wells 5 and 7 as part of CIP projects discussed in **Chapter 8.** The Fulmer Field Corrosion Control Treatment Facility has backup power.

The Game Farm Park Pump Station, Lea Hill BPS, and Intertie Pump Station are the only pump stations without a standby power source or connection. Backup power will be added to the Lea Hill BPS and the Intertie Pump Station as part of a capital projects discussed further in **Chapter 8**. The Game Farm Park Pump

Station is a small facility that serves a recreational area and does not serve residential or commercial properties, therefore back-up power is not a critical element.

2.6.1 Use Impacts on Instream Flows

New water right appropriations in the Green-Duwamish Basin are subject to instream flow (ISF) regulations as described in the CMP and WAC 173-509. These ISF are senior to the City's recent water rights application G1-28404. This requires mitigation for potential impacts to the Green River when instream flows are not met, such as predicting when streamflow will drop below ISFs as well as determining the lag time associated with impacts to instream flows from groundwater withdrawals. The CMP includes the following detailed description of the streamflow characteristics:

> "A review of historical streamflow data indicates that on average streamflow's are below the ISFs at the Auburn gauge approximately 20 percent of the time (Table 3). Streamflow's are generally more often below the minimum ISFs during the summer months, falling below the minimum ISFs 35 percent to 61 percent of the time between June and September. The flows are frequently above the minimum ISFs during the spring and winter months but can drop to below ISFs at any time of the year. For example, in April, streamflow falls below the minimum ISFs approximately 3 percent of the time (4.1.2)."

The City's current rights are senior to the instream rights and therefore not effected by the instream flow limitations, however as stewards of the watershed, the City has an aggressive water use efficiency program described in Chapter 4 meant to limit the volume of withdrawals, especially during the dry season. The City has a minor surplus of both annual volume withdrawn (Qa) and maximum instantaneous flow rate withdrawn (Qi) to meet MDD through the 20-year planning period. However, several facility improvements are required to make the withdrawals feasible.

2.6.2 Wholesale Interties

The City has three wholesale interties, described below and in further detail in Section 1.6.2.

City of Algona

The City has supplied water to Algona on a regular basis since 1996, when interlocal agreement IA3 was negotiated. A superseded agreement, IA3A, was negotiated in October 2002 which reflects the current status. The agreement will remain unless terminated by mutual agreement of the City and Algona. Currently, Algona is served through the metered Boeing Welded Duct Intertie and by two eight-inch, manually operated meter stations located at Boundary Boulevard and Industry Drive North, and at Boundary Boulevard and Milwaukee Avenue.

LMWD

An intertie between the City and LMWD was constructed in 1996 as part of IA2 to enable LMWD to purchase water from the City. The manually operated intertie also allows the City to provide an emergency supply to Kent's East Hill Service Area. The City agreed to provide up to 2.5 MGD average day and 5.0 MGD maximum day use. A provision of the agreement calls for LMWD to send an emergency supply of water to

the City when needed for the Lea Hill Service Area. The IA2 agreement also included several improvements to allow delivery of water:

- The Green River Pump Station and pipelines to deliver additional water into the Lea Hill Service Area
- The Intertie Pump Station and pipelines to deliver water from the Lea Hill Service Area to LMWD
- Construction of two additional wells (Wells 6 and 7).

LMWD discontinued regular purchase of water from the City in 2017 per the amendment to IA2, however LMWD still maintains the intertie with the City to use as a wholesale water supply on an as-needed basis. This interlocal agreement has a term of sixty years, commencing in 2017.

City of Tacoma

In 2012, Tacoma agreed to provide water to the City in the quantity of up to 1.0 MGD average day use, 1.8 MGD peak day use, and 1.62 MGD four-day peak use. Two interties were constructed to supply the City's Valley pressure zone: located at 3200 B Street NW and 29600 132nd Avenue SE in Auburn. In 2014, Tacoma amended and restated the 2012 agreement with the City to provide a total of 3.5 mgd (2,430 gpm) of average use and 5.12 mgd (3,555 gpm) of peak use from the interties. The B Street NW remotely operated intertie is limited to a maximum flowrate of 2,200 gpm and the 132nd Avenue SE Intertie is limited to a maximum flowrate of 4,500 gpm. However, the combined use of the interties cannot exceed 5.12 mgd (3,555 gpm) in a 24 hour period. This agreement will remain in force as long as the City of Tacoma remains in the business of providing water, however the City has not purchased water for consumption from the City of Tacoma since 2016.

2.6.3 Emergency Interties

Emergency interties are an important tool that helps water utilities increase reliability and respond to emergencies. The City has emergency interties with seven water systems, as described in Section 1.6.2 and summarized in Table 1-3.

2.6.4 Potential Interties

The City has an interest in acquiring additional interties that would enhance the reliability of water service in the City and among adjacent purveyors. Tacoma Public Utilities constructed the Second Supply Pipeline Project, which runs through the north end of the City's RWSA between 30th and 37th Streets NE. In addition to the B Street NW and 132nd Avenue SE interties, a third turnout was constructed as part of the pipeline project in the Valley Service Area. The City does not currently plan to develop this turnout but may do so in the future.

2.7 Future Population Projections and Land Use

2.7.1 Demographic Forecast

Demographic forecasts provide an estimate of future population and employment. The City is a member of the Puget Sound Regional Council (PSRC), which develops demographic analyses for the central Puget Sound region (King County, Kitsap County, Pierce County, and Snohomish County). The demographic projections are developed based on local planned development capacities and regional policies adopted by the PSRC Vision 2050. Vision 2050 established the region's strategy for accommodating population and employment growth to maintain the high quality of living, economic prosperity, and a healthy environment

through the year 2050. Through this planning process, the City is required to plan for a specific number of additional housing units and jobs.

Consistent with the Washington State Growth Management Act (GMA), the City uses the Vision 2050 growth values as the basis of the demographic projections.

Demographic projections are based on the PSRC's 2044 forecasts for housing, population, and employment for each Transportation Analysis Zone (TAZ) within the City's RWSA, as the City's policy is to serve all customers within its RWSA. Additional information on the City's existing land use, future zoning, demographic projections, and corresponding rates of growth are detailed in this Section.

2.7.2 Future Land Use and Zoning

Land use and zoning regulations provide important information in determining future water requirements. Land use and zoning determines the area available for various types of development including both SFR and MFR development, as well as commercial and other types of land use that provide the economic base necessary to support residential development. The housing, population and employment projections developed for the 2024 Periodic Comprehensive Plan are based on the employment and housing targets provided by King and Pierce counties that the City must accommodate over the 20-year planning horizon. This consistent approach is encouraged by the Washington State GMA and should result in predictable and stable land uses over longer planning periods.

Future land use and zoning designations for the City's RWSA are shown on the Comprehensive Zoning Map provided as Figure 2-5. Land uses in unincorporated King County which are part of the RWSA, but beyond City limits are anticipated to remain consistent with current designations, as the current land use designations reflect the intended long-range use of land for the 20-year planning horizon in the current Comprehensive Plan; additional data for future land use designation for unincorporated King County are not currently available. Zoning designations implement the land use identified in the City's Comprehensive Plan; therefore, the current land use reflects the City's historical zoning. House Bill 1337 and House Bill 1110, both effective as of July 2023, are geared at expanding housing options. As such, the City has adopted future zoning to allow for accessory dwelling units within areas previously dedicated to single-family detached housing. Table 2-13 summarizes the updating zoning designations and fire flow requirements. Note that the required fire flow in some zoning designations will be determined on a case-by-case basis pending development or re-development type. Fire flow requirements for portions of the RWSA located in unincorporated King County are also captured in Table 2-13.

Three of the updated residential zoning designations presented in Table 2-13 allow for Accessory Dwelling Units (ADUs). Policies related to ADU water service metering and connection fees are included in Appendix A. The demographic population projections are expected to be sufficient to account for growth that is realized by the additional ADUs within the service area. The demographic population projections are discussed in Section 2.7.3 and demand projections are discussed in Section 2.8.2. Required fire flow for ADUs will be determined on a case-by-case basis pending development or re-development type.

The City includes a wide range of residential, commercial, institutional, and industrial land uses. Public and quasi-public land uses include parks, open space, and public recreation as well as institutional uses such as schools. Commercial and industrial uses occur primarily in the Valley Service Area; however, large areas of residential land use and the Downtown Urban Center (DUC) also exist in the Valley Service Area.

The Academy and Lakeland Service Areas are primarily residential, although some commercial zoning is located along Auburn Way South (SR 164) in the Academy Service Area. The Lea Hill Service Area is also

primarily residential although other uses include small amounts of commercial and open space, and Green River College.

Areas within the RWSA, but outside the City limits, are governed by King County zoning. Land use was assumed to be consistent with zoning in these areas. The area in the northwest corner of the RWSA, west of SR167 and north of S 287th Street is zoned for Agriculture. A second area is located near Auburn Narrows State Park, which is north and west of SR18. This area includes Rural Residential, as well as Park and Greenbelt zoning. The City does not currently provide service in this area; however, it is willing to provide service to customers meeting the Service Area Policies. There are two additional unincorporated "pockets" of urban residential zoning within the RWSA that the City currently serves, where the southern area also contains a single parcel of Industrial zoning. The King County zoning was used in the demographic analyses.

Table 2-13 | Updated Zoning Districts and Fire Flow Requirements

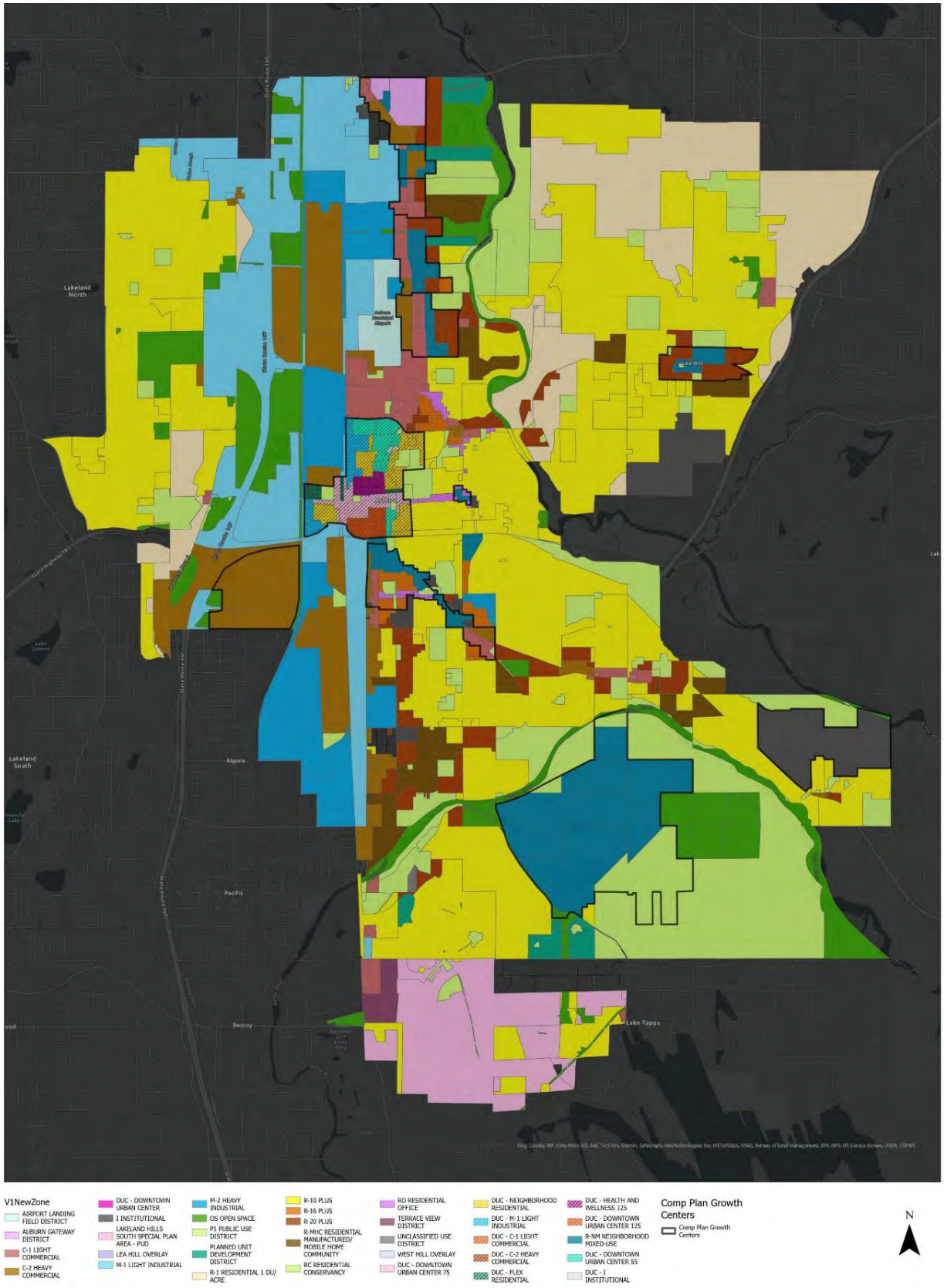
Zoning District	Land Use	Definition	Fire Flow Requirement (gpm)
RC RESIDENTIAL CONSERVANCY	Residential Conservancy	No change	1,500
R-1 RESIDENTIAL 1 DU/ACRE	Neighborhood Residential One	No change	1,500
R-10 PLUS[1]	Neighborhood Residential Two	Single family, townhouse, duplex, triplex, fourplex, two-story stacked flats, cottage housing-4-6 units/lot ADUs	1,500 - 2,500
R-16 PLUS	Neighborhood Residential Two	R-10, plus five-plex, six-plex, 3 story stacked flats, courtyard apartments, apartment buildings and mixed use up to 20 units ADUs	2,500
R-20 PLUS	Neighborhood Residential Three	R-16 plus apartment buildings, and mixed use over 20 units ADUs	2,500
R-NM NEIGHBORHOOD MIXED-USE	Mixed Use	R-16 and C-1 Uses + Mixed-use (horizontal or vertical) encouraged	2,500
R-MHC RESIDENTIAL MANUFACTURED/MOBILE HOME COMMUNITY	Neighborhood Residential Three	No change	2,500
RO RESIDENTIAL OFFICE	Mixed Use	Smaller scale R-NM with emphasis on conversion of existing structure	2,500
C-1 LIGHT COMMERCIAL DISTRICT	Commercial	Generally the same as existing	2,500
C-2 HEAVY COMMERCIAL DISTRICT	Commercial	Generally the same as existing	2,500
AUBURN GATEWAY DISTRICT	Mixed Use	North Auburn Subarea Use	2,500
M-1 LIGHT INDUSTRIAL DISTRICT	Industrial	Generally the same as existing	2,500
M-2 HEAVY INDUSTRIAL DISTRICT	Industrial	Generally the same as existing	2,500
AIRPORT ZONE	Industrial	No change	2,500
P1 PUBLIC USE DISTRICT	Public/Quasi-Public	Public schools, recreational spaces, police stations, fire stations, cemeteries	2,500

Zoning District	Land Use	Definition	Fire Flow Requirement (gpm)
I INSTITUTIONAL USE DISTRICT	Public/Quasi-Public	Private schools, Green River College, large campus development	2,500
OS OPEN SPACE	Open Space	No change	-
DUC - DOWNTOWN URBAN CENTER 125	Downtown Urban Center	DUC with up to 125-ft tall buildings where permitted	2,500
DUC - DOWNTOWN URBAN CENTER 75	Downtown Urban Center	DUC with up to 75-ft tall buildings where permitted	2,500
DUC - DOWNTOWN URBAN CENTER 55	Downtown Urban Center	DUC with up to 55-ft tall buildings where permitted	2,500
DUC - NEIGHBORHOOD RESIDENTIAL	Downtown Urban Center	Mixed-use and R-15	2,500
DUC - HEALTH AND WELLNESS 125	Downtown Urban Center	R-OH-MultiCare Zone	2,500
DUC - FLEX RESIDENTIAL	Downtown Urban Center	RO with permitted specific industrial uses (craft workshops, breweries, coffee, etc.)	2,500
LAKELAND HILLS SOUTH SPECIAL PLAN AREA – PUD[1]	Neighborhood Residential Two		1,500-2,500
AIRPORT LANDING FIELD DISTRICT	Industrial		2,500
AUBURN GATEWAY DISTRICT	Mixed Use		2,500
DUC - I INSTITUTIONAL	Downtown Urban Center		2,500
DUC - M-1 LIGHT INDUSTRIAL	Downtown Urban Center		2,500
I INSTITUTIONAL	Public/Quasi-Public		2,500
PLANNED UNIT DEVELOPMENT DISTRICT[1]		Varies by location	1,500-2,500
TERRACE VIEW DISTRICT	Commercial		2,500
UNCLASSIFIED USE DISTRICT[1]		Varies by location	1,500-2,500
A-10	Agricultural	1 Dwelling Unit per 10 acres, located in unincorporated King County.	1,500
RA-5	Rural Area	1 Dwelling Unit per 5 acres, located in unincorporated King County.	1,500
R-1	Residential	1 Dwelling Unit per acre, located in unincorporated King County	1,500
R-4	Residential	4 Dwelling Units per acre, located in unincorporated King County	1,500

Note:

1. Required fire flow will be determined on a case-by-case basis pending development or re-development type.

Figure 2-5 | Comprehensive Future Land Use and Zoning Map



2.7.3 Projected Demographic Growth

Many factors influence population growth including the state of the economy, interest rates, annexation of adjacent areas, and up-zoning for new development. Growth management policies, along with coordination between local governments, should make development more predictable and growth projections more accurate than they have been historically. The City's Comprehensive Plan, as well as this Plan, are key documents to aid the City in preparing for the predicted growth. However, it is common for actual growth rates to vary from those predicted. In addition, growth rates will vary between various parts of the City based on the availability of services and the costs to develop for the zoned use.

Housing, population, and employment projections were used to calculate rates of growth. PSRC's Vision 2050 requires the City to plan for a given number of additional housing units and jobs. The demographic projections for population and employment were allocated based on water meter locations within the four Water Service Areas that comprise the RWSA. Population projections extending beyond the RWSA boundary were modified or eliminated and are not included in the projections.

2.7.3.1 Demographic Projections

Existing and future demographic projections consistent with the City's GMA goals were provided by the City for 2021 and 2044. City planning provided projections of housing, population, and employment growth based on TAZ data. The intermediate 10-year planning horizon (2034) was interpolated assuming consistent compounding growth across the planning period.

The projections were further delineated by Service Area, as growth is expected to vary due to zoning, availability of vacant or re-developable land, existing and proposed infrastructure, etc. Demographic growth rates, rather than total number of people or employed people, were used to develop demand projections. The resulting demographic growth rates as a compounding annual percentage are presented in **Table 2-14.** Total population is projected to annually increase by 1.5 percent from 2021 to 2044 and total employment is projected to increase by 1.9 percent annually over the same period. Overall, the City is planning for an additional 24,987 people and 20,525 employed people by 2044 within the RWSA.

Table 2-14 | Growth Rates by Customer Class and Service Area

	Total Growth from 2021 to 2044 (Housing Units/Population)	Total Growth from 2021 to 2044 (%)	Annual Average Compounding Growth (%)
Single-Family Unit Projections			
Lea Hill	201	5.9%	0.248%
Valley	275	5.3%	0.223%
Lakeland	534	27.0%	1.043%
Academy	436	36.3%	1.355%
Multi-Family Unit Projections			
Lea Hill	254	12.6%	0.518%
Valley	7,862	77.1%	2.515%
Lakeland	1,003	55.7%	1.943%
Academy	124	10.4%	0.433%
Population Projections			
Lea Hill	1,245	8.2%	0.343%
Valley	18,009	44.1%	1.602%

	Total Growth from 2021 to 2044 (Housing Units/Population)	Total Growth from 2021 to 2044 (%)	Annual Average Compounding Growth (%)
Lakeland	4,113	39.4%	1.456%
Academy	1,621	24.6%	0.962%
Employment Projections			
Lea Hill	484	30.6%	1.168%
Valley	18,692	43.8%	1.586%
Lakeland	171	31.1%	1.172%
Academy	1,178	77.8%	0.316%

Table 2-15 summarizes the calculated demographic projections for population or employment projections by Service Area for each category when applying the growth rates from **Table 2-14.**

Table 2-15 | Population and Employment Projections Calculated by Service Area

	2024	2034	2044
Single-Family Population			
Lea Hill	10,498	10,864	11,243
Valley	19,889	23,315	27,330
Lakeland	4,394	5,077	5,866
Academy	5,009	5,512	6,066
Subtotal	**39,789**	**44,767**	**50,505**
Multi-Family Population			
Lea Hill	5,341	5,527	5,719
Valley	25,203	29,544	34,633
Lakeland	3,454	3,991	4,612
Academy	1,535	1,689	1,859
Subtotal	**35,533**	**40,752**	**46,824**
Total Population			
Lea Hill	15,839	16,391	16,962
Valley	45,092	52,859	61,964
Lakeland	7,848	9,068	10,478
Academy	6,544	7,201	7,925
Subtotal	**75,323**	**85,519**	**97,328**
Employment			
Lea Hill	1,720	1,932	2,170
Valley	46,946	54,948	64,313
Lakeland	596	669	752
Academy	1,605	1,656	1,709
Subtotal	**50,867**	**59,205**	**68,944**

The demographic growth for each Service Area is shown in **Figure 2-6, Figure 2-7**, and **Figure 2-8**, where single family population, multi-family population, and employment population growth are each presented in a different graph. The figures show the anticipated variability in growth between the Service Areas. For example, employment growth rate (percentage) is projected to be greater in the Valley Service Area than the other Services Areas between 2024 and 2044. Since the Valley Service Area has a much greater magnitude of population and employment than the other Service Areas, minor differences in growth projection percentages results in larger increases in total population and employment numbers. The Valley

Service Area is projected to represent 64 percent of the system's population and 93 percent of the system's employment in 2044.

Figure 2-6 | Single Family Population Projections by Service Area

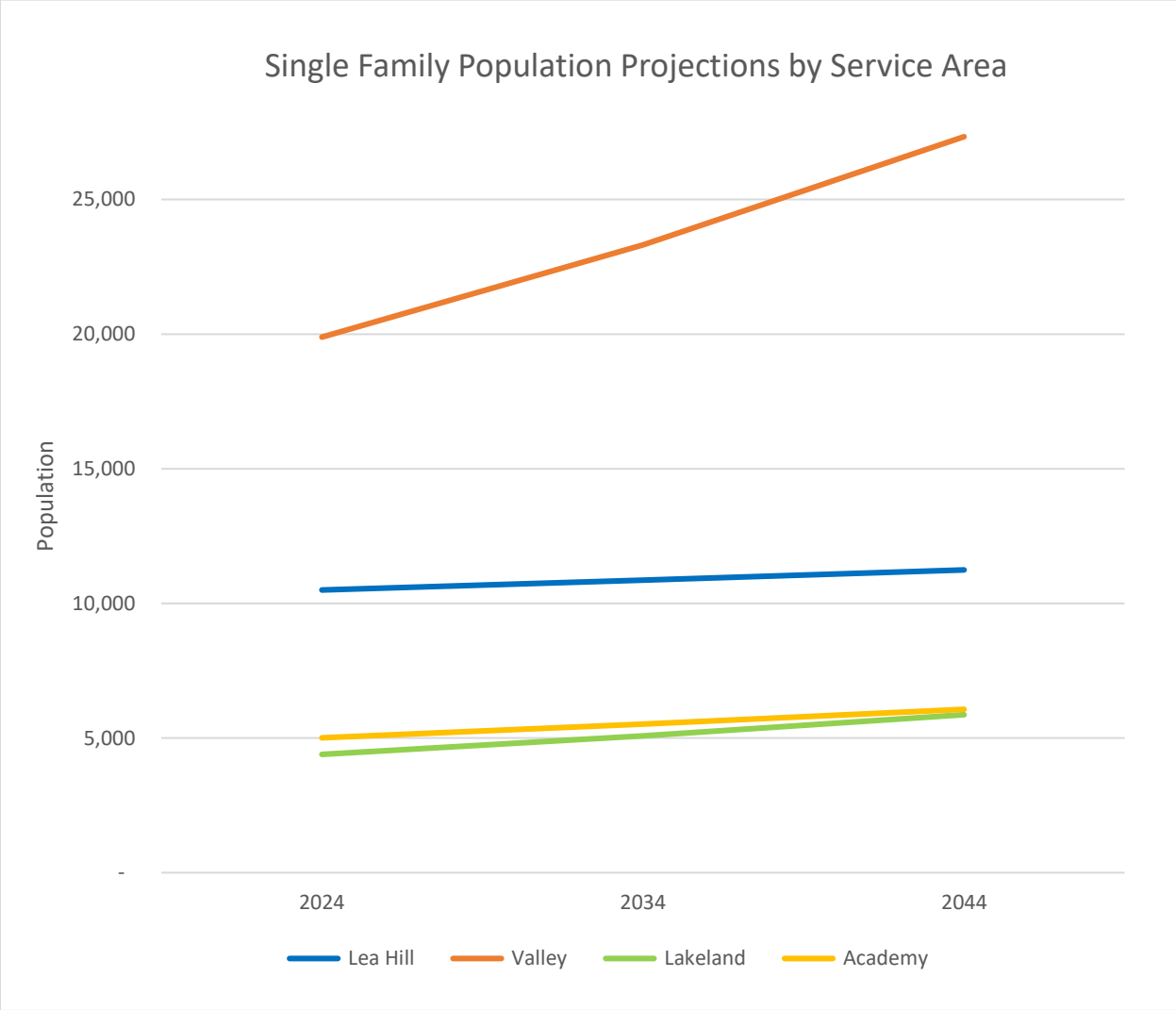


Figure 2-7 | Multi-Family Population Projections by Service Area

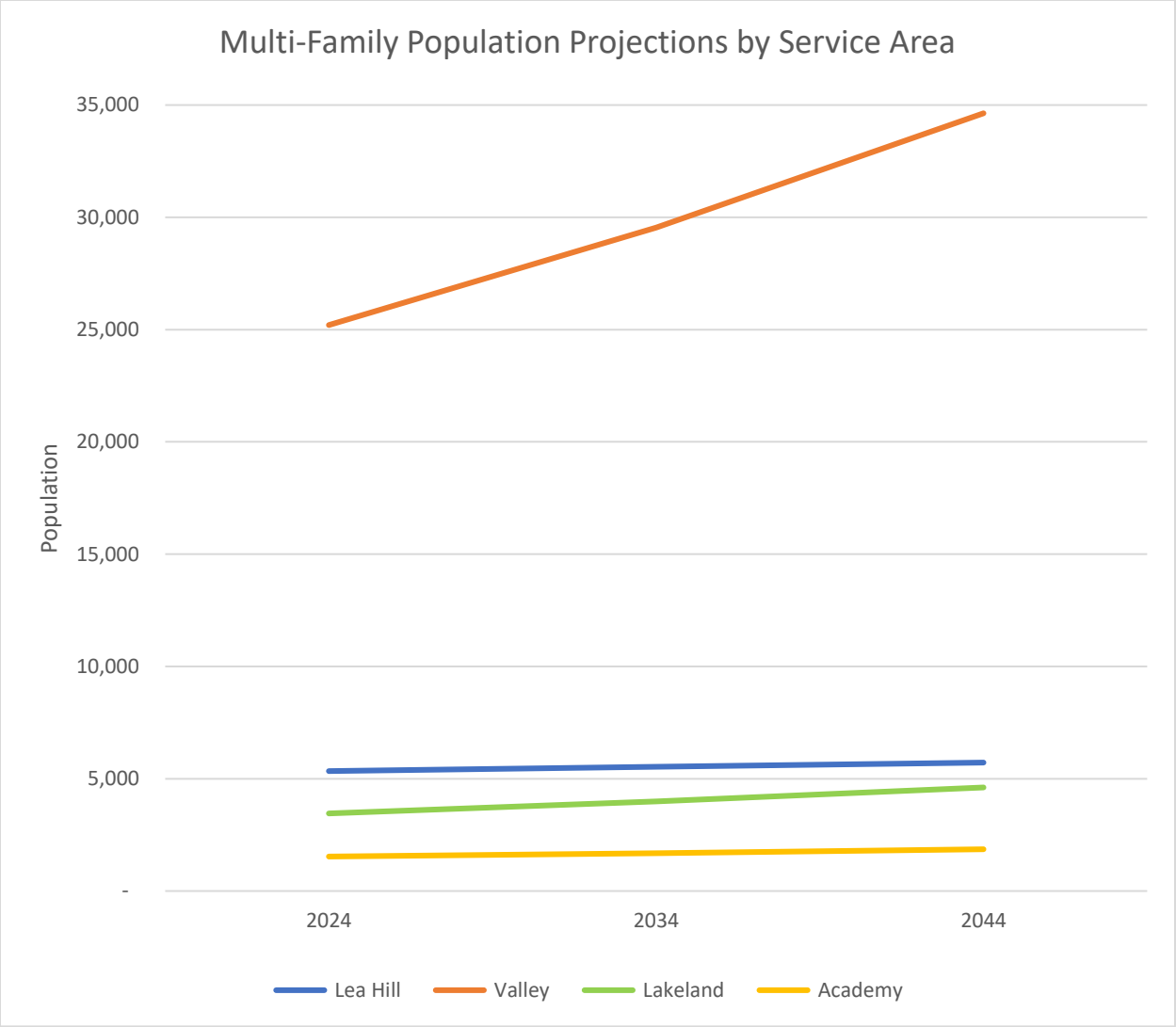
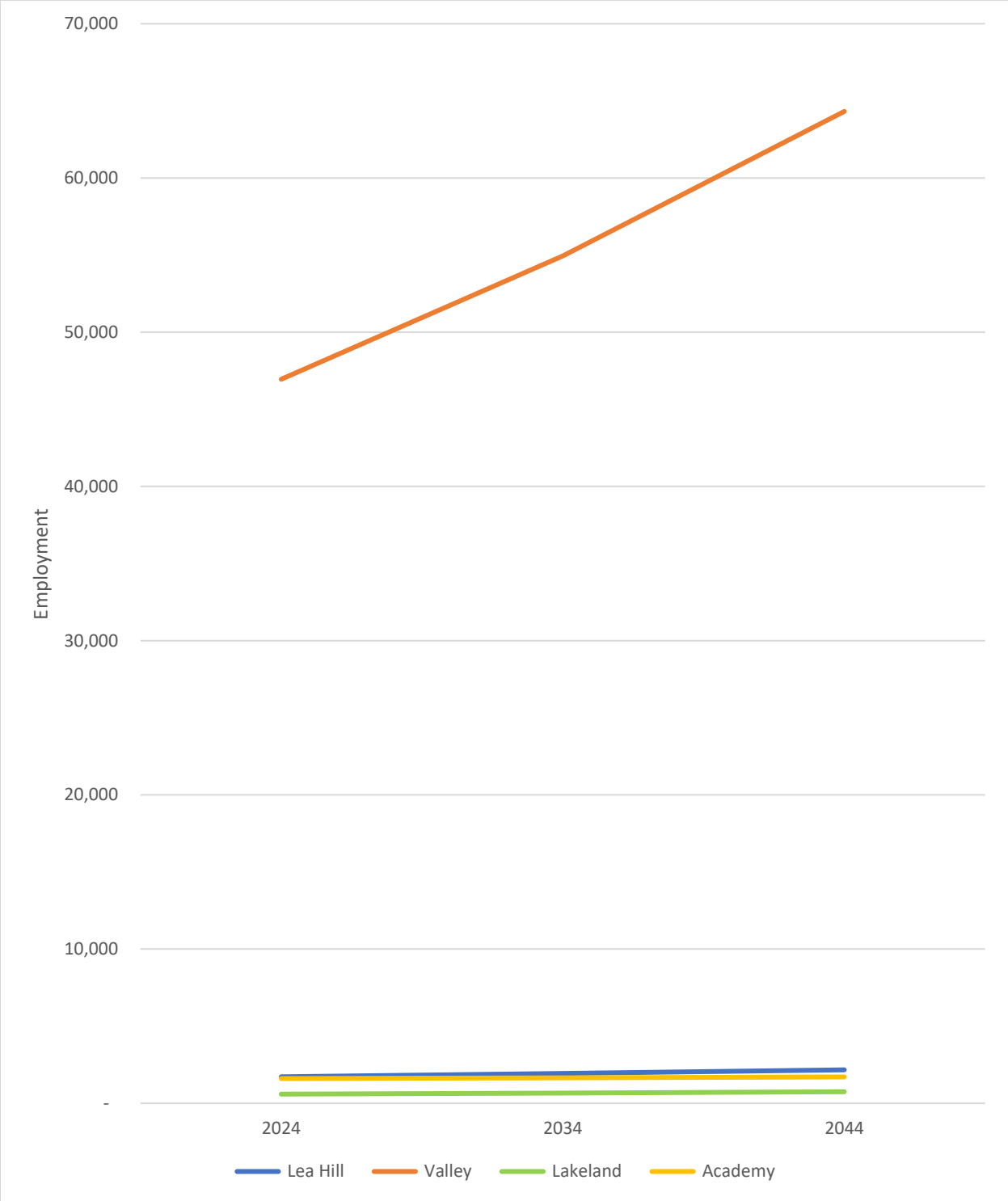
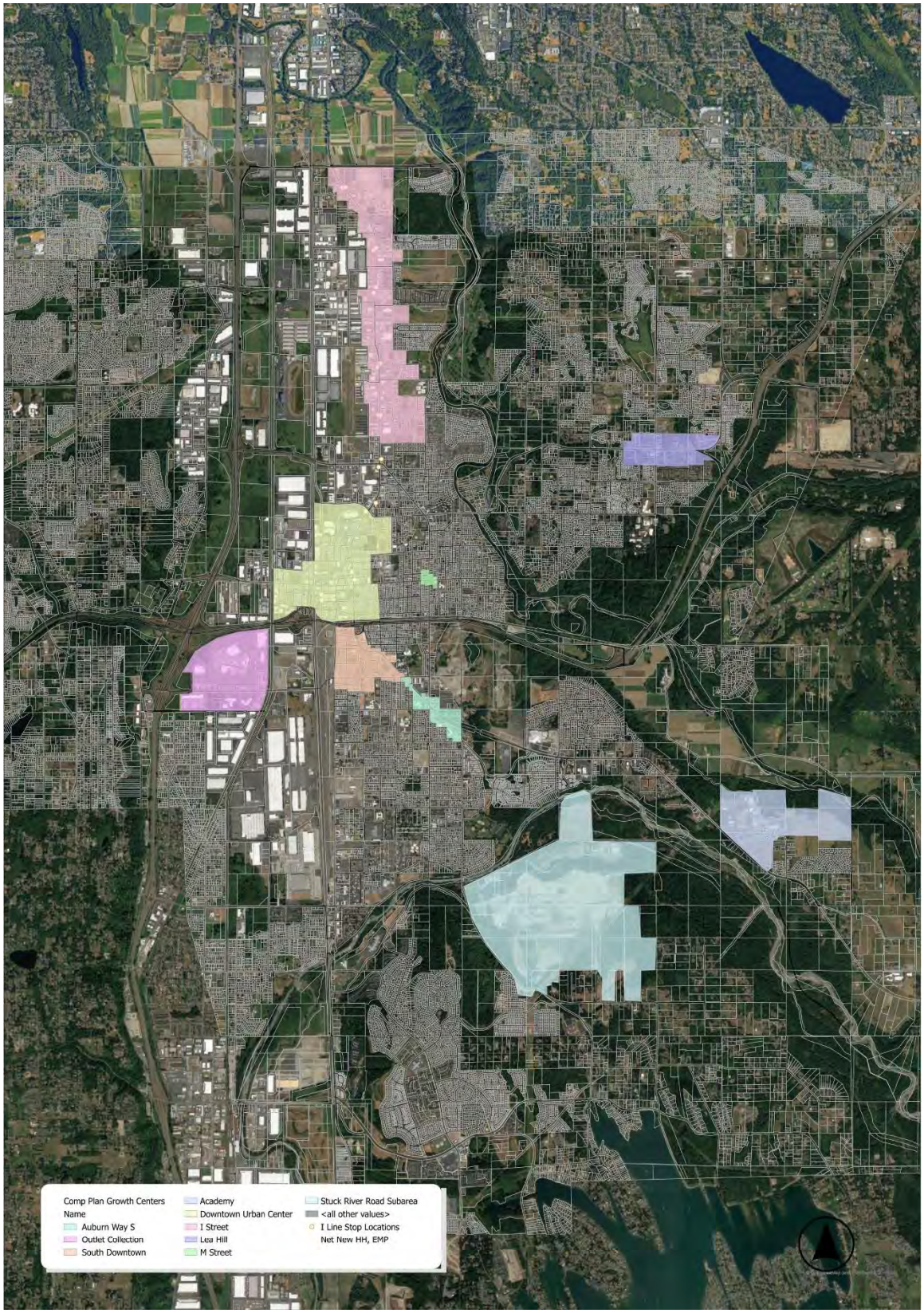


Figure 2-8 | Employment Projections by Service Area



Areas anticipated to have higher than average population and employment growth through 2044, termed "Growth Centers" identified in the City's Comprehensive Plan, are presented in **Figure 2-9.** Demand in each Service Area was modified during the system analysis to reflect focus growth in the areas identified in **Figure 2-9**, matching the population and employment growth projection data.

Figure 2-9 | Map of Projected Areas with Greatest Population Growth



2.8 Future Water Demand

2.8.1 Projected Number of Connections

The number of water connections was used in determining the ERU, ADD, and MDD projections. The number of water connections in the future was projected using the demographic growth rates presented in **Table 2-14** and the number of existing water accounts presented in **Table 2-2**. The projected future connections by both Service Area and customer classification are presented in **Table 2-16.**

- The respective housing unit growth rates for each Service Area were used to calculate projected SFR and MFR connections.
- The School connections were projected by multiplying the percentage of the City population aged 5-19 (22%) by population growth rates for each Service Area.
- The projected employment growth rates were used to calculate future Commercial, Municipal (City Accounts), and Irrigation connections.
- The City's largest user (Boeing) is not included in **Table 2-16**, their projections are based on individual demand and are presented separately. Boeing also accounts for the only Manufacturing and Industrial connections within the City.
- Wholesale customers are not included in **Table 2-16**, their projections are based on individual demand and are presented separately.

Table 2-16 | Connection Projections by Customer Classification and Service Area

	2024	2034	2044
Lea Hill			
Single-Family Residential	3,265	3,347	3,431
Multi-Family Residential	167	176	186
Commercial	22	24	27
Manufacturing/Industrial	-	-	-
Schools	11	11	11
Municipal (City Accounts)	1	1	1
Irrigation	61	69	78
Valley			
Single-Family Residential	5,954	6,088	6,226
Multi-Family Residential	807	1,035	1,327
Commercial	1,272	1,489	1,743
Manufacturing/Industrial	-	-	-
Schools	37	38	40
Municipal (City Accounts)	32	38	45
Irrigation	532	622	729
Lakeland			
Single-Family Residential	1,354	1,502	1,666
Multi-Family Residential	109	132	161
Commercial	34	39	43
Manufacturing/Industrial	-	-	-
Schools	9	9	9

	2024	2034	2044
Municipal (City Accounts)	-	-	-
Irrigation	21	23	26
Academy			
Single-Family Residential	1,581	1,808	2,069
Multi-Family Residential	47	49	51
Commercial	14	14	15
Manufacturing/Industrial	-	-	-
Schools	2	2	2
Municipal (City Accounts)	1	1	1
Irrigation	34	35	36
Total			
Single-Family Residential	12,153	12,745	13,391
Multi-Family Residential	1,131	1,393	1,725
Commercial	1,342	1,566	1,828
Manufacturing/Industrial	-	-	-
Schools	59	60	62
Municipal (City Accounts)	35	40	47
Irrigation	648	750	868

2.8.1.1 Lea Hill Service Area

The Lea Hill Service Area is located east of the Auburn-Kent Valley and the Green River. The area is mostly residential with supportive neighborhood businesses. Green River College is in the Lea Hill Service Area and has a concentration of multi-family residential units in the vicinity of the college.

The Lea Hill service area is projected to have the lowest growth rate in population with a 0.3 percent per year average increase from 2021 to 2044. This Service Area is projected to have a moderate growth in employment with a 1.2 percent growth per year from 2021 to 2044.

2.8.1.2 Valley Service Area

The Valley Service Area contains a significant amount of developable land designated as multi-family and commercial, including the Downtown Urban Center. The Service Area is projected to have the highest growth rate in population at 1.6 percent per year from 2021 to 2044. The multi-family connections in this area are projected to grow 2.5 percent per year from 2021 to 2044 and employment is projected to grow 1.6 percent per year. These growth projections are based on the City's anticipation of growth trends and the redevelopment of Auburn's Downtown Urban Center, as well as commercial developments in locations with available space throughout the Service Area.

2.8.1.3 Lakeland Service Area

The Lakeland Service Area includes the entire City south of the White River. A sizable portion of this Service Area is designated residential conservancy land use, which is anticipated to be developed within the planning horizon related to the anticipated closure of the Segale Gravel Pit. The area includes proposed special planning areas for Stuck River Road and Mount Rainier Vista anticipated to be developed with a moderate population growth rate of 1.5 percent per year. This Service Area is projected to have a moderate growth in employment with a 1.2 percent growth per year from 2021 to 2044.

2.8.1.4 Academy Service Area

The Academy Service Area is a well-developed portion of the City. It is expected to have a population growth of 1.0 percent per year from 2021 to 2044. This Service Area is projected to have minimal growth in employment with a 0.3 percent per year increase from 2021 to 2044.

2.8.2 Projected Water Demand

Projecting future water demand is one of the key elements of the water system planning process. Identification of system improvements such as supply, pumping, storage, and piping requirements are all related to demand projections. This section summarizes the ERU, ADD, and MDD projections, as well as the potential range in future demands associated with various factors, such as water use per ERU, DSL, and demographic growth rate.

2.8.2.1 Potential Range in Future Water Demand

Several factors and assumptions affect the accuracy of projected future water demands. Recognizing that certain assumptions built into the demand projections will vary in the future, the projections were developed for medium and high demand scenarios to provide a range in demands that may be experienced in the future. The medium projection will be used for the system analysis in **Chapter 3**, while the high projection will be used for the water right evaluation in **Chapter 5**. The system analysis determines future pumping, storage, and distribution system deficiencies and identifies potential improvements to achieve the City's established capacity criteria. The water right evaluation looks at both water rights and overall supply capacity. Only the medium projections are presented within this Chapter. The variables considered in developing the range of demand projections are summarized in **Table 2-17** and are discussed below.

- Future Water Connections: The future water connections are presented in **Table 2-16** and were used for both demand scenarios.
- Water Use Per ERU_{ADD}: Water use per ERU for the average demand day projections are based on the 75th percentile of the historical data, which is the medium demand scenario, presented in **Table 2-4**. This value equals 182 gpd per ERU. The high demand scenario used the highest annual value from the data set presented in **Table 2-4**, which equals 193 gpd per ERU.
- ERUs per Account: The historical ERU per account by customer classification presented in **Table 2-4** was used to develop demand projections. The ERU per Account values are based on the 75th percentile of the historical data and a water use per ERU value of 182 gpd per ERU. These values are used in both projections.
- Distribution System Leakage: Historical annual DSL varied between 0.7 and 7.4 percent of the City's total City production between 2015 and 2022. The average three-year rolling average of historical DSL values of 5.2 percent is utilized in the medium demand scenario and the maximum three-year rolling average of 6.8 percent was used for the high demand scenario.
- Authorized Unbilled Consumption: Historical annual authorized unbilled consumption varied between 0.14 and 0.54 percent of the City's total billed consumption between 2015 and 2022. The 75^{th} percentile value of 0.27 percent is utilized in the medium demand scenario and the maximum values of 0.54 percent is used for the high demand scenario.
- Water Use Per ERU_{MDD}: Water use per ERU for the maximum demand day projections are based on 75th percentile of the historical data, which is the medium demand scenario, presented in **Table**

2-10. This value equals 322 gpd per ERU. The high demand scenario used the highest annual value from the data set presented in Table 2-10, which is 358 gpd per ERU.

- MDD/ADD Peaking Factor: The 75th percentile of historical annual peaking factors of 1.77 is utilized in the medium demand scenario. The highest value in the historical annual peaking factor data set was used for the high demand scenario, which is 1.97.

The City's largest user (Boeing) and wholesale customers are not included in Table 2-17, their projections are based on individual demand and are presented separately.

Table 2-17 | Proposed Planning Values for Demand Projections

Assumptions	Medium Demand Scenario	High Demand Scenario
Water Demand per ERU_{ADD} (gpd)	182	193
DSL	5.2%	6.8%
Authorized Unbilled	0.27%	0.54%
Water Demand per ERU_{MDD} (gpd)	322	358
MDD/ADD Peaking Factor	1.77	1.97

2.8.3 Large User Demand Forecast

The large user term is used to identify customers consuming the greatest volume of water on an annual basis as presented in Table 2-6. Projections for the City's single largest user (Boeing) is separated from the demand forecasts to aid in accurate forecasting and in the system analyses. The forecasts were based on historical water use data from 2015 through 2022 and is presented in Table 2-18. The projected demand will use the 75th percentile of water use from the historical period of record. Boeing's consumption has trended down over the historical period of record, therefore, the projected demand is conservative and actual consumption is anticipated to be less than the value presented in Table 2-18.

Wholesale connections are also projected separately in Table 2-22. The remaining largest users are not presented separately in demand forecasts; their projected consumption is built into the overall Service Area projections by customer classification.

Table 2-18 | Large User Demand Projections

Large User	Customer Class	Service Area	Representative Historical Water Use Statistic[1]	Representative Annual Water Use (MG)[2]	Projected ERUs in 2044
Boeing	Manufacturing Commercial	Valley	75th percentile	210.6	3,168

Notes:
1. Historical water use data from 2015 through 2022
2. Based on representative historical water use statistic.

2.8.4 Projected Retail ERUs

Future water system demands are based on projected ERUs, which in turn are based on the projected water consumption by customer classification and the projected number of accounts discussed earlier in this chapter. Table 2-19 shows the projected ERUs for the City's individual service areas over the planning period. The projected number of ERUs for each Service Area was calculated by multiplying the projected number of accounts, provided in Table 2-16, by the number of ERUs per account, as summarized in Table

2-3, for each customer class. Wholesale customer demand in terms of ERUs is not included in the demand projections below and must be added separately as summarized in Table 2-23.

Table 2-19 | ERU Projections by Customer Class and Service Area

	2024 ERU	2034 ERU	2044 ERU
Lea Hill			
Single-Family Residential	3,265	3,347	3,431
Multi-Family Residential	1,379	1,452	1,529
Commercial	128	143	161
Manufacturing/Industrial	-	-	-
Schools	127	128	129
Municipal (City Accounts)	2	3	3
Irrigation	319	358	402
Authorized Unbilled	14	15	15
DSL	272	283	295
Valley			
Single-Family Residential	5,954	6,088	6,226
Multi-Family Residential	6,652	8,528	10,933
Commercial	7,554	8,841	10,348
Manufacturing/Industrial	-	-	-
Schools	435	451	467
Municipal (City Accounts)	70	82	96
Irrigation	2,758	3,228	3,778
Boeing (Largest User)	3,170	3,170	3,170
Authorized Unbilled	56	66	78
DSL	1,386	1,584	1,825
Lakeland			
Single-Family Residential	1,354	1,502	1,666
Multi-Family Residential	900	1,091	1,323
Commercial	204	230	258
Manufacturing/Industrial	-	-	-
Schools	102	106	109
Municipal (City Accounts)	-	-	-
Irrigation	108	121	136
Authorized Unbilled	7	8	9
DSL	139	159	182
Academy			
Single-Family Residential	1,581	1,808	2,069
Multi-Family Residential	388	405	423
Commercial	81	84	86
Manufacturing/Industrial	-	-	-
Schools	25	26	27
Municipal (City Accounts)	2	2	2
Irrigation	174	179	185
Authorized Unbilled	6	7	8
DSL	117	131	146
Total			
Single-Family Residential	12,153	12,745	13,391
Multi-Family Residential	9,320	11,477	14,209

	2024 ERU	2034 ERU	2044 ERU
Commercial	7,967	9,298	10,853
Manufacturing/Industrial	-	-	-
Schools	690	711	732
Municipal (City Accounts)	74	87	101
Irrigation	3,359	3,887	4,502
Boeing (Largest User)	3,170	3,170	3,170
Authorized Unbilled	83	96	110
DSL	1,914	2,156	2,447
City of Algona (Wholesale)	Refer to **Table** 2-22.		

2.8.5 Projected Retail Average Day and Maximum Day Demands

The ADD projections include the projected customer demands by customer classification, authorized unbilled consumption, and DSL by service area. The resulting ADD projections are summarized in **Table 2-20**.

- Customer demands by classification were calculated by multiplying the projected ERUs summarized in **Table 2-19** by the average ERU water use (182 gpd/ERU).
- Authorized unbilled consumption projections were calculated by multiplying the sum of all customer classification use by the medium demand scenario percentage presented in **Table 2-17**.
- DSL consumption projections were calculated by multiplying the sum of all customer classification use and authorized unbilled use by the medium demand scenario percentage presented in **Table 2-17** for DSL.

Table 2-20 | ADD Projections

	2024 (mgd)	2034 (mgd)	2044 (mgd)
Lea Hill			
Single-Family Residential	0.595	0.610	0.625
Multi-Family Residential	0.251	0.265	0.279
Commercial	0.023	0.026	0.029
Manufacturing/Industrial	-	-	-
Schools	0.023	0.023	0.023
Municipal (City Accounts)	-	-	0.001
Irrigation	0.058	0.065	0.073
Authorized Unbilled	0.003	0.003	0.003
DSL	0.050	0.052	0.054
Valley			
Single-Family Residential	1.084	1.109	1.134
Multi-Family Residential	1.212	1.553	1.991
Commercial	1.376	1.610	1.885
Manufacturing/Industrial	-	-	-
Schools	0.079	0.082	0.085
Municipal (City Accounts)	0.013	0.015	0.017
Irrigation	0.502	0.588	0.688
Boeing (Largest User)	0.577	0.577	0.577

	2024 (mgd)	2034 (mgd)	2044 (mgd)
Authorized Unbilled	0.010	0.012	0.014
DSL	0.252	0.288	0.332
Lakeland			
Single-Family Residential	0.247	0.274	0.303
Multi-Family Residential	0.164	0.199	0.241
Commercial	0.037	0.042	0.047
Manufacturing/Industrial	-	-	-
Schools	0.019	0.019	0.020
Municipal (City Accounts)	-	-	-
Irrigation	0.020	0.022	0.025
Authorized Unbilled	0.001	0.002	0.002
DSL	0.025	0.029	0.033
Academy			
Single-Family Residential	0.288	0.329	0.377
Multi-Family Residential	0.071	0.074	0.077
Commercial	0.015	0.015	0.016
Manufacturing/Industrial	-	-	-
Schools	0.005	0.005	0.005
Municipal (City Accounts)	-	-	-
Irrigation	0.032	0.033	0.034
Authorized Unbilled	0.001	0.001	0.001
DSL	0.021	0.024	0.027
Total			
Single-Family Residential	2.214	2.321	2.439
Multi-Family Residential	1.698	2.091	2.588
Commercial	1.451	1.694	1.977
Manufacturing/Industrial	-	-	-
Schools	0.126	0.129	0.133
Municipal (City Accounts)	0.014	0.016	0.018
Irrigation	0.612	0.708	0.820
Boeing (Largest User)	0.577	0.577	0.577
Authorized Unbilled	0.015	0.017	0.020
DSL	0.349	0.393	0.4546

The MDD projections include the projected customer demands by customer classification, authorized unbilled consumption, and DSL by service area and are summarized in **Table 2-21**.

- Customer demands by classification, authorized unbilled consumption projections, and DSL projections were calculated by multiplying the ADD projections as summarized in **Table 2-20** by the MDD/ADD Peaking Factor presented in **Table 2-17.**

Table 2-21 | MDD Projections

	2024 (mgd)	2034 (mgd)	2044 (mgd)
Lea Hill			
Single-Family Residential	1.051	1.077	1.104
Multi-Family Residential	0.444	0.468	0.492
Commercial	0.041	0.046	0.052
Manufacturing/Industrial	-	-	-

	2024 (mgd)	2034 (mgd)	2044 (mgd)
Schools	0.041	0.041	0.041
Municipal (City Accounts)	0.001	0.001	0.001
Irrigation	0.103	0.115	0.129
Authorized Unbilled	0.005	0.005	0.005
DSL	0.088	0.091	0.095
Valley			
Single-Family Residential	1.916	1.960	2.004
Multi-Family Residential	2.141	2.745	3.519
Commercial	2.431	2.846	3.331
Manufacturing/Industrial	-	-	-
Schools	0.140	0.145	0.150
Municipal (City Accounts)	0.022	0.026	0.031
Irrigation	0.888	1.039	1.216
Boeing (Largest User)	1.020	1.020	1.020
Authorized Unbilled	0.018	0.021	0.025
DSL	0.446	0.510	0.587
Lakeland			
Single-Family Residential	0.436	0.483	0.536
Multi-Family Residential	0.290	0.351	0.426
Commercial	0.066	0.074	0.083
Manufacturing/Industrial	-	-	-
Schools	0.033	0.034	0.035
Municipal (City Accounts)	-	-	-
Irrigation	0.035	0.039	0.044
Authorized Unbilled	0.002	0.003	0.003
DSL	0.045	0.051	0.059
Academy			
Single-Family Residential	0.509	0.582	0.666
Multi-Family Residential	0.125	0.130	0.136
Commercial	0.026	0.027	0.028
Manufacturing/Industrial	-	-	-
Schools	0.008	0.008	0.009
Municipal (City Accounts)	0.001	0.001	0.001
Irrigation	0.056	0.058	0.060
Authorized Unbilled	0.002	0.002	0.002
DSL	0.038	0.042	0.047
Total			
Single-Family Residential	3.912	4.102	4.310
Multi-Family Residential	3.000	3.694	4.573
Commercial	2.564	2.993	3.493
Manufacturing/Industrial	-	-	-
Schools	0.222	0.229	0.236
Municipal (City Accounts)	0.024	0.028	0.032
Irrigation	1.081	1.251	1.449
Boeing (Largest User)	1.020	1.020	1.020
Authorized Unbilled	0.027	0.031	0.036
DSL	0.616	0.694	0.788

2.8.6 Wholesale Demands

The City currently has a wholesale water contract with the City of Algona. The City is also planning to supply wholesale water for the MIT's future fish hatchery. As stated in the Retail Water Service Policy, "the City will plan for and provide water service to all retail customers and wholesale customers with firm contracts. As supply permits, the City may provide water to wholesale customers without firm contracts unilaterally or as part of a capital improvement partnership agreement." The wholesale demands for the City are summarized in Table 2-22.

Algona's current agreement allows for the sale of up to 525,000 gallons per day on a firm basis for the ADD and up to 1,114,00 gallons per day on a firm basis for the MDD. In 2022, Algona purchased an average of 342,953 gallons per day of water from the City. Algona's 2022 Water System Plan (WSP) projects 2042 ADD to be 404,278 gallons per day and 2042 MDD to be 766,137 gallons per day. Algona's WSP demand projections were used for projecting the wholesale water purchases by Algona, rather than the contractual amount, as presented in Table 2-22.

MIT plans to develop a fish hatchery on the White River. An agreement dated from 1986 (included in Appendix G) requires that the City provide the tribe with an average annual demand of 3.9 cubic feet per second (cfs) (2.52 mgd) from Coal Creek Springs for MIT's future fishery enhancement purposes. The agreement does not specify an MDD but rather states:

"The Tribe and the City agree to work in harmony toward a mutually satisfactory allocation of the Coal Creek waters. In furtherance of this goal, the City understands that the water requirements for fishery enhancement purposes are greatest in the winter and spring months. Accordingly, the City agrees to increase the amount of water above 3.9 cfs as needed for fishery purposes. The Tribe understands that the City's requirement for water for domestic use is greatest in the summer and fall months. Accordingly, the Tribe agrees to decrease its use of water below 3.9 cfs, as needed for domestic water purposes…It is further understood that the tribe requires a minimum of 3 cfs at all times for fishery enhancement purposes".

The intent of this agreement indicates that the MIT demand will be at a minimum when the City's demands are at their maximum. Based on this understanding, the planned MDD for the MIT is 1.5 mgd and the ADD was 2.5 mgd. For planning purposes, the MIT demand was added to the Algona demand and included in the "Retail + firm wholesale" group of demands.

LMWD has an interruptible wholesale contract that can be terminated at any time and is therefore represented separately. As discussed in the Historical Wholesale Consumption section, LMWD discontinued regular purchase of water from the City in 2017 per the amendment to IA2 but maintains an intertie with the City to use wholesale water supply on an as-needed basis. LMWD may purchase up to 2.5 mgd of wholesale water per IA2. The contract does not have an expiration date and therefore 2.5 mgd of interruptible wholesale demand is projected through 2044.

Table 2-22 | Wholesale Demand Projections

Wholesale Customer	Service Area	Contractual Delivery[1]	2024 (mgd)	2034 (mgd)	2044 (mgd)[2]
ADD					
Algona	Valley	Firm	0.37	0.39	0.41
MIT Fish Hatchery	Valley	Firm	2.5	2.5	2.5
LMWD	Lea Hill	Interruptible	2.5	2.5	2.5
MDD					
Algona	Valley	Firm	0.69	0.73	0.78
MIT Fish Hatchery	Valley	Firm	1.5	1.5	1.5
LMWD	Lea Hill	Interruptible	2.5	2.5	2.5

Notes:
1. The City will plan for and provide water services to all retail customers and wholesale customers with firm contracts. As supply permits, the City may provide water to wholesale customers without firm contracts unilaterally or as part of a CIP agreement.
2. Algona's projections are provided through 2042; their projected rate increase was used to project consumption to 2044.

2.8.7 Total Demands

The total projected demands are tabulated for retail customers, firm wholesale, and interruptible wholesale in **Table 2-23.** The demands are presented separately to show the level of obligation to the City's customers. Projected retail ADD, MDD, and ERUs are presented by Service Area for the medium demand scenario. Additionally, the ADD and MDD are presented as the total of the projected retail demand and firm wholesale. The retail with firm wholesale represents the projected demand that is used as the basis for the system analysis and are shown in **Figure 2-10**. The difference between the historical and projected wholesale demands is due to the projected allocation of the supply to the proposed MIT Fish Hatchery, per the 1986 Stipulation Settlement Agreement. Additionally, both CWD and LMWD discontinued regular purchase of water from the City in 2017.

The 2044 retail ADD demand is projected to 9.02 mgd, which represents a 28 percent increase from 2024. Throughout the planning period, approximately 40 percent of the City's demand may be from wholesale purchases when both firm and interruptible supply are considered. The MDD is projected to increase by 24 percent from 2024 to 2044 for the sum of firm wholesale customers and retail customers.

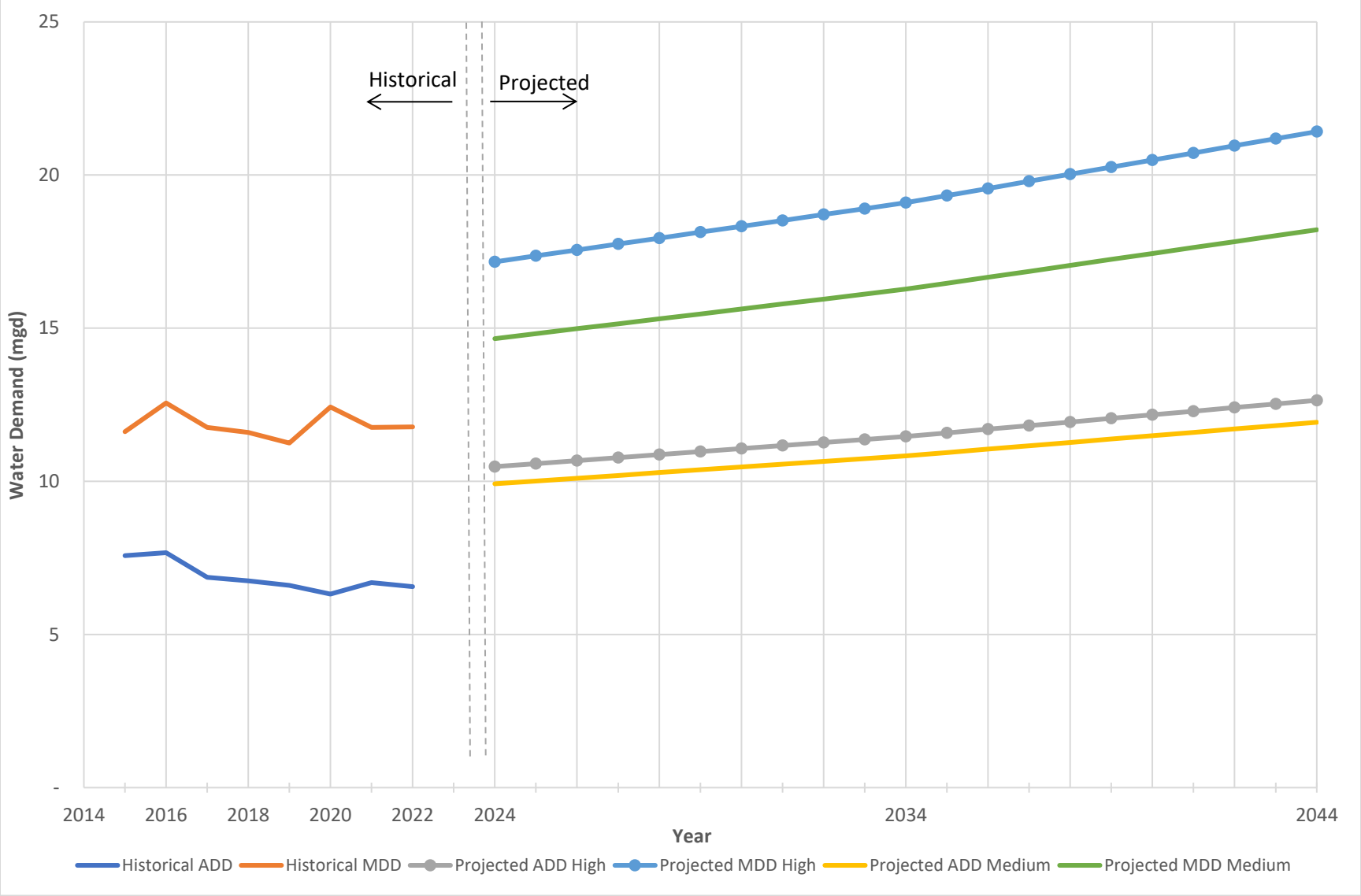
Table 2-23 | ADD, MDD, and ERUs Summarized by Service Area with Wholesale Included

	2024	2034	2044
Lea Hill			
Average Day Demand (mgd)	1.00	1.04	1.09
Maximum Day Demand (mgd)	1.77	1.84	1.92
Equivalent Residential Units	5,506	5,729	5,966
Valley			
Average Day Demand (mgd)	5.11	5.84	6.72
Maximum Day Demand (mgd)	9.02	10.31	11.88
Equivalent Residential Units	28,034	32,037	36,920
Lakeland			
Average Day Demand (mgd)	0.51	0.59	0.67
Maximum Day Demand (mgd)	0.91	1.04	1.19
Equivalent Residential Units	2,815	3,217	3,684
Academy			
Average Day Demand (mgd)	0.43	0.48	0.54
Maximum Day Demand (mgd)	0.76	0.85	0.95
Equivalent Residential Units	2,375	2,642	2,946
Total Retail Customers			
Total Average Day Demand (mgd)	7.05	7.95	9.02
Total Maximum Day Demand (mgd)	12.47	14.04	15.94
Total Equivalent Residential Units	38,731	43,626	49,515
Algona (Firm Wholesale)			
Total Average Day Demand (mgd)	0.365	0.386	0.409
Total Equivalent Residential Units, ADD[1]	2,005	2,120	2,246
Total Maximum Day Demand (mgd)	0.692	0.732	0.775
Total Equivalent Residential Units, MDD[1]	2,150	2,274	2,409
Retail Customer Demand with Algona (Firm Wholesale)			
Total Average Day Demand (mgd)	7.42	8.33	9.43
Total Maximum Day Demand (mgd)	13.16	14.77	16.71
Retail with Firm Wholesale (Algona and MIT Fish Hatchery)			
Total Average Day Demand (mgd)	9.92	10.83	11.93
Total Maximum Day Demand (mgd)	14.66	16.27	18.21
Retail with Firm & Interruptible Wholesale (Algona, MIT Fish Hatchery, and LMWD)			
Average Day Demand (mgd)	12.42	13.33	14.43
Maximum Day Demand (mgd)	17.16	18.77	20.71

Note:

1. The Algona ERU values were calculated using the City of Algona's projected demand and the City of Auburn's ERU_{ADD} and ERU_{MDD} factors.

Figure 2-10 | Projected Retail Plus Firm Wholesale ADD and MDD



CHAPTER 3

System Analysis and Asset Management

This chapter's objective is to identify existing facilities and determine their capacity to reliably satisfy current and projected water demands with safe drinking water. The cost of addressing identified infrastructure deficiencies and operational and maintenance improvements is addressed in priority order in Chapter 8.

This chapter addresses the following topics:

3.1 Asset Management – Asset Inventory and Analysis
3.2 Water Quality
3.3 Design Standards
3.4 Capacity Analysis
3.5 Summary of System Deficiencies

3.1 Asset Management – Asset Inventory and Analysis

This section establishes a date-based inventory of all system-owned water assets and satisfies the requirements of WAC 246-290-100(4)e(iii). The City actively assesses and plans for the maintenance, repair, and replacement of its major assets while preventive maintenance practices keep assets in good condition, thereby extending their useful life.

The City utilizes Cartegraph, an asset management software program, in conjunction with ESRI ArcGIS, a geographic information system (GIS) software program to manage its water assets. GIS is updated using record drawings as projects are completed and Cartegraph is linked to automatically update with new GIS information. Cartegraph is used to track and schedule maintenance activities, as well as materials, labor hours, costs and project timelines. Capital costs for the replacement of assets are assessed on a case-by-case basis.

The City's water system is comprised of groundwater wells, springs, interties with other water systems, treatment facilities, pump stations, storage facilities, pressure reducing stations, and water transmission and distribution pipelines. The City's water system includes 28 pressure zones in four different service areas: Lea Hill, Valley, Academy, and Lakeland. The location of major assets and pressure zones are shown in Figure 3-1. The hydraulic profile of the City's water system is presented in Figure 3-2, with enlargements provided as Figure 3-3 and Figure 3-4.

Water system vulnerabilities relating to risks from natural hazards, such as power outage, flooding, and earthquake are detailed in the Natural Hazard Vulnerability Summary, which is provided in Appendix U.

Figure 3-1 | Map of Water System Assets and Pressure Zones

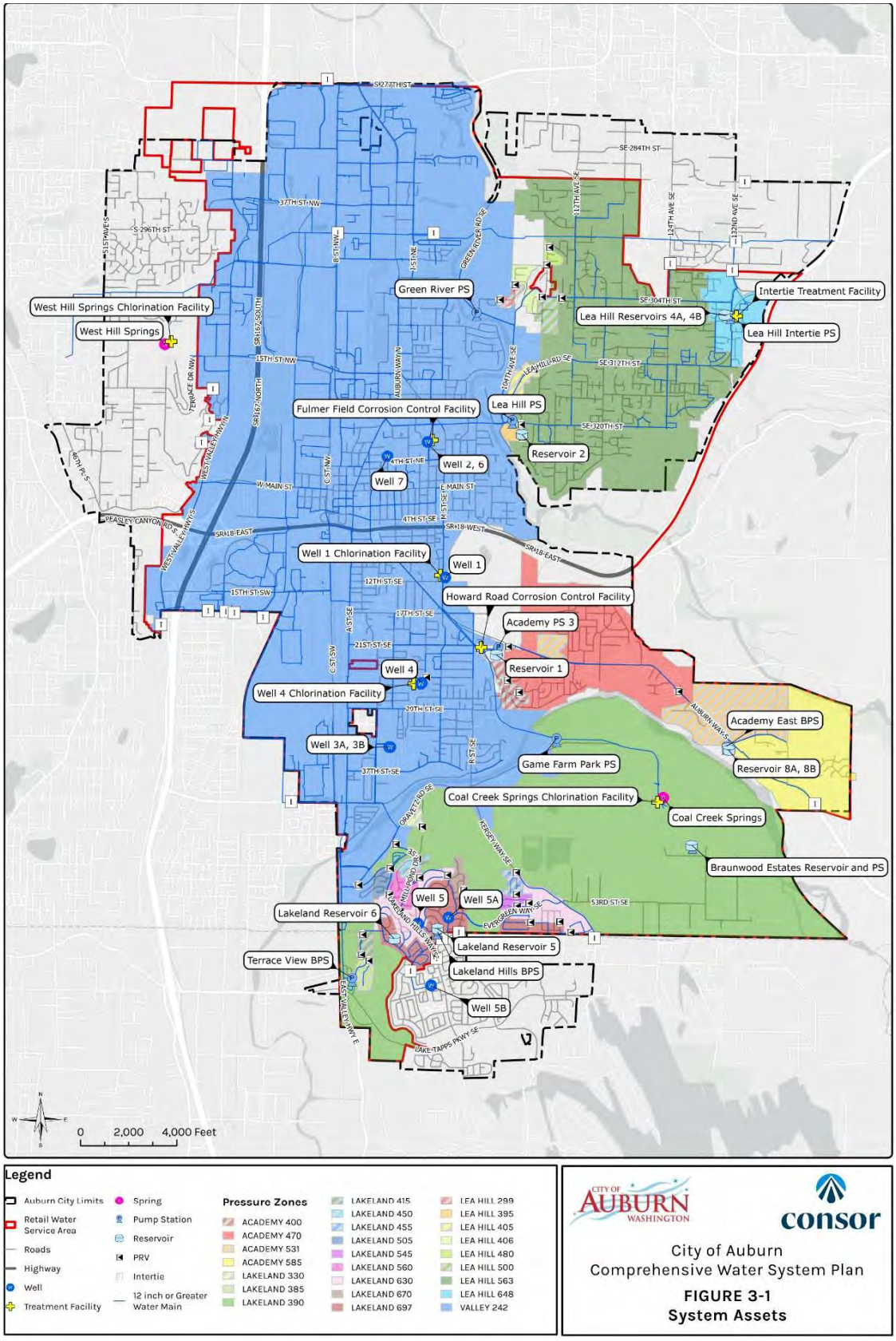


Figure 3-2 | Hydraulic Profile

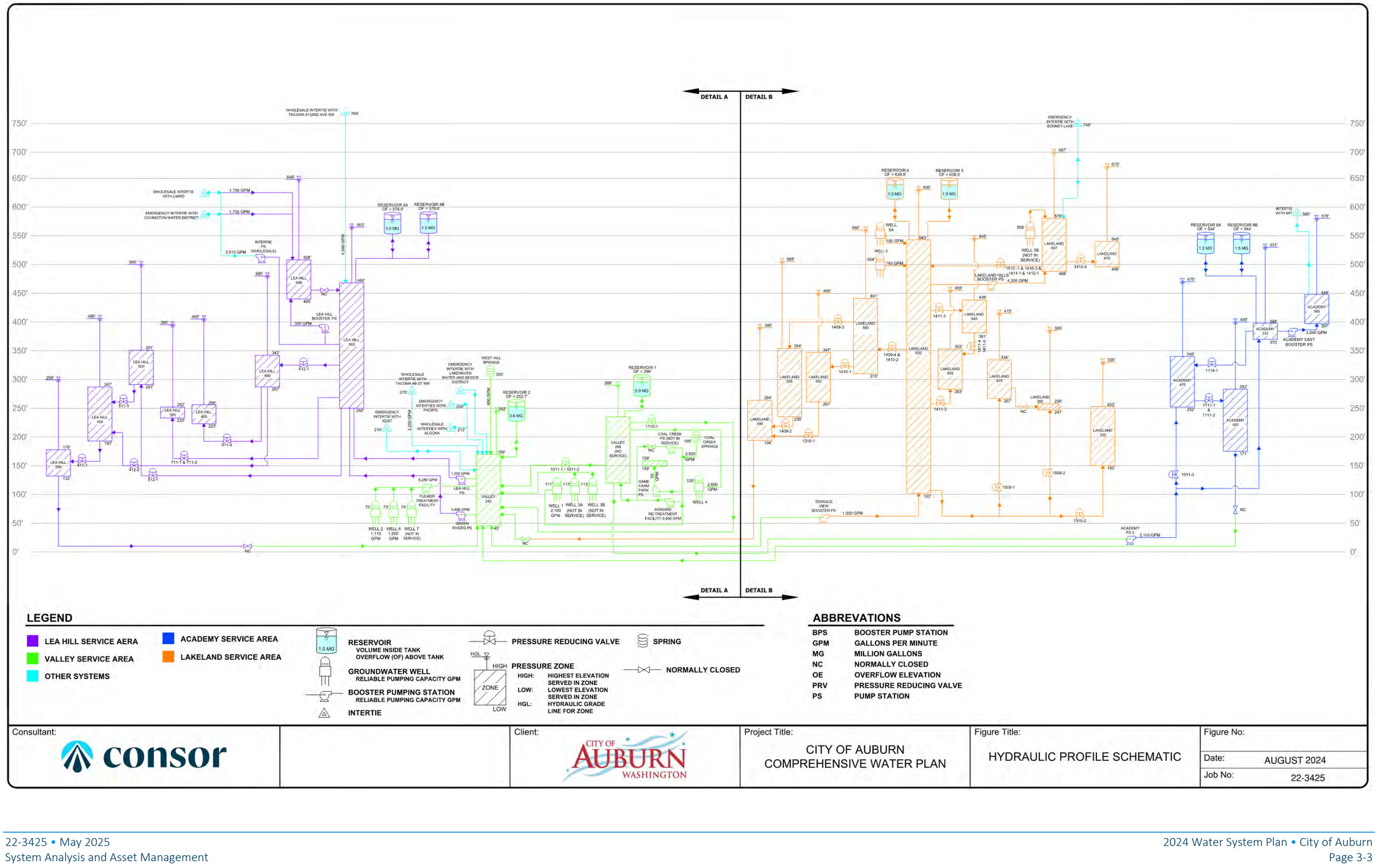


Figure 3-3 | Hydraulic Profile - Detail A

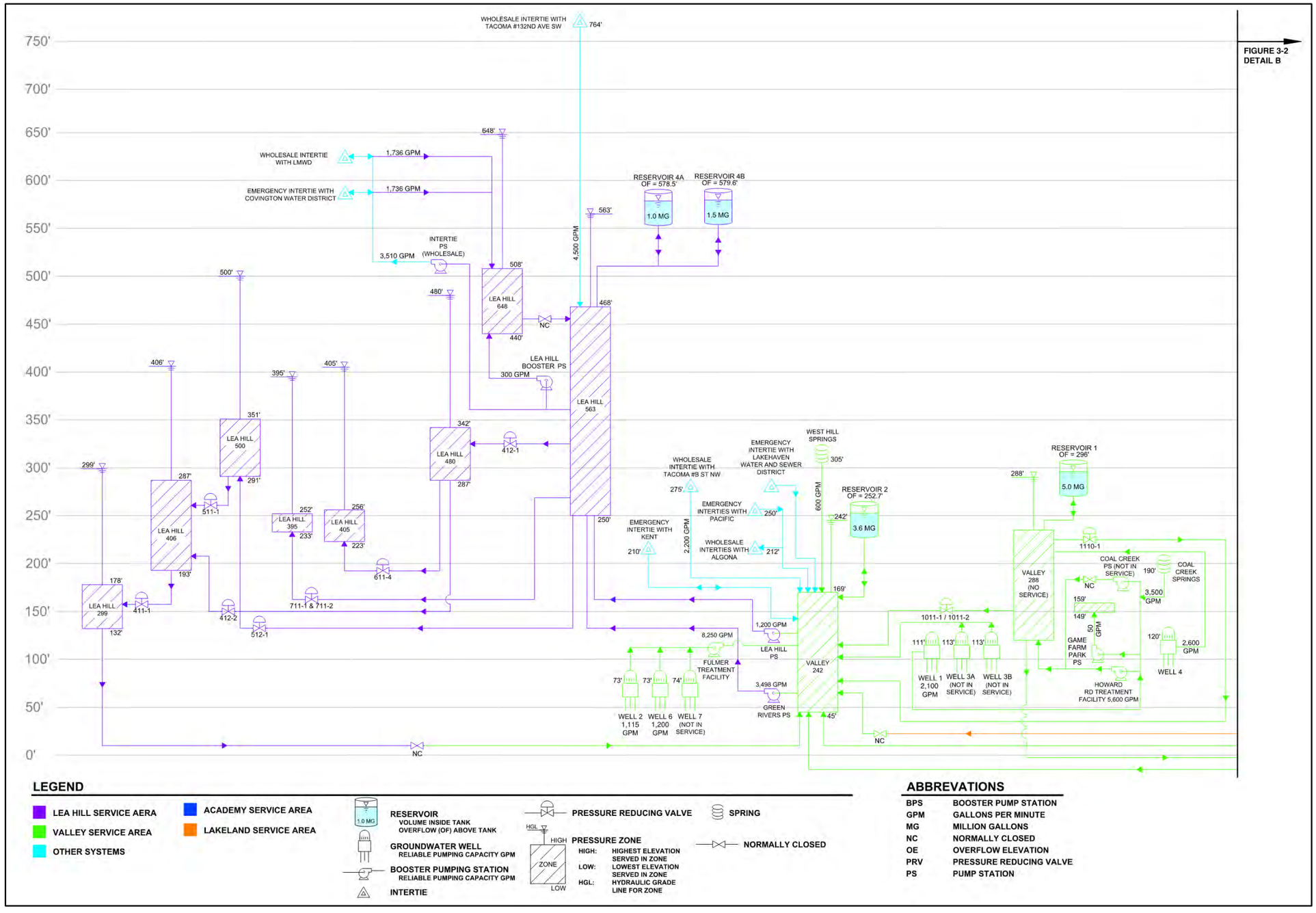
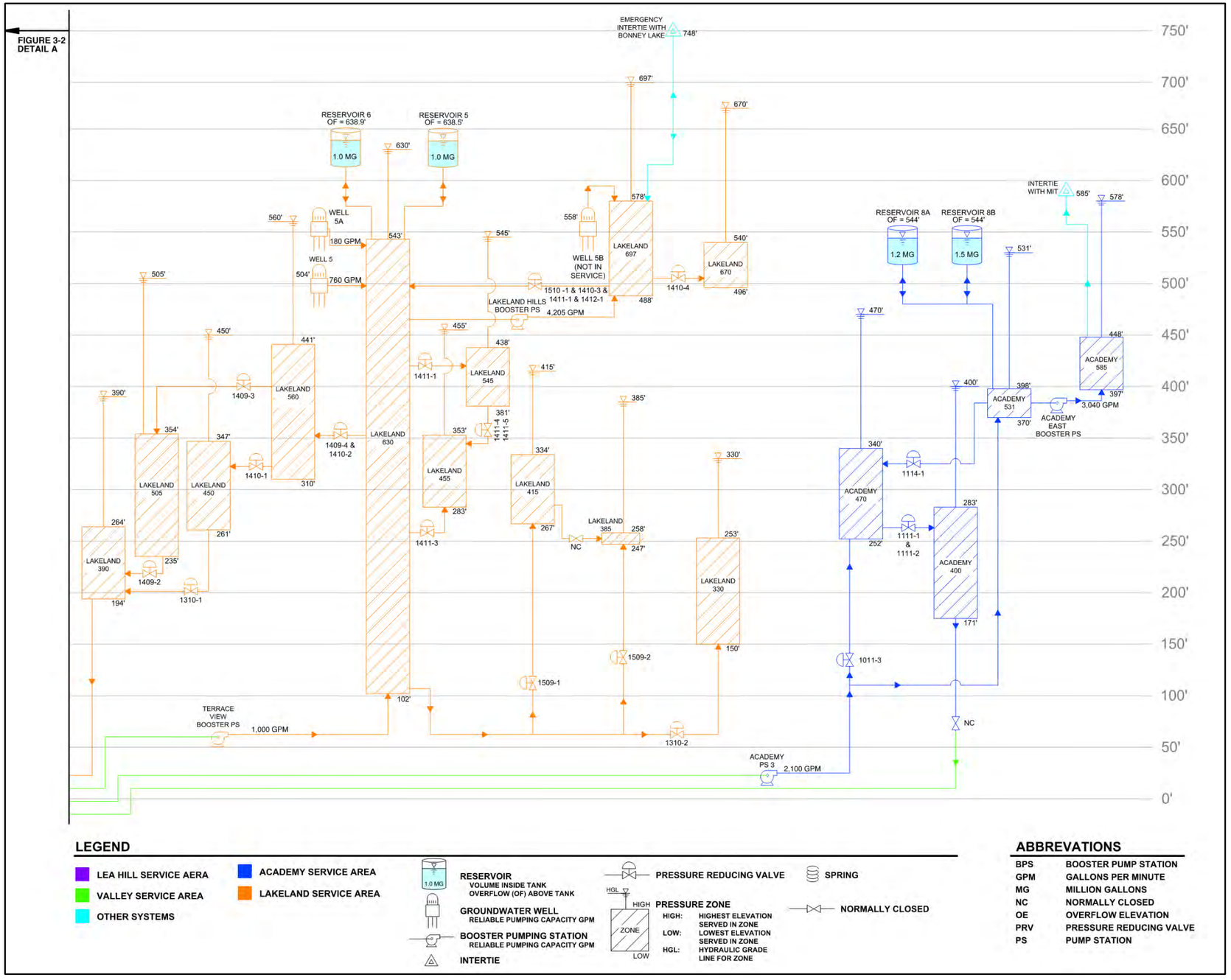


Figure 3-4 | Hydraulic Profile - Detail B



3.1.1 Distribution Facilities

The City' water distribution system includes approximately 300 miles of piping. **Table 3-1** summarizes the water piping inventory by size (diameter). The criticality ratings for the system's pipes are presented in **Table 3-1**, as criticality of the pipelines is assessed based on size. Water main and transmission pipelines vary in diameter from 4 to 36 inches, with a predominance of 8 and 12 inches, and range in age with the oldest piping dating back to 1925. Approximately 78 percent of the distribution system is ductile iron pipe.

Table 3-1 | Transmission and Distribution System Piping Inventory by Pipe Diameter

Distribution System Piping Diameter (inches)	Length (linear feet)	Design Life (years)	Criticality Rating (Bigger # = Less Critical)[1]
≤ 6	189,574	100	4
8-10	681,601		4
12-15	532,953		3
16-20	119,997		3
24-30	15,582		2
36-42	35		2
Unknown	1,380		--

Note:
1. Criticality was assessed based on pipe diameter. Larger diameter pipes were identified as being more critical than smaller diameter pipes.

Table 3-2 organizes water system piping by material and age and identifies the anticipated pipe condition. Pipe condition was assessed based on pipe age and remining useful life. Cast iron pipe that was installed after the 1930's, which constitutes over 48 miles of water mains or 16 percent of the total length of water mains in the City's system, was designated to have a significantly reduced design life of 50 years due to known pipe integrity issues. As such, the City is prioritizing replacement of cast iron pipe and regularly partners with other City projects to replace this piping efficiently and has capital programs to fund replacements as discussed further in **Chapter 8**. Piping that has an unknown material and unknown installation date will be updated in the City's GIS system and Cartegraph as more records research is completed.

In 2014, the City conducted leak detection testing and condition assessment of approximately 2.8 miles of 14 to 24-inch ductile iron and concrete composite pipe. The results indicated that the 20-inch and 16-inch ductile iron mains in the Lea Hill Service Area range from moderate to good condition. The Coal Creek Springs concrete composite main was identified as being in good condition. The 14-inch ductile iron main located in the Academy Service Area was suspected of being in poor condition, however this was later thought to be in decent condition as more information regarding the pipe material was obtained. A portion of the 14-inch piping was replaced as part of a roundabout project within Auburn Way S.

In 2020 the City conducted additional leak detection testing and condition assessment of approximately 13,500 feet of 10 to 16-inch cast iron main. With a focus on four specific sites: Auburn Way South, C Street Southwest, West Hill Springs, and Lea Hill Road. All the pipe on Auburn Way South and Lea Hill Road are in moderate condition. The pipe on C Street Southwest and at West Hill Springs are in poor to moderate condition. The C Street Southwest piping is currently being replaced by the City's "C St SW Preservation" capital project that will begin construction in in 2024.The West Hill Springs piping will be replaced in a forthcoming capital project titled "West Hill Springs Transmission Main Replacement" that is identified in **Chapter 8**.

Table 3-2 | Transmission and Distribution System Piping Inventory by Material and Installation Decade

Piping Material	Total Length (linear feet)	Install Decade (10-Year Period)	Length (linear feet)	Design Life (years)	Remaining Useful Life (years)	Condition Rating (Bigger # = Worse Condition)[1]
Cast Iron	253,919	1920	11,877	100	-4	7
		1930	10,602		6	6
		1940	3,079	50	-34	10
		1950	5,937		-24	10
		1960	147,764		-14	9
		Unknown	74,660		--	--
Concrete[2]	11,284	1960	11,284	100	36	3
Ductile Iron	1,198,958	1960	48,235	100	36	4
		1970	115,184		46	4
		1980	283,977		56	4
		1990	299,293		66	4
		2000	230,295		76	3
		2010	156,307		86	2
		2020	50,594		96	1
		Unknown	15,072		--	--
HDPE	409	2010	409	100	86	1
PVC[2]	19,498	1960	1,630	100	36	4
		1970	2,598		46	4
		1980	1,251		56	4
		1990	1,784		66	4
		2000	2,647		76	3
		2010	2,588		86	2
		2020	1,117		96	1
		Unknown	5,884		--	--
RCP	1,014	1970	884	100	46	3
		2020	130		96	1
Steel	1,030	1920	870	100	-4	6
		1970	160		46	4
Unknown - Anticipated to be Cast Iron based on install date	4,022	1960	4,022	50	-14	4
	28,564	1970	4,001	100	46	4
		1980	3,822		56	4

Piping Material	Total Length (linear feet)	Install Decade (10-Year Period)	Length (linear feet)	Design Life (years)	Remaining Useful Life (years)	Condition Rating (Bigger # = Worse Condition)[1]
Unknown – Anticipated to be Ductile Iron based on install date		1990	12,465		66	4
		2000	4,165		76	3
		2010	4,112		86	2
Unknown	23,089	Unknown	23,089	50	--	--

Notes:

1. Condition was assessed based on remaining useful life of the pipe.
2. The City is investigating pipe materials in 2024 to verify pipe materials in the City's database that may be mislabeled.

The distribution system piping is delineated into pressure zones using Pressure Reducing Valves (PRVs). An inventory of the City's PRVs, as well as their size, remaining useful life, condition, and criticality are summarized in **Table 3-3**. As PRVs approach their anticipated design life, the City's Maintenance and Operations (M&O) staff remove and rebuild the valve to extend the useful life of the asset, when feasible.

Table 3-3 | Pressure Reducing Valve (PRV) Inventory

Valve ID #	PRV Location Description	Valve Size (inches)	Install Date (year)	Design Life (years)	Remaining Useful Life (years)	Condition Rating (Bigger # = Worse Condition)	Criticality Rating (Bigger # = Less Critical)
Lea Hill Service Area							
411-10 - Primary Valve	Cobble Creek Upper at 30216 104th Ave SE	8	2024	40	40	1	3
411-11 - Secondary Valve		2					4
411-12 - Relief Valve		1.5					4
411-20 - Primary Valve	104th Ave SE/SE 302nd St. Cobble Creek Lower	6	1994		10	4	3
411-21 - Secondary Valve		2					4
411-22 - Relief Valve		1.5					4
412-10 - Primary Valve	298th Pl SE & 109th Ave SE	6	2011		27	2	3
412-11 - Secondary Valve		2					4
412-12 - Secondary Valve		2					4
412-20 - Primary Valve	300 Block SE & 108th Ave SE	6	2005	40	21	1	3
412-21 - Secondary Valve		2					4
412-22 - Secondary Valve		2					4
511-10 - Primary Valve	SE 304th St. & 108th Ave. SE	6	2016		32	1	3
511-11 - Secondary Valve		2					4
511-20 – Primary Valve	Cobble Creek Lower at 10230 304th Pl SE	6	1994		10	1	3
511-21 – Secondary Valve		2					4
511-22 – Relief Valve		1.5					4

Valve ID #	PRV Location Description	Valve Size (inches)	Install Date (year)	Design Life (years)	Remaining Useful Life (years)	Condition Rating (Bigger # = Worse Condition)	Criticality Rating (Bigger # = Less Critical)
512-10 – Primary Valve	SE 304th St & 110th Pl SE	6	2018		34	1	3
512-11 – Secondary Valve		2					4
512-12 – Secondary Valve		2					4
611-30 - Primary Valve	Carriage Square	8	2018		34	1	3
611-31 - Secondary Valve		3					4
611-32 - Secondary Valve		3					4
711-10 - Primary Valve	Amberview North	8	1986		2	5	3
711-11 – Secondary Valve		2					4
711-20 - Primary Valve	Amberview South	8	1986		2	5	3
Valley Service Area							
1110-10 - Primary Valve	25th St SE & K St SE	10	1987	40	3	6	3
1110-20 - Secondary Valve		4					4
Lakeland Service Area							
1309-10 - Primary Valve	Mill Pond Dr SE & Oravetz Rd SE	10	1980	40	-4	6	3
1309-11 - Secondary Valve		3					4
1309-12 - Secondary Valve		3					4
1309-13- Secondary Valve		1					4
1310-10 - Primary Valve	Mill Pond Dr SE & Mill Pond Loop SE	10	1980		-4	6	3
1310-11 - Secondary Valve		3					4
1310-12 - Secondary Valve		2		40			4
1310-13 - Secondary Valve		1					4
1409-10 - Primary Valve	Oravetz Rd SE & Lakeland Hills Way SE	8	1990		6	5	3
1409-11 - Secondary Valve		4					4
1409-12 - Secondary Valve		2					4
1409-13 - Secondary Valve		2					4
1409-20 - Primary Valve	47th St SE & Lakeland Hills Way SE	8	1992		8	5	3
1409-21 - Secondary Valve		4					4
1409-22 - Secondary Valve		2					4
1409-23 - Secondary Valve		2					4
1409-30 - Primary Valve	Lakeland Hills Way SE & 51st St SE	10	2004		20	3	3
1409-31 - Secondary Valve		3					4
1409-32 - Secondary Valve		2					4
1409-40 - Primary Valve		10	1988		4	5	3

Valve ID #	PRV Location Description	Valve Size (inches)	Install Date (year)	Design Life (years)	Remaining Useful Life (years)	Condition Rating (Bigger # = Worse Condition)	Criticality Rating (Bigger # = Less Critical)
1409-41 - Secondary Valve	Mill Pond Dr SE & Lakeland Hills Way SE	3					4
1409-42 - Secondary Valve		3					4
1409-43 - Secondary Valve		1					4
1410-10 - Primary Valve	5018 Mill Pond Dr SE	10	1980		-4	6	3
1410-11 - Secondary Valve		3					4
1410-12 - Secondary Valve		2					4
1410-20 - Primary Valve	52nd St SE & East of Mill Pond Dr SE	8	1992		8	5	3
1410-21- Secondary Valve		4					4
1410-22- Secondary Valve		2					4
1410-23- Secondary Valve		2					4
1410-30 - Primary Valve	Nathan Ave SE & Highland Dr SE	8	1992		8	5	3
1410-31- Secondary Valve		4					4
1410-32- Secondary Valve		2					4
1410-33- Secondary Valve		2					4
1410-40 - Primary Valve	5203 Quincy Ave SE	8	1995	40	11	4	3
1410-41- Secondary Valve		4					4
1410-42- Secondary Valve		2					4
1410-43- Secondary Valve		2					4
1509-10 - Primary Valve	Terrace View Lower	10	2007		23	3	3
1509-11- Secondary Valve		3					4
1509-12- Secondary Valve		3					4
1509-20 - Primary Valve	Terrace View Middle	10	2007		23	3	3
1509-21- Secondary Valve		3					4
1509-22- Secondary Valve		3					4
1509-30 - Primary Valve	Terrace View Upper	10	2007		23	3	3
1509-31- Secondary Valve		3					4
1509-32- Secondary Valve		3					4
1509-40 - Primary Valve	Terrace View Dr SE & Alexander Pl SE	10	2007		23	3	3
1509-41- Secondary Valve		3					4
1509-42- Secondary Valve		3					4
1510-10 - Primary Valve	Lakeland Hills Way SE & Evergreen Way SE	8	1994		10	4	3
1510-11- Secondary Valve		4					4
1510-12- Secondary Valve		2					4

Valve ID #	PRV Location Description	Valve Size (inches)	Install Date (year)	Design Life (years)	Remaining Useful Life (years)	Condition Rating (Bigger # = Worse Condition)	Criticality Rating (Bigger # = Less Critical)
1510-13- Secondary Valve		2					4
1411-10 - Primary Valve	56th St SE at Bennett Ave SE	6	2011		27	2	3
1411-11- Secondary Valve		2					4
1411-12- Secondary Valve		2					4
1411-20 - Primary Valve	5310 Bennett Ave SE	6	2010		26	2	3
1411-21- Secondary Valve		2					4
1411-22- Secondary Valve		2					4
1411-30 - Primary Valve	Kersey Way SE & 50th St SE	8	2015		31	2	3
1411-31- Secondary Valve		2					4
1411-32- Secondary Valve		2		40			4
1411-40 - Primary Valve	2305 54th St SE	10	2015		31	2	3
1411-41- Secondary Valve		3					4
1411-42- Secondary Valve		3					4
1411-50 - Primary Valve	5253 Wesley Ave SE	6	2015		31	2	3
1411-51- Secondary Valve		2					4
1411-52- Secondary Valve		2					4
1412-10 - Primary Valve	5539 Franklin Ave SE	6	2012		28	2	3
1412-11- Secondary Valve		2					4
1412-12- Secondary Valve		2					4
Academy Service Area							
1011-30 - Primary Valve	2003 Auburn Way S	8	2006		22	3	3
1011-31 - Secondary Valve		3					4
1011-32 - Secondary Valve		3					4
1111-10 - Primary Valve	Riverwalk Dr SE & Howard Rd SE	6	2006		22	3	3
1111-11 - Secondary Valve		2					4
1111-12 - Secondary Valve		2					4
1111-20 - Primary Valve	2204 27th St SE	6	1997		13	3	3
1111-21 - Secondary Valve		2					4
1111-22 - Secondary Valve		2					4
1114-10 - Primary Valve	4500 Auburn Way South	8	2006		22	3	3
1114-11 - Secondary Valve		3					4
1114-12 - Secondary Valve		3					4

Figure 3-5 shows the locations of water main breaks and leaks that have required repair since 2014. A total of 93 repairs have been completed during this timeframe and include water main break and leak repairs, water main appurtenance repairs, service lines repairs, and repairs due to damage caused by construction contractors.

Figure 3-5 | Water Main Leak and Break Repair Locations from 2014-2024

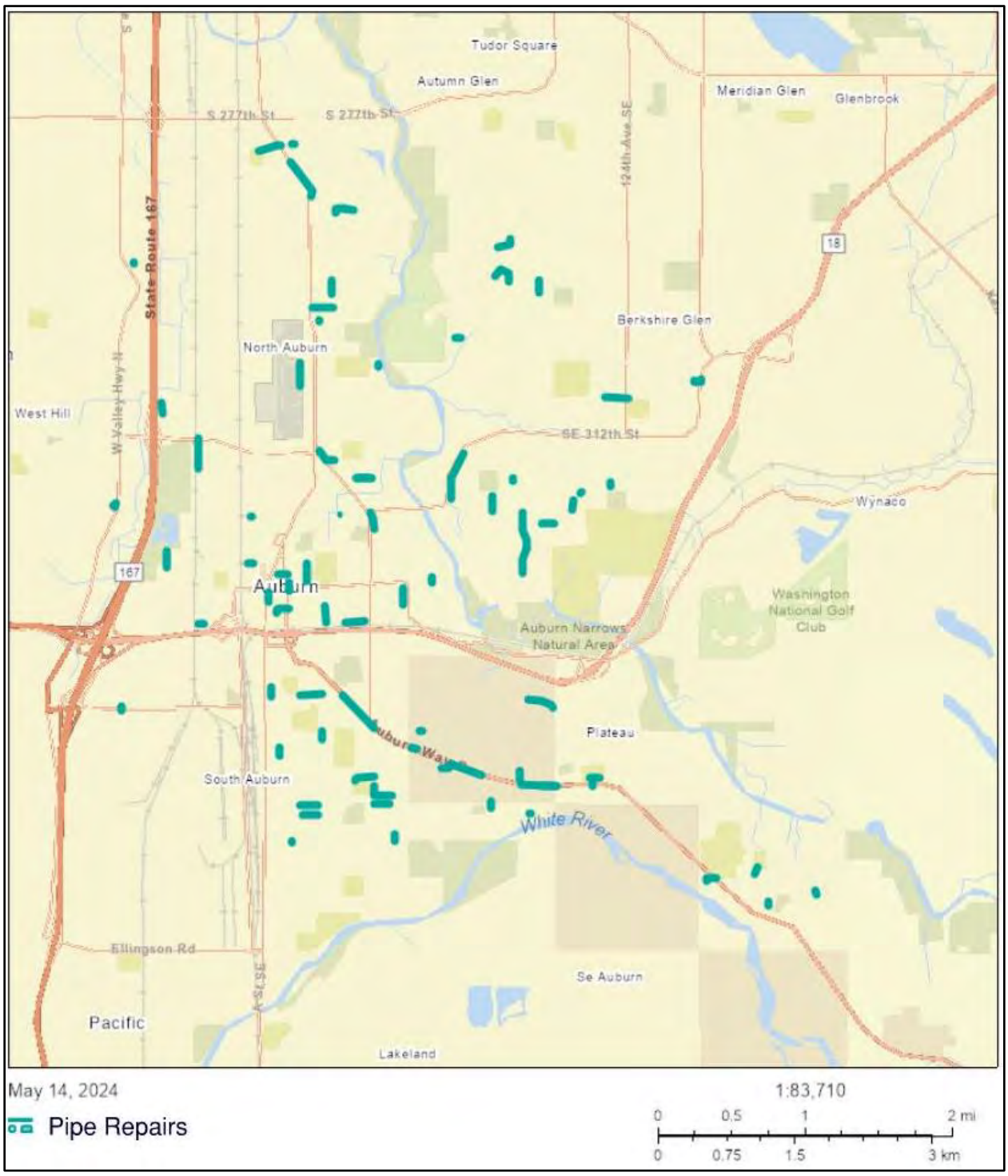
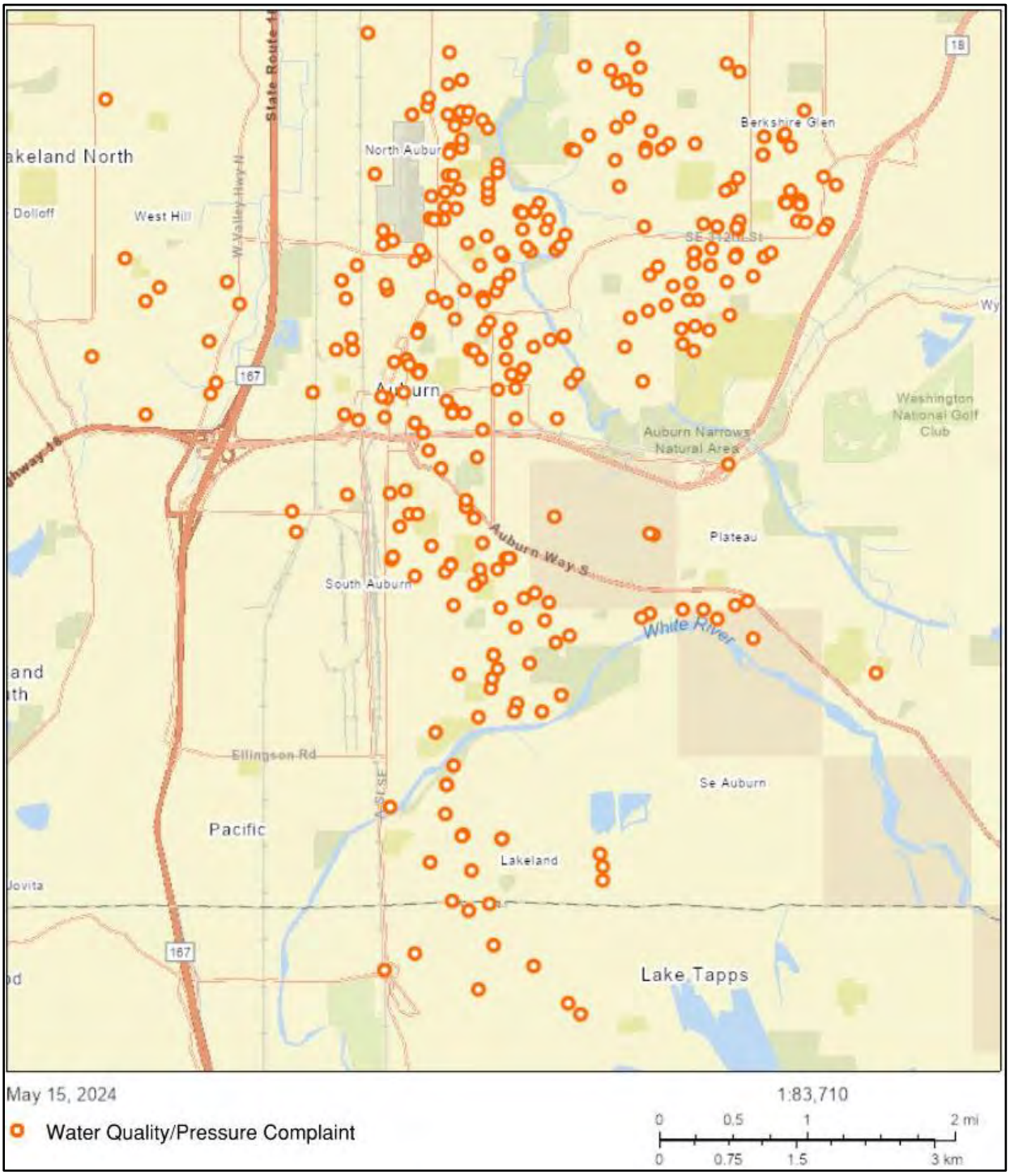


Figure 3-6 shows the locations of low pressure and water quality (odor and discolored water) complaints received since 2014.

Figure 3-6 | Low Pressure, Odor, and Discolored Water Complaints from 2014-2024



A summary of the customer complaints by category is presented in **Table 3-4**. Overall, there has been only one odor complaint within the last ten years. Pressure complaints and water quality complaints have remained fairly consistent, with the fewest number of complaints being made in 2023.

Table 3-4 | Summary Customer Complaints

Category	2014[1]	2015	2016	2017	2018	2019	2020	2021	2022	2023
Water Quality (Appearance)	0	40	47	23	14	55	48	47	27	9
Odor	3	1	0	0	0	0	0	0	0	0
Pressure	6	9	16	19	12	8	4	11	8	10
Total	**9**	**50**	**63**	**42**	**26**	**63**	**52**	**58**	**35**	**19**

Note:
1. Data in 2014 is incomplete due to the City transitioning to Cartegraph Asset Management.

3.1.2 Water Source Facilities

The City uses a combination of groundwater wells and springs as supply sources for the water system. The pumping capacity, remaining useful life, condition and criticality of the City's groundwater wells are summarized in **Table 3-5**. The City's two spring sources, Coal Creek Springs and West Hill Springs, are not included in **Table 3-5** since both these sources operate by gravity and have no on-site pumping equipment. Condition ratings are assigned based on the 2013 Water Facilities Evaluation Study.

A detailed description of each water source facility, including both springs and groundwater wells, and planned improvements is provided following **Table 3-5**. A summary of the pumping or production capacity of each source, including the springs, is included in **Section 2.6** of **Chapter 2**. Discussion of the City's current water rights for each water source is provided in **Section 3.4.1**.

Table 3-5 | Source of Supply Well Pump Inventory

Facility Name	Capacity (MGD)	No. of Pumps	Pump Type	Install Year	Design Life (years)	Remaining Useful Life (years)	Condition Rating (Bigger # = Worse Condition)	Criticality Rating (Bigger # = Less Critical)
Valley Service Area								
Well 1	3.02	1	Vertical Turbine	2016	40	32	2	2
Well 2	1.61	1	Centrifugal	2023		39	3	1
Well 3A	Not in Service							
Well 3B	Not in Service							
Well 4	3.74	1	Centrifugal	1985	40	30	1	3
Well 6	1.73	1	Vertical Turbine	1999		15	4	1
Well 7	Not in Service							
Lakeland Service Area								
Well 5	0.94	1	Submersible	1983	40	-1	7	3
Well 5A	0.26	1	Submersible	1990		6	7	2
Well 5B	Not in Service							

3.1.2.1 Coal Creek Springs

Coal Creek Springs is a primary water supply for the City due to its production capacity. This source is more economical to operate than other sources as it can provide a large volume of water and does not require pumping for extraction. Much of the spring's collector system, including the south and middle collectors, was constructed in 1964. A third collector (the north collector) was added in 1998 to enhance system performance and to provide increased reliability. Currently, the flow from this collector is by gravity, however a buried manhole structure was installed in the line to provide space for a future pump station that could increase production.

Each collector is connected to an overflow structure before connection to a 24-inch transmission line that conveys flow to the Howard Road Corrosion Control Treatment (CCT) Facility where the water is treated for corrosion and is then pumped to Reservoir 1. Between the Coal Creek Springs headworks and the Howard Road CCT Facility is a single connection that supplies potable water to Game Farm Wilderness Park. This transmission main is in good condition, however a suspected leak on the 24-inch steel transmission main crossing the White River was identified in a facility evaluation study completed in 2014. It was later identified that there was not a leak, but the evaluation results were caused by river turbulence due to portions of the pipe being exposed along the riverbed. The City is currently constructing a project that replaces the river crossing with new transmission piping suspended from a utility and pedestrian bridge; the project will be completed in 2024 and is identified in Chapter 8.

In recent years, the production capacity of Coal Creek Springs has been reduced. A maximum instantaneous production rate up to 4,500 gpm is currently feasible, however a more consistent functional production capacity of 3,500 gpm is currently achieved (approximately 52 percent of the water right capacity). The City is currently investigating the cause of reduced production and potential solutions. A capital project is planned to rehabilitate Coal Creek Springs once a solution is identified; the project is discussed further in Chapter 8.

3.1.2.2 West Hill Springs

Although the use of West Hill Springs as a potable water supply dates to before 1907, most of the current facilities and equipment were constructed after 1960. More recent improvements include replacement of the collection boxes, as recommended in the 1995 Comprehensive Water Plan, and partial fencing of the watershed, as recommended by the 2000 Water Comprehensive Plan. The spring's existing transmission main is constructed of 10-inch diameter cast iron piping and has experienced two breaks. The City plans to replace approximately 1,250 linear feet of the transmission main with 12-inch diameter ductile iron pipe in an upcoming capital project identified in Chapter 8.

3.1.2.3 Well 1

Well 1 was constructed in 1960 and underwent substantial renovation in 2016, significantly improving the overall facility condition. Renovations included transmission piping to Howard Road CCT Facility, site improvements, a new well house, new pumping system, disinfection with sodium hypochlorite, on-site emergency power, and upgraded electrical and supervisory control and data acquisition (SCADA) controls. The new well pumping system is a two-stage, vertical turbine pump with a capacity of 2,100 gpm, driven by a 100-HP motor and controlled by a variable frequency drive (VFD). Supply from Well 1 will be routed along the recently constructed 16-inch transmission main and conveyed to the Howard Road CCT Facility.

3.1.2.4 Wells 2 & 6

Well 2 was constructed in 1970 and the well and well house were replaced in 2000 with a new masonry building and pumping equipment as part of the City's corrosion control strategy. The facility built in 2000 also houses Well 6, which was built in 1999. Within the facility is a two-stage 1,115 gpm centrifugal pump powered by a 125-HP motor, installed in 2023 (Well 2), and a two-stage, vertical-turbine pump driven by a 200-HP motor (Well 6). The pumping capacity of Well 6 has been reduced in recent years to a typical production rate of 1,200 gpm due to fouling of the well screen that requires occasional cleaning. The wells discharge to a 14-inch transmission main to Fulmer Field CCT Facility for treatment prior to distribution.

Since the Fulmer Field CCT Facility is required to re-pump the water from Wells 2 and 6 into the Valley Service Area and to Reservoir 2, Wells 2 and 6 are functional only with operation of the Fulmer Field CCT Facility. Chlorination and emergency power for both Wells 2 and 6 are housed in the Fulmer Field CCT Facility.

In 2023 the City completed an interim replacement of the pump at Well 2. Full replacement of Well 2 is planned as a capital project discussed further in Chapter 8. Additionally, rehabilitation work completed in 2013 and 2014 indicated that it would be beneficial to clean and rehab both wells on a regular basis. As such, the City initiated a program for regular cleaning of the wells established on a 3-year cycle which is discussed further in Chapter 8.

3.1.2.5 Wells 3A & 3B

Wells 3A and 3B are located at the same site, off 37th Street SE on the extension of E Street SE. The wells are approximately 50 feet apart and were constructed in 1983 and 1984 respectively. Each well is equipped with a four-stage, centrifugal pump driven by a 125-HP motor, each with a maximum pumping capacity of 1,650 gpm when operated individually. A standby generator capable of running one pump at a time is available on site. The system is equipped with an automatic transfer switch.

Currently, Wells 3A and Well 3B are not operated because they produce water that contains high concentrations of manganese. Since the wells were taken offline, the chlorination facilities have been removed. If operated, the wells pump directly into the Valley Service area distribution system. The City plans to construct treatment for these wells as part of the "Wells 3A/3B Treatment" project discussed further in Chapter 8.

3.1.2.6 Well 4

Well 4 was originally constructed in 1985, was rebuilt in 2012, and is currently undergoing significant upgrades to mechanical and electrical equipment, including well pump piping, valve replacement, and control panel replacement. Once the upgrades are complete this source will be considered in excellent condition. The well is equipped with a 2,600-gpm, four-stage, centrifugal, turbine pump driven by a 300-HP motor. Well 4 pumps directly to a 16-inch transmission main that can either convey water to Reservoir 1 or to distribution through a PRV. Well 4 is an important supply for the southern end of the City's Retail Water Service Area (RWSA). Operation of the well is normally controlled by the water level in Reservoir 1.

3.1.2.7 Well 5

Well 5 is one of three City wells that were constructed to serve the Lakeland Hills Development within the City's Lakeland Service Area. Well 5 pumps directly into the Lakeland Service Area distribution system. The well was constructed in 1983 and is equipped with a seven-stage submersible turbine pump, driven by a

125-HP motor. The well facility was assessed to be in poor condition in the 2013 Water Facilities Evaluation Study. The City plans to upgrade the facility as part of the Well 5/5A Upgrades project discussed in Chapter 8.

3.1.2.8 Well 5A

Well 5A is the second well serving the Lakeland Service Area and was constructed in 1990 to supplement Well 5. The well pumps directly into the Lakeland Service Area distribution system. The well is equipped with a ten-stage submersible turbine pump, driven by a 60-HP motor and has on-site chlorination facilities. A manual transfer switch is provided to allow operation of Well 5A using a portable emergency generator. The well facility was assessed to be in poor condition in the 2013 Water Facilities Evaluation Study. The City plans to upgrade the facility as part of the Well 5/5A Upgrades project discussed in Chapter 8.

3.1.2.9 Well 5B

Well 5B was constructed in 2005 with a 600 gpm pump. Once this source came on-line, the City discovered the aquifer was not recovering, so the well was taken out of service in 2006 and has not been operated since. The City has no plans to operate this well within the planning horizon.

3.1.2.10 Well 7

Well 7 was constructed in 1997 and was originally equipped with a 3,500-gpm variable-stage, vertical-turbine pump driven by a 500-HP motor. Well 7 is configured to pump directly to the Fulmer Field CCT Facility through a 16-inch transmission main. The treated water is then re-pumped into the Valley Service Area. If necessary, Well 7 can pump untreated water directly to the Valley Service Area through a PRV. The well was taken out-of-service in 2012 due to high manganese concentrations. The City has planned capital projects to expand the treatment capacity and treat manganese at Fulmer Field CCT Facility to accommodate flows from Well 7 so operation of this facility can be reinstated. The projects to provide treatment and back-up power for Well 7 are discussed in Chapter 8.

3.1.2.11 Algona Well 1

In 1996, the City acquired the water rights for Algona Well 1 as a condition of the wholesale agreement with the City of Algona (Algona). Due to pump operational problems, Algona Well 1 was removed from service. The 500-gpm pump and associated piping have been removed from the well house and the building has been demolished, but the well casing is still intact, and the well is plugged. The City has a capital project identified in Chapter 8 to study the well and options for potential use or relocation.

3.1.3 Water Treatment Facilities

The City's water treatment facilities provide chlorination and corrosion control. An inventory of the water system's treatment facilities, including the treatment type, capacity, remaining useful life, condition, and criticality is provided in Table 3-6. Condition ratings are assigned based on the 2013 Water Facilities Evaluation Study. A detailed description of each water treatment facility and planned improvements is provided following Table 3-6.

Table 3-6 | Water Treatment Facility Inventory

Facility Name	Treatment Type	Treatment/ Dosing Capacity	Install Date	Design Life (years)	Remaining Useful Life (years)	Condition Rating (Bigger # = Worse Condition)	Criticality Rating (Bigger # = Less Critical)
Coal Creek Springs	Gas Chlorination	0.75-0.80 mg/L	1976	35	-13	3	2
West Hill Springs	Gas Chlorination	0.75-0.80 mg/L	1992		15	5	3
Fulmer Field CCT Facility	Hypochlorite	0.95 mg/L	2002	35	13	5	2
	Corrosion/Air-Stripping	11.88 MGD					1
Howard Road CCT Facility	Corrosion/Air-Stripping	8.06 MGD	2004		15	5	1
Terrace View Booster Pump Station	Re-chlorination	0.75 mg/L	2010		21	3	2
Well 1	Hypochlorite	0.75-0.80 mg/L	2016		27	2	2
Well 4	Hypochlorite	0.75-0.80 mg/L	2016		27	2	3
Well 5A	Hypochlorite	0.75-0.80 mg/L	1990		1	3	2

3.1.3.1 Chlorination Facilities

3.1.3.1.1 Coal Creek Springs Chlorination

The Coal Creek Springs chlorination station was built in 1976 and achieves 4-log treatment of the supply. The chlorination station is housed in a masonry building approximately 300 feet north of the collectors and is in fair condition. As a major source of water for the system, Coal Creek Springs is used to maintain chlorine residuals in the Academy Service Area and south end of the Valley Service Area.

This chlorination station is equipped with two chlorinators. Gaseous chlorine is stored on site in a separate room. Alarms from the chlorination equipment are transmitted back to the Water Control Center at the M&O Facility. A chlorine residual analyzer provides high and low alarms to the M&O Facility. Chlorine is dosed into the water at a range of 0.75-0.80 milligrams per liter (mg/L) and is adjusted based on the chlorine residual measured in the Academy and the south end of the Valley Service Area.

The City has a capital project planned to replace the chlorination building and upgrade the chlorination equipment from chlorine gas to hypochlorite disinfection. This project is discussed further in **Chapter 8**.

3.1.3.1.2 West Hill Springs Chlorination

The West Hill Springs Chlorination Facility was constructed in 1992. Water produced at West Hill Springs continuously flows from the collection boxes to the on-site chlorination station, housed in a wood building, where gas chlorine is metered continuously to treat the water. Chlorine dosage typically ranges from 0.75 – 0.80 mg/L and is adjusted based on the measured chlorine residual in the north end of the Valley Service Area. From the chlorination station, the water flows by gravity into the Valley Service Area.

3.1.3.1.3 Well 1

Liquid sodium hypochlorite treatment was installed at Well 1 in 2016. The chlorine dosage typically ranges from 0.75 - 0.80 mg/L. A residual monitoring system is tied into the City's existing SCADA system. The City plans to replace the liquid hypochlorite system with an on-site chlorine generation system (OSEC) to better accommodate seasonal changes to chemical demands and reduce chemical waste. This project is discussed further in Chapter 8.

3.1.3.1.4 Wells 2 and 6

Water produced at Wells 2 and 6 is treated and chlorinated at the Fulmer Field CCT Facility prior to distribution.

3.1.3.1.5 Well 4

Well 4 was equipped with a liquid sodium hypochlorite chlorination system in 2016. The chlorine dosage typically ranges from 0.75 – 0.80 mg/L. The City plans to replace the liquid hypochlorite system with an on-site chlorine generation system (OSEC) to better accommodate seasonal changes to chemical demands and reduce chemical waste. This project is discussed further in Chapter 8.

3.1.3.1.6 Well 5

There is currently no chlorination provided for water produced at Well 5. This City has a capital project discussed in Chapter 8 that will include the addition of a chlorination facility to Well 5.

3.1.3.1.7 Well 5A

Well 5A was equipped with a liquid sodium hypochlorite chlorination station in 1990. The chlorine dosage typically ranges from 0.75 – 0.80 mg/L and is adjusted based on the chlorine residual measured in the Lakeland Service Area.

3.1.3.1.8 Fulmer Field CCT Facility

The Fulmer Field CCT Facility was constructed in 2004. Chlorination at Fulmer Field CCT, along with B Street Intertie, is a major source of chlorine residual in the north end of the Valley Service Area and in the Lea Hill Service Area and is achieved using an on-site chlorine generation system. The existing on-site chlorine generation cell was replaced in 2012, but the system was identified as being in poor condition and sourcing replacement parts for repairs has become increasingly more difficult. A capital project to replace the entire on-site generation system is planned and discussed further in Chapter 8.

The Fulmer Field CCT Facility treats the water from Wells 2, 6, and 7 (when operational). Chlorine is introduced into the system prior to the air-stripping towers at a dose of approximately 0.95 mg/L. The chlorine is adjusted based on measured chlorine residual at the station analyzer. The treated water is then stored in the clearwell and boosted into the distribution system and Reservoir 2. If needed, the chlorine can be manually introduced into the clearwell rather than prior to the towers.

3.1.3.1.9 Terrace View Booster Pump Station (BPS)

The Terrace View BPS was equipped with a liquid sodium hypochlorite chlorination system in 2010, adding 6 percent solution to the discharge piping of the station at an approximate dose of 0.75 mg/L.

3.1.3.1.10 Intertie Pump Station

Through the First Amendment to Interlocal Agreement No. 2 for the Lea Hill Intertie project executed in 2017, Covington Water District (CWD) terminated its rights or obligations to Interlocal Agreement No. 2 or the First Amendment and Lake Meridian Water District (LMWD) continues to receive wholesale water from the City, as needed, on an interruptible basis. The chlorination equipment was removed from the Intertie Pump Station since the intertie is not used on regular basis.

3.1.3.2 CCT Facilities

To limit the corrosion of lead and copper in the system, the City treats major supplies. The treatment process increases the pH of the water, which reduces the solubility of lead and copper, allowing the water to comply with the Lead and Copper Rule. The goal of the CCT facilities is to adjust the water leaving the facility to a pH of approximately 7.5.

3.1.3.2.1 Fulmer Field CCT Facility

The Fulmer Field CCT Facility also adjusts the pH of the water from its sources to approximately 8.0 by air-stripping in three 33,000 gallon air-stripping towers to provide corrosion control treatment. Three 10,000 cubic feet per minute (CFM) blowers provide air. As the carbon dioxide is stripped from the water, the treated water is stored in the clearwell and boosted through four booster pumps back into the distribution system and Reservoir 2. The firm capacity of the facility is 11.88 MGD.

3.1.3.2.2 Howard Road CCT Facility

The Howard Road CCT Facility was constructed in 2004. It has a life expectancy of an additional 15 years and is generally in fair condition. This facility is housed in a masonry building and treats the water from Coal Creek Springs and Well 1. The pH of the water from Coal Creek Springs and Well 1 is then adjusted to approximately 7.8 by air-stripping in two 33,000 gallon air-stripping towers. Two 9,300 CFM blowers provide air. The treated water is then stored in the clearwell at the facility and re-boosted through three booster pumps to Reservoir 1 and the Valley Service Area. The firm capacity of the facility is 8.06 MGD.

3.1.4 Storage Facilities

The City currently maintains a total of 15.7 million gallons (MG) of water storage in eight water reservoirs located throughout the system. Storage reservoirs are present in each of the City's Service Areas. The location of each storage reservoir is shown in **Figure 3-1**. A summary of the City's storage reservoirs, as well as the type of storage tank, installation date, remaining useful life, condition and criticality is provided in **Table 3-7**. Condition ratings are assigned based on the 2013 Water Facilities Evaluation Study. The storage volumes provided in **Table 3-7** represent the maximum tank volume; however, the City commonly operates the reservoirs at below the maximum levels. A detailed description of reservoir and planned improvements is provided following **Table 3-7**.

Table 3-7 | Inventory of Storage Reservoirs

Reservoir Name	Storage Volume (MG)	Type	Install Date	Design Life (years)	Remaining Useful Life (years)	Condition Rating (Bigger # = Worse Condition)	Criticality Rating (Bigger # = Less Critical)
Valley Service Area							
Reservoir 1	5.0	Prestressed Concrete	1975	100	45	5	2
Reservoir 2	3.6	Prestressed Concrete	1975		45	3	2
Lea Hill Service Area							
Reservoir 4A	1.0	Steel Standpipe	1965	70	11	3	2
Reservoir 4B	1.5	Steel Standpipe	1983		29	4	2
Lakeland Service Area							
Reservoir 5	1.0	Steel Standpipe	1981	70	27	2	3
Reservoir 6	1.0	Steel Standpipe	2012		58	2	3
Academy Service Area							
Reservoir 8A	1.2	Steel Standpipe	1973	70	19	3	3
Reservoir 8B	1.5	Steel Standpipe	1980		26	3	3

3.1.4.1 Reservoir 1

Reservoir 1 is located at the southeast end of the Valley Service Area and is the primary storage location for water produced at Coal Creek Springs and pumped from the Howard Road CCT Facility. Reservoir 1 can also be filled by water produced at Well 4. The reservoir was constructed in 1975 and is a covered, pre-stressed concrete tank with a capacity of 5 MG. Reservoir 1 is 184.5 feet in diameter and has an overflow elevation of 269 feet. Academy Pump Station 3 draws water from Reservoir 1 to feed the Academy Service Area. Reservoir 1 also serves the Valley Service Area through Control Valve 1. Control Valve 1 is essential to limit flow and maintain adequate supply to the Valley Service Area.

Reservoir 1 was last inspected and cleaned on March 15, 2023. Recommended improvements identified in 2013 Water Facilities Evaluation Study are planned to be completed as part of the "Reservoir Capital Improvements" project discussed further in **Chapter 8**.

3.1.4.2 Reservoir 2

Reservoir 2 is located on the northeast side of the City's Water Service Area and serves the Valley Service Area. The reservoir was constructed in 1975 and is a buried, pre-stressed concrete tank with public tennis courts on the concrete roof. The reservoir has a maximum storage capacity of 3.6 MG, has a diameter of 143 feet and an overflow elevation of 252.7 feet. Reservoir 2 is filled by the water sources located in the Valley Service Area and is also filled from Reservoir 1 through Control Valve 1.

Reservoir 2 was last inspected and cleaned on March 13, 2023. A capital project is planned to replace the fill and drain valves associated with the reservoir; the project is discussed further in **Chapter 8**. This project will also resolve improvements identified in the 2022 sanitary survey.

3.1.4.3 Reservoirs 4A and 4B

Storage in the Lea Hill Service Area is provided in two steel standpipe reservoirs located in the northeast corner of the City's RWSA, Reservoir 4A and Reservoir 4B. The reservoirs have capacities of 1.0 MG and 1.5 MG respectively. Reservoir 4A was constructed in 1965 with a diameter of 46 feet and an overflow elevation of 578.5 feet. Reservoir 4B was constructed in 1983 with a diameter of 58 feet and an overflow elevation of 579.6 feet. Water is supplied to the Lea Hill reservoirs from the City's Valley Service Area through the Green River Pump Station and Lea Hill Pump Station.

The reservoirs were last inspected and cleaned in June and April of 2018. A capital project is currently installing seismic control valves on the outlet piping from both reservoirs to prevent catastrophic flow during a seismic pipe failure; the project is discussed further in **Chapter 8**. Additionally, required improvements identified in the 2022 Sanitary Survey will be completed as part of the Reservoir Repair and Replacements Program also discussed in **Chapter 8**.

3.1.4.4 Reservoir 5

Reservoir 5 is one of two reservoirs providing storage for the Lakeland Service Area. The reservoir was constructed in 1981 and has a total capacity of 1.0 MG. The reservoir is filled by Well 5, Well 5A, and the Terrace View BPS. Reservoir 5 is steel standpipe with a 53.25-foot diameter and an overflow elevation of 638.5 feet. The reservoir was last cleaned and inspected in 2019 and the interior and exterior were last painted in 2016 as part of routine maintenance.

3.1.4.5 Reservoir 6

Reservoir 6 is in the Lakeland Service Area within the boundary of the Lakeland 697 pressure zone but is connected to distribution piping for the Lakeland 630 pressure zone. Reservoir 6 is a steel standpipe constructed in 2012 and has a total capacity of 1.0 MG. This reservoir has a diameter of 63.4 feet and an overflow elevation of 638.9 feet. The reservoir is filled by Well 5, Well 5A, and the Terrace View BPS. The reservoir was last cleaned and inspected in 2019.

3.1.4.6 Reservoir 8A and 8B

Reservoirs 8A and 8B are steel standpipes that provide storage for the Academy Service Area. The reservoirs are normally operated in parallel, functioning as one large reservoir. Reservoir 8A has a diameter of 52.75 feet and a total storage volume of 1.2 MG and was constructed in 1973. Academy Reservoir 8B has a diameter of 60 feet and a total storage volume of 1.5 MG and was constructed in 1980. Both reservoirs have an overflow elevation of 544 feet. Academy Pump Station 3 fills the reservoirs.

The reservoirs were last cleaned and inspected in October 2019. A capital project is currently installing seismic control valves on the outlet piping from both reservoirs to prevent catastrophic flow during a seismic pipe failure; the project is discussed further in **Chapter 8**. Additionally, required improvements identified in the 2022 Sanitary Survey will be completed as part of the Reservoir Repair and Replacements Program also discussed in **Chapter 8**.

3.1.5 Pump Station Facilities

The City operates and maintains several pump stations to move water throughout the distribution system and to provide water at the required service pressures. An inventory of the City's pump stations is provided in **Table 3-8** and locations are shown in **Figure 3-1**. Condition ratings provided in **Table 3-8** are assigned based on findings from the 2013 Water Facilities Evaluation Study.

Table 3-8 | Pump Station and Booster Pump Station Inventory

Facility Name	Firm Capacity (gpm)	Firm Capacity (MGD)	Install Date	Design Life (years)	Remaining Useful Life (years)	Condition Rating (Bigger # = Worse Condition)	Criticality Rating (Bigger # = Less Critical)
Lea Hill Service Area							
Intertie Pump Station (Wholesale)	3,510	5.05	1999	40	15	3	4
Lea Hill BPS	300	0.432	1999		15	3	3
Lea Hill Pump Station	1,200	1.73	1965		-19	6	3
Green River Pump Station	3,498	5.04	1999		15	3	2
Valley Service Area							
Game Farm Park Pump Station	50	0.07	1988	40	4	7	4
Lakeland Service Area							
Lakeland Hills BPS	4,205	6.06	2012	40	28	2	2
Terrace View BPS	1,000	1.44	2010		26	2	2
Fulmer Field CCT Facility	8,250	11.88	2004		20	3	1
Howard Road CCT Facility	5,600	8.06	2004		20	4	1
Academy Service Area							
Academy Pump Station 3	2,100	3.02	2023	40	39	1	1
Academy East BPS	3,040	4.38	2014		30	2	2

3.1.6 Facility Back-Up Power

An inventory of the City's existing facilities with backup power accommodation is provided in **Table 3-9**. Of the City's twelve water sources, only Wells 5 and 7 are currently without a standby power source. Standby power will be added to both wells as part of capital projects discussed in **Chapter 8**. Back-up power for Wells 2 and 6 is housed at the Fulmer Field CCT Facility.

The Game Farm Park Pump Station, Lea Hill BPS, and Intertie Pump Station are the only pump stations without a standby power source or connection. Backup power will be added to the Lea Hill BPS as part of a capital project discussed further in **Chapter 8**. The Game Farm Park Pump Station is a small facility that serves a recreational area and does not serve residential or commercial properties, therefore back-up power is not a critical element.

Table 3-9 | Back Up Power Inventory

Generator Location	Generator Type and Size	Install or Purchase Date	Design Life (years)	Remaining Useful Life (years)	Condition Rating (Bigger # = Worse Condition)	Criticality Rating (Bigger # = Less Critical)
Fulmer Field CCT Facility	On-site, 1000 kW	2001	25	2	4	3
Howard Road CCT Facility	On-site, 600 kW	2004		5	3	3
Academy East BPS	On-site, 600 kW	2010		11	2	3

Generator Location	Generator Type and Size	Install or Purchase Date	Design Life (years)	Remaining Useful Life (years)	Condition Rating (Bigger # = Worse Condition)	Criticality Rating (Bigger # = Less Critical)
Academy Pump Station 3	On-site, 450 kW	2023		24	1	3
Green River Pump Station	On-site, 515 kW	2004		5	2	3
Lakeland Hills BPS	On-site, 300 kW	2012		13	2	3
Lea Hill Pump Station	On-site, 250 kW	1964		-35	6	3
Terrace View BPS	On-site, 250 kW	2010		11	2	3
Well 1	Portable, 230 kW	2014		15	2	3
Well 3A/3B	On-site, 210 kW	1983		-16	5	3
Well 4	On-site, 450 kW	2016		17	2	3
Well 5A	Portable, 230 kW	1992		-7	4	3
Well 5B	On-site, 400 kW	2005		6	3	4
Coal Creek Springs	On-site, 20 kW	1964		-35	6	3

3.1.7 Facility Monitoring and Control

Primary monitoring and operation of the City's water system and facilities is conducted via a SCADA computerized control system. A software program called "AVEVA" works in association with SCADA to provide real time graphical display of system data, set points, and alarms for staff monitoring and control. The City's SCADA system controls are centralized at the Public Works M&O Facility. Major upgrades of the City's SCADA system were complete in 2015 and again in 2024, and the system regularly undergoes updates as facility upgrades or improvements are completed.

3.1.8 2022 Sanitary Survey Findings

The City has already taken corrective actions and will continue to resolve all deficiencies identified in the 2022 Sanitary Survey, as summarized in **Table 3-10**.

Table 3-10 | Summary of 2022 Sanitary Survey Findings

Issues/Recommended Improvements		Required Action
Sources and Treatment		
Well 3A	Offline due to manganese issues	--
Well 3B	Offline due to manganese issues	--
Well 5	Water supply lines to chlorine solution tanks must be provided with either air gaps or reduced pressure backflow assemblies to eliminate potential cross connections.	This deficiency was mislabeled by DOH, This should have been for Well 4. A letter from the DOH acknowledging the error was received on October 17, 2022.
	Pump to waste line should terminate above grade.	Will be addressed in Well 5/5A Upgrades project included in CIP; refer to **Chapter 8**.
Well 5A	Water supply lines to chlorine solution tanks must be provided with either air gaps or reduced pressure backflow assemblies to eliminate potential cross connections.	Completed. On September 21, 2022, a reduced pressure backflow assembly was installed at Well 5A, on the water supply line to the chlorine tank.
	Raise casing to terminate above grade or provision of sump pump or alarms that activate when water accumulates in vault. In the meantime, the vault	City implemented an inspection program in October 2022.

	Issues/Recommended Improvements	Required Action
	should be inspected weekly and immediately following significant storm events.	Will be addressed further in Well 5/5A Upgrades project included in CIP; refer to **Chapter 8**.
Well 7	Offline due to manganese issues	--
Storage		
Reservoir 2	Reservoir overflow should not be connected directly to any drain, sanitary sewer, or storm sewer.	Will be addressed in Reservoir 2 improvements project included in CIP; refer to **Chapter 8**.
Reservoir 4A	Reservoir vents should open downward to prevent windblown debris from entering tank.	Will be completed as part of City's annual Reservoir Repair and Replacement program or Reservoirs 4 and 8 Seismic Rehabilitation project; refer to **Chapter 8**.
	Reservoir overflow should not be connected directly to any drain, sanitary sewer, or storm sewer.	Will be completed as part of City's annual Reservoir Repair and Replacement program or Reservoirs 4 and 8 Seismic Rehabilitation project; refer to **Chapter 8**.
Reservoir 4B	Reservoir overflow should not be connected directly to any drain, sanitary sewer, or storm sewer.	Will be completed as part of City's annual Reservoir Repair and Replacement program or Reservoirs 4 and 8 Seismic Rehabilitation project; refer to **Chapter 8**.
Reservoir 8A	Reservoir overflow screen must be repaired	Completed. On September 13, 2022, the overflow screen at Reservoir 8A was repaired.
	Reservoir vents should open downward to prevent windblown debris from entering tank.	Will be completed as part of City's annual Reservoir Repair and Replacement program or Reservoirs 4 and 8 Seismic Rehabilitation project; refer to **Chapter 8**.
Reservoir 8B	Reservoir overflow screen must be repaired	Completed. On September 13, 2022, the overflow screen at Reservoir 8B was repaired.
	Reservoir vents should open downward to prevent windblown debris from entering tank.	Will be completed as part of City's annual Reservoir Repair and Replacement program or Reservoirs 4 and 8 Seismic Rehabilitation project; refer to **Chapter 8**.

3.2 Water Quality

The quality of drinking water in the United States is regulated by the EPA. Under provisions of the Safe Drinking Water Act (SDWA) established in 1974, the EPA is allowed to delegate primary enforcement responsibility for water quality control to each state. In the State of Washington, DOH is the agency responsible for implementing and enforcing the drinking water regulations. For the State to maintain the authority to implement requirements under the SDWA, it must adopt drinking water regulations that are at least as stringent as federal regulations. In meeting these requirements, the State has published drinking water regulations that are contained in Chapter 246-290 of the WAC.

As a Group A system, the City is responsible for monitoring and complying with all applicable SDWA and WAC regulations pertaining to source water and distribution system water quality. The purpose of this section is to document the water system's water quality compared to the above drinking water standards, satisfying the requirements of WAC 246-290-100(4)(e)(ii).

The City also owns and operates the Braunwood satellite system located in southeast Auburn in the Braunwood development, also known as the Hidden Valley Acres development. This system is classified as a Group A - Community Water System by DOH. This system is not discussed further in this chapter since it is a small satellite system that is regularly monitored by the City as required and has not had water quality issues as documented in the City's annual water quality reports for the system.

This section includes the following:

- Water quality and treatment objectives
- Analysis of source water quality
- Analysis of distribution system water quality
- Recent regulatory changes

3.2.1 Water Quality Treatment and Objectives

The treatment objectives of the City are to treat source water to contaminant concentrations below the MCLs established by the EPA and WAC.

Historically, the City has relied on groundwater supplied from wells and springs, which have been determined to be not under the direct influence of surface waters (DOH 2004 for Coal Creek Springs). For these water sources, the City is required to meet the EPA's Groundwater Rule (GWR). The City treats water from all groundwater and spring sources, except for Well 5. The City's water treatment facilities provide chlorination and corrosion control. A summary of the required operator certifications for each type of facility is provided in Table 3-11.

Table 3-11 | Summary of Operator Certifications

Treatment Facility	Required Operator Certifications
Corrosion Control Treatment (CCT) Facilities	Water Distribution Manager 4 (WDM-4) and Water Treatment Plant Operator (WTPO)
Chlorination Facilities	WDM-4

The City began using surface water in 2012 through the B-St Wholesale Intertie with the City of Tacoma (Tacoma). This supply, referred to as the Regional Water Supply, originates from the Green River and the Howard Hansen Dam. Since the City receives treated water as a wholesale purchaser, it is not required to meet the Surface Water Treatment Rule. Tacoma maintains compliance with the Interim Enhanced Surface Water Rule, Long Term 1 and Long Term 2 Enhanced Surface Water Treatment Rules; and the Filter Backwash Recycling Rule. The City has not purchased water for consumption from Tacoma since 2016.

3.2.2 Analysis of Source Water Quality

3.2.2.1 Raw Water Quality

The City only samples post-treatment water except for Well 5, which does not currently have treatment or chlorination. Water quality data for Well 5 is provided in Table 3-12.

3.2.2.2 Finished Water Quality

Monitoring of inorganic chemical and physical parameters varies by source but is typically required once per 36-month compliance period, however, the City typically monitors these constituents every 12 months (annually) in July. Samples are collected from each source following treatment. A summary of the maximum detected concentrations for monitoring data from 2015 through 2022 is provided in **Table 3-12**. During this time, none of the MCLs published by the EPA were exceeded; all samples were below required limits.

Asbestos sampling is usually required once per 36-month compliance period. However, the City has a waiver that requires sampling once every nine years at three distribution system sample sites. No data was collected during the study period. The City is expected to sample again in 2028. Annual VOC sampling is required for Wells 2 and 6, which are both currently represented by the Fulmer Field CCT Facility. All active sources are disinfected with chlorine prior to entering the distribution system except for Well 5, which serves the Lakeland Service Area.

Monitoring data for 2015 through 2022 for inorganic constituents, physical parameters, SOCs, and VOCs were reviewed and is summarized in **Table 3-12**. All values are post-treatment, except for Well 5 since water from this source is not treated. Wells 3A, 3B, 5B, and 7 were not used during this period and were therefore not sampled.

Table 3-12 | EPA Primary Drinking Water Standards Results from 2015 through 2022

Constituent	MCL	Units	Maximum Detected Concentration From 2015 Through 2022[1] (mg/L)						
			Coal Creek Springs	West Hill Springs	Well 1	Well 4	Well 5	Well 5A	Fulmer Field CCT Facility[2]
EPA Primary Drinking Water Standards									
Arsenic	0.01	mg/L	0.001	0.001	0.001	0.001	0.001	0.002	0.002
Barium	2	mg/L	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Cadmium	0.005	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Chromium	0.1	mg/L	0.007	0.007	0.007	0.007	0.007	0.007	0.007
Mercury	0.002	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
Selenium	0.05	mg/L	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Beryllium	0.004	mg/L	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003
Nickel[3]	-	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Antimony	0.006	mg/L	0.003	0.003	0.003	0.003	0.003	0.003	0.003
Thallium	0.002	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Cyanide	0.2	mg/L	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Fluoride	4.0	mg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Nitrite-N	1	mg/L	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Nitrate-N	10	mg/L	1.7	3.6	2.4	1.4	1.9	0.4	1.7
Total Nitrate/Nitrite[4]	10	mg/L	1.7	3.6	2.4	1.4	1.9	0.5	1.7
EPA Secondary Drinking Water Standards[5]									
Iron	0.3	mg/L	0.1	0.1	0.1	0.62[6]	0.16	0.1	0.1
Manganese	0.05	mg/L	0.01	0.01	0.01	0.01	0.01	0.01	0.032
Silver	0.1	mg/L	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Chloride	250	mg/L	5	8	5	4	6	3	9
Sulfate	250	mg/L	9	15	12	12	11	6	14
Zinc	5	mg/L	0.2	0.2	0.2	0.2	0.2	0.2	0.2
State Regulated Characteristics									
Sodium	20	mg/L	6	8	7	7	10	6	12
Conductivity	700	µmhos/cm	150	254	184	152	275	133	224

Constituent	MCL	Units	Maximum Detected Concentration From 2015 Through 2022[1] (mg/L)						
			Coal Creek Springs	West Hill Springs	Well 1	Well 4	Well 5	Well 5A	Fulmer Field CCT Facility[2]
Turbidity	1	NTU	0.4	1.5	9.6	5.8	1.2	0.4	3.1
Color	15	Color Units	5	5	10	5	5	5	5
Total Dissolved Solids (TDS)[7]	600	mg/L	N/A	N/A	N/A	N/A	N/A	N/A	N/A
State Unregulated									
Lead[8]	0.015	mg/L	0.001	0.001	0.001	0.018	0.001	0.001	0.001
Copper	1.3	mg/L	0.02	0.3	0.02	0.2	0.02	0.02	0.02
Hardness[9]	-	mg/L	66	122	83	100	130	62	100

Notes:

1. Based on monitoring conducted between 2015 and 2022. Wells 3A, 3B, and 5B were not in use during this time period and no monitoring was conducted.
2. The Fulmer Field CCT Facility was monitored in 2015, 2018,2020, 2021, and 2022, it replaces monitoring of Wells 2, 6, and 7.
3. There is no state or federal MCL, but Washington state has a detection reporting limit of 0.005 mg/L.
4. EPA has set a treatment goal of Total Nitrate at 10 mg/L.
5. EPA does not enforce these "secondary maximum contaminant levels" (SMCLs). They are established as guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color, and odor. These contaminants are not considered to present a risk to human health at the SMCL.
6. Iron levels in Well 4 exceeded the Secondary Drinking Water Standards in 2015 but have since all been below the MCL.
7. N/A - not applicable, no testing conducted; testing for total dissolved solids is only required if the specific conductivity is greater than 700 micomhos per centimeter (umhos/cm).
8. On November 30, 2023, the EPA announced the proposed Lead and Copper Rule Improvements, which would lower the Lead Action Level from 0.015 mg/L to 0.010 mg/L if finalized in October 2024.
9. No MCL, as hardness is not a regulated characteristic.

3.2.2.3 Water Quality and Treatment Technique Violations

There were no water quality treatment violations from 2015 through 2022.

3.2.3 Analysis of Distribution System Water Quality

3.2.3.1 Seasonal Water Quality Changes

Water quality within the distribution system is relatively consistent throughout the year. The Valley Service Area distribution water experiences low pH during the winter, however no changes are implemented to offset seasonal variations.

3.2.3.2 Distribution Water Quality Objectives

The City collects 100 samples at 70 dedicated sampling sites for total and fecal coliform monitoring. Sampling is conducted at one quarter of the routine sample locations each week during the first four weeks of a month. The City also monitors weekly for total and fecal coliform at Coal Creek Springs and West Hill Springs at their respective collector vaults, as well as after treatment, and at several additional sites to support operations on a weekly basis. The City uses two types of disinfectant for treatment, chlorine gas and liquid sodium hypochlorite, which both produce free chlorine residuals in the distribution system. Average chlorine residuals throughout the distribution system ranged from 0.57 to 0.71 mg/L from 2015 through 2022, as summarized in **Table 3-13**. Although the range of chlorine residual varies throughout the year, the range of chlorine residual is relatively consistent from year to year. Planned improvements to chlorination facilities at Well 1 and Well 4 are expected to help maintain a more consistent chlorine residual level within the water system.

Table 3-13 | Total Chlorine Residuals Results from 2015 through 2022

Year	Sample Results (mg/L)	
	Average	Range
2015	0.71	0.40 - 1.09
2016	0.64	0.37 – 0.89
2017	0.58	0.32 – 0.79
2018	0.57	0.30 – 0.78
2019	0.59	0.33 – 0.77
2020	0.57	0.33 – 0.80
2021	0.58	0.36 – 0.78
2022	0.59	0.40 – 0.77

The Stage 1 Disinfection By-Product Rule (DBPR) monitoring was superseded in 2012 with Stage 2 DBPR monitoring because the City's population exceeded 50,000 people. The City conducts monthly sampling within the distribution system to determine the concentration of fluoride. This sampling is in addition to the inorganic source monitoring required by DOH. The City does not add fluoride to their water. The City of Tacoma does fluoridate their water and is wholesale supplier to the City, but the City has not purchased water for consumption from Tacoma since 2016. Sampling is conducted for informational purposes only and to answer customer questions regarding natural fluoride in the City's water. Should the City purchase water from Tacoma, this information would also be used to monitor the blending of different water sources within the distribution system.

In the event the City purchases water from Tacoma via the Cascade Water Alliance, such as during a shortage or other such operational constraint, the City will monitor and report distribution system disinfection residuals daily. These samples will be taken at the same time and place as the City's routine coliform sampling.

The City conducted both Stage 1 and Stage 2 DBPR monitoring since the last water system plan (WSP). **Table 3-14** provides a summary of the sample results from 2015 through 2022. The City's Total Trihalomethanes (TTHMs) and Haloacetic Acid 5 (HAA5) monitoring has been conducted once per year during the month with the warmest water temperature (i.e., July or August). All samples were well below the concentrations that DOH uses to determine whether a water system qualifies for reduced monitoring (0.080 mg/L for TTHMs and 0.060 mg/L for HAA5).

Table 3-14 | Summary of Disinfection By-Product Rule Monitoring Results from 2015 through 2022

Year	TTHM Concentration (µg/L)[2]		HAA5 Concentration (µg/L)[2]	
	Range for LRAA[1]	Compliance	Range for LRAA[1]	Compliance
2015	2.6 – 19.0	< 80	Not Detected – 4.8	< 60
2016	2.2 – 23.1	< 80	Not Detected – 6.0	< 60
2017	1.7 – 15.0	< 80	1.1 – 6.9	< 60
2018	6.7 – 15.1	< 80	Not Detected – 6.9	< 60
2019	ND	< 80	0.2 – 0.3	< 60
2020	7.5 – 11.95	< 80	Not Detected – 3.66	< 60
2021	6.45 – 17.62	< 80	1.25 – 12.41	< 60
2022	9.03 – 10.41	< 80	Not Detected	< 60

Notes:
1. Local running annual average.

2. Microgram per liter (µg/L).

Corrosion control treatment (CCT) is required for the water produced at Coal Creek Springs, Well 1, Well 2, Well 6, and Well 7. Per the Lead and Copper Rule (LCR), the City is required to collect at least 30 water samples per 36-month compliance period in alignment with reduced lead and copper monitoring requirements of WAC 246-290. Sample results from 2015 through 2022 are presented in **Table 3-15**. Since the CCT facilities were constructed, the lead and copper levels have been well below the action level.

DOH granted the City a (b)(3) exemption on August 17, 2021. This exemption, under 40 CFR Part 141.81(b)(3), eliminates the requirement for the City to conduct optimal water quality parameter (OWQP) sampling throughout the distribution system. Instead, the City continues to focus on lead and copper sampling at designated monitoring sites to meet compliance requirements. A copy of the City's exemption letter from DOH is included as **Appendix F.**

Table 3-15 | Summary of Lead and Copper Sampling Results from 2015 through 2022

Constituent	Range of Results from 2015 through 2022
Copper Concentrations (mg/L)	
Copper Concentration Range	<0.02 – 0.3
Copper 90th Percentile	0.091
Lead Concentrations (mg/L)	
Lead Concentration Range	<0.001-0.018
Lead 90th Percentile	<0.001

3.2.3.3 Water Quality and Treatment Technique Violations

There were no water quality violations in the distribution system from 2015 through 2022.

3.2.4 Recent Regulatory Changes

The EPA established a health advisory for drinking water of 70 parts per trillion (ppt) for perfluorooctane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA), two commonly found Perfluorinated compounds (PFAS). When both compounds are found in the water, the combined health advisory is also 70 ppt. The Washington State Board of Health (Board) adopted rule changes to chapter 246-290 WAC, Group A Public Water Supplies and WAC 246-390, Drinking Water Laboratory Certification and Data Reporting. The newly adopted rules became effective on January 1, 2022.

The rule establishes the administrative processes for setting drinking water quality standards as State Action Levels (SAL) and state MCLs. The rule establishes SALs for five PFAS contaminants: PFOA, PFOS, perfluorohexane sulfonic acid (PFHxS), perfluorononanoic acid (PFNA), and perfluorobutane sulfonic acid (PFBS). The rule requires Group A community and non-transient noncommunity public water systems to test for PFAS. For those Group A water systems that have detections of PFAS, but do not exceed the SAL, the rule requires additional ongoing monitoring, with the frequency of monitoring based upon the detected level in comparison to the SAL. It also establishes reporting, recordkeeping, and consumer confidence report requirements. For those Group A water systems that exceed the SAL, the rule requires follow-up actions such as monitoring, public notification, additional recordkeeping, and reporting requirements. SALs for regulated PFAS compounds are shown in **Table 3-16** with results from the City's latest samples. Most results indicated that the PFAS compounds were not detected (ND), being they were below detectable limits. PFBS was detected at Well 1, Coal Creek Springs, and West Hill Springs, however the levels are far

below regulated levels. In more recent results received in May 2024, all samples were below detection limits for all facilities and the City was approved for a 3-year testing schedule.

Furthermore, in April 2024, the EPA announced the first National Primary Drinking Water Regulation for six PFAS. This established individual MCLs for PFOA, PFOS, PFHxS, PFNA, and Hexafluoropropylene oxide dimer acid (HFPO-DA) and a Hazard Index MCL for PFAS mixtures containing at least two or more of PFHxS, PFNA, HFPO-DA, and PFBS. The EPA also finalized MCLGs for these PFAs, which can be seen alongside the MCLs in Table 3-16. The regulation requires that public water systems must monitor for these PFAS and must complete initial monitoring by 2027, followed by ongoing compliance monitoring. Water systems must provide the public with information on the PFAS levels in the drinking water beginning 2027. Public water systems must implement solutions by 2029 to reduce PFAS if monitoring shows that drinking water levels exceed the MCLs.

Table 3-16 | PFAS State Action Levels and Monitoring Data

PFAS Compound	SAL (ng/L)	MCL (ng/L)	MCLG (ng/L)	Maximum Detected Concentration (ng/L)[1]									
				Well 1	Fulmer Field CCT Facility	Well 3A	Well 3B	Well 4	Well 5	Well 5A	Well 5B	Coal Creek Springs	West Hill Springs
PFOA	10	4.0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFOS	15	4.0	0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFHxS	65	10	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFNA	9	10	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PFBS	345	-	-	2.8	ND	ND	ND	ND	ND	ND	ND	3.1	3.0
HFPO-DA	-	10	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mixtures containing two or more of PFHxS, PFNA, HFPO-DA, and PFBS	-	1[3]	1[3]	0	0	0	0	0	0	0	0	0	0

Notes:

1. Nanograms per liter (ng/L).
2. Not detected (ND).
3. Hazard Index – unitless.

3.3 Design Standards

The City's most recent Engineering Design Standards are available on the City's website and are provided as Appendix P. Table 3-17 highlights keys standards that are used to evaluate the capacity of the City's water system, summarizing both DOH criteria and City criteria. The City's water quality design standards follow the design standards set forth by the EPA and DOH, as discussed in Section 3.2.

Table 3-17 | System Capacity Analysis Criteria

Evaluation Type		Evaluation Criteria	Agency's Standard
Water Reliability Recommendations	Multiple Source	2 or more supply sources are available	DOH
	Backup Power	Source of supply pump stations have power connections to two independent primary public power sources, have in-place auxiliary power available, and/or maintain adequate gravity standby storage	DOH
	Surface Water Reliability	Firm watershed yield for surface water provides 98% reliability to meet normal, anticipated system demands.	DOH
	Groundwater Reliability	Factor of safety is applied to well pumping test safe yield determination.	DOH
Water Source	Source Capacity	MDD while replenishing Fire Suppression Storage (FSS) within 72-hrs (24-hr source pumping may be assumed).	DOH
		ADD with largest source out of service.	DOH
		MDD in a pumping period of 20 hours or less of pumping.	DOH
		MDD with the largest active water source out of service.	City
Pump Stations	Capacity - Open System (sufficient storage in zone)	ADD with largest pump out of service.	DOH
		MDD with all pumps in service.	
		MDD with largest pump out of service.	City
		Fire Flow is met from storage reservoir.	
	Capacity - Closed System (no/insufficient storage in zone)	PHD with largest pump out of service.	DOH
		MDD + Fire Flow at a pressure of at least 20 psi at all points throughout the distribution system.	
		PHD + Fire Flow with largest pump out of service.	City
		Standby power with capacity to run with any single pump out of service.	

Evaluation Type		Evaluation Criteria	Agency's Standard
Storage Facilities	Total Storage Capacity	Sum of operational, equalization, standby, fire suppression, and dead storage.	DOH
	Operating Storage (OS)	The volume of water before sources turn on.	DOH
		(pump off elev. – pump on elev.) x gal/ft	
	Equalizing Storage (ES)	(PHD – maximum supply capacity) x 150 min	DOH
		Min. pressure of 30 psi.	
		Must be provided when source pumping capacity cannot meet the peak hourly demand.	
	Standby Storage (SB)	Min. standby storage of 200 gallons per ERU.	DOH
		Min. pressure of 20 psi.	
		Standby storage volume equal to one day of MDD for the pressure zone(s) served.	
	Fire Suppression Storage (FSS)	(required fire flow rate) x (duration in minutes)	DOH
		Min. pressure of 20 psi.	
		Nested storage (same storage for Standby and Fire Suppression Storge) requires written consent of fire protection authority.	
	Dead Storage (DS)	Volume that cannot provide minimum design pressure (20 psi) to all customers.	DOH
		Volume below the outlet pipe and cannot be used because of hydraulic limitations.	City
Distribution System	Minimum Pressures	PHD at no less than 30 psi.	DOH
		MDD + Fire Flow at no less than 20 psi.	
	Maximum Pressures	Add individual PRVs for ADD pressures more than 80 psi.	DOH
		Max. target pressure of 80 psi in water distribution system.	City
	Maximum Velocity	No more than 8 feet per second (fps) under PHD conditions.	DOH
		No more than 8 fps in distribution mains and 5 fps in transmission mains under PHD conditions. No more than 18 fps under MDD+FF conditions.	City
	Minimum Pipe Size	6-inch diameter in residential areas and 8-inch diameter in commercial areas, unless a hydraulic analysis justifies another size.	DOH
		Single-Family Residential minimum 8-inch diameter and Industrial/Commercial/Multi-Family minimum 12-inch diameter.	City
	Telemetry	Each parcel receiving water service shall have its own meter	City
		Meters shall be located as close to the water main from which the service is taken as possible, distance not to exceed 50 feet.	
		Meters shall be placed in landscape strips, behind the sidewalk, or at the right-of-way limits in that order of availability.	
		Meters in landscaped or unimproved areas shall be set 2 inches above the finished grade.	
	Maximum Valve Spacing	Maximum 400-foot spacing and at the intersection of lateral lines in all zones.	City
	Hydrant Spacing	Single-Family Residential maximum 600-foot spacing.	City
		Industrial/Commercial/Multi-Family maximum 300-foot spacing.	
Fire Flow & Duration	Residential	Minimum 1,500 gpm at 2 hours.	City
	Multi-Family Residential	Minimum 2,500 gpm at 3 hours.	
	Commercial		
	Industrial		

3.4 Capacity Analysis

This section provides an analysis of legal and physical capacity of the water system based on the system's available water rights, sources, treatment, storage, and distribution components.

3.4.1 Water Rights

A summary of the City's current water rights is presented in **Table 3-18**. The maximum instantaneous allowable flow for each source (Qi) is in units of gpm. The total annual withdrawal for each source (Qa) is in units of acre-feet per year. The City does not have any interruptible water rights.

Table 3-18 | Summary of Existing Water Rights

Water Right	Primary Qi (gpm)	Primary Qa (acre-feet/year)
Coal Creek Springs	6,732	9,410
Well 1, 6, & 7	2,200	1,120
Well 2, 6, & 7	2,400	1,360
Well 3A & 3B, 6, & 7	2,800	3,600
Well 4, 6, and 7	2,800	3,600
Wells 5, 5A, 5B, &5C	1,000	720
Well 5A	167	0
Algona Well	500	175
Braunwood Well[1]	20	6.5
West Hill Springs[2]	625	1,010
TOTAL	**19,244**	**21,002**

Notes:

1. The Department of Ecology considers Braunwood a standalone non-municipal satellite water system.
2. Water from West Hill Springs operates through water right claim S1-049354CL. A claim is an assertion that a water right was created pre-code (1917 for surface water and 1945 for groundwater).

In addition to the water rights presented above, the City also has a wholesale agreement with the City of Tacoma and can purchase water through two interties as discussed in **Chapter 1, Section 1.6.1**. These two interties are also considered to be supply facilities. The City also has several emergency interties with adjacent purveyors.

3.4.1.1 Analysis Criteria

Supply facilities must be reliable and provide sufficient water at pressures that meet the requirements of WAC 246-290-230. The capacity of supply facilities in a pressure zone with adequate storage must be sufficient to provide water at a rate that is equal to or greater than the MDD of the zone being served. This approach assumes that demands greater than the MDD will be supplied using equalizing storage.

According to Section 3.10.5 and Section 5.4 of the 2020 DOH Water System Design Manual, water system sources must be capable of supplying MDD and replenishing depleted within 72-hours (assuming continuous pumping), provide MDD in a pumping period of 20 hours or less, and provide ADD with the largest source out of order. The City's standards have a more stringent requirement to provide MDD with the largest active source out of service.

3.4.1.2 Analysis Results

The City's water supply (production) capacity compared with demand projections and DOH and City criteria are summarized in **Table 3-19**. It is worth noting that the water supply (production) capacity is not synonymous with the supply water rights. The MDD and ADD values are based on the demand projections included in **Chapter 2** and include wholesale supply projections for the City of Algona. Demand allocation for the Muckleshoot Indian Tribe (MIT) Fish Hatchery and LMWD are not included. LMWD is not included since they do not rely on the City as their main source of water and have an interruptible wholesale agreement. Demand from the MIT Fish Hatchery is also not included since it is unknown when this facility will be constructed, however the analysis presented in **Table 3-19** shows that the City has sufficient surplus supply to support this demand when it comes to fruition. The FSS flow rate is calculated as the sum of the FSS for each service area presented in **Section 3.4.2.3.2**, which totals 797 gpm, divided over a 72-hour period.

The results presented in **Table 3-19** demonstrate that the City has the supply facilities necessary to meet demand projections under current and future projections for all required criteria.

Table 3-19 | Supply Analysis with Largest Source Out of Service

Description	2024 Scenario	2034 Scenario	2044 Scenario
Required Supply (gpm)			
FSS Replenished in 72-hours	797	797	797
Maximum Day Demand[1], gpm	8,657	9,751	11,068
Average Day Demand[1], gpm	4,899	5,518	6,263
Available Supply (gpm)			
Largest Source (Q_L) – Tacoma Interties	3,555	3,555	3,555
Largest Active Source – Coal Creek Springs[2]	3,500	3,500	3,500
Total Sources (Q_t)[3,4]	15,610	15,610	15,610
DOH Criteria: MDD while replenishing FSS within 72-hrs (24-hr source pumping may be assumed)			
Surplus / (Deficit) of Supply, gpm	6,156	5,062	3,746
DOH Criteria: ADD with largest source out of service			
Surplus / (Deficit) of Supply, gpm	7,156	6,537	5,792
DOH Criteria: MDD in a pumping period of 20 hours or less of pumping			
Surplus / (Deficit) of Supply, gpm	4,352	3,257	1,941
City Criteria: MDD with largest active water supply source out of service			
Surplus / (Deficit) of Supply, gpm[2]	3,453	2,359	1,042

Notes:

1. Current analysis does NOT include a separate allocation for wholesale customers who have not purchased water from the City since 2019 or earlier (i.e., MIT or LMWD).
2. The City's largest active source is Coal Creek Springs since the City has not purchased water from Tacoma since 2016.
3. Total sources are: Well 1, 2, 4, 5, 5a, and 6 (7,955 gpm), Coal Creek Springs (3,500 gpm), West Hill Springs (600 gpm), and two Tacoma Interties (3,555 gpm).
4. Supplies do NOT include emergency interties with CWD (1,736gpm) or LMWD (1,736 gpm).

The City's Water Rights Self-Assessment Form is provided in **Appendix I** and was used to assess the City's water rights water rights and includes supply that is available to the City through firm wholesale interties with Tacoma. The form includes a comparison of the available water rights to the existing, 10-year and 20-year demand projections for the "High Demand Scenario" presented in **Chapter 2**. The calculations presented in the Water Rights Self-Assessment Form conclude that the City's existing water rights are anticipated to be adequate to meet the current, 10-year, and 20-year demand projections.

The City does not have all the infrastructure required to withdraw from all water rights (i.e., Wells 3A, 3B, 5B, and 7 are not currently operational). Additionally, some sources have underlying aquifer or infrastructure restrictions that limit the capacity of the source (i.e., Well 2, Well 6, and Coal Creek Springs). Several facility improvement projects are necessary for the City to maximize water production capacity to meet future demands, and planned supply related capital projects to meet this need are discussed further in Chapter 8.

3.4.2 Physical Capacity Analysis

This section includes an analysis of the physical capacity of the City's distribution system. The specific components analyzed include:

- Pump Station Capacity Analysis
  - Open Pressure Zones: Zones with storage reservoirs
  - Closed Pressure Zones: Zones without storage
- Storage Capacity Analysis
- Hydraulic Analysis of the Distribution System
- System Analysis based on ERUs

To complete the physical capacity analysis, the projected demands calculated in Chapter 2 were utilized for the 2024 scenario (existing conditions), 2034 scenario (10-year projections) and 2044 scenario (20-year projections). When evaluating facilities under fire flow conditions, the largest fire flow demand was utilized in each Service Area. The fire flow required for single family residential customers is 1,500 gpm for two hours and all other customer types have a requirement of 2,500 gpm for two hours. There are select buildings throughout the system that require fire flow capacity in the water system that exceeds 2,500 gpm for two hours as determined by the Fire Marshal; these individual locations and their fire flow requirements are summarized in Table 3-20.

Table 3-20 | Buildings in Auburn with High Fire Flow Requirements

ID #	Location Description	Address	Service Area	Flow Required (gpm)
1	RPS Distribution Center	3702 C St. NE	Valley	4,000
2	Emerald Downs	2300 Emerald Downs Drive	Valley	3,000
3	Panattoni Warehouse	816 44th ST NW	Valley	4,000
4	Span Alaska Transportation Inc.	3815 W Valley Highway N	Valley	3,125
5	AMB Valley Distribution Center	2202 Perimeter Road SW	Valley	4,000
6	Grace Community Church	1106 12th Street SE	Valley	3,750
7	Riverside High School	501 Oravetz Road SE	Valley	3,000
8	Wesley Homes Senior Housing	10805 SE 320th Street	Lea Hill	4,000
9	Auburn Elementary School at Lakeland	1020 Evergreen Way SE	Lakeland	3,125
10	Academy Campus	5000 Auburn Way South	Academy	4,000
11	MIT Casino Expansion	2402 Auburn Way South	Academy	2,625

3.4.2.1 Pump Station Analysis: Open Pressure Zones

This section evaluates the pumping capacity of the water system on a zone-by-zone basis with consideration for pump stations between zones and supply wells pumping directly into the pressure zones

that contain a storage reservoir. All reduced pressure zones are included in the open zone analysis, as they are ultimately fed by gravity from a reservoir. Pressure zones that do not include a storage facility are analyzed as a closed zone.

3.4.2.1.1 Valley Service Area

The Valley Service Area is the largest service area in the water system and consists of two pressure zones: Valley 288 and Valley 242. The Valley 288 pressure zone is a transmission zone that does not directly serve any customers. Valley 242 is the largest pressure zone in the RWSA and is draws supply from the following facilities:

- Wells 2 and 6 via the Fulmer Field CCT Facility
- Coal Creek Springs and Well 1 via the Howard Road CCT Facility with transmission through Valley 288
- Well 4 with transmission through Valley 288
- West Hill Springs

Table 3-21 provides an overview of the total pump station capacity into the Valley Service Area compared with demand projections and DOH and City criteria. The results presented in **Table 3-21** demonstrate that the City has adequate pumping capacity within the open pressure zones of the Valley Service Area to meet current and future demand projections for all required criteria.

Table 3-21 | Pumps Station Capacity for Valley Service Area Open Pressure Zones

Description	Valley 2024 Scenario	Valley 2034 Scenario	Valley 2044 Scenario
Required Capacity (gpm)			
FSS Replenished in 72-hours	222	222	222
Maximum Day Demand, gpm	6,266	7,161	8,252
Average Day Demand, gpm	3,546	4,052	4,670
Available Capacity (gpm)			
Largest Pump (Q_L), gpm	2,800	2,800	2,800
Total Pumping Capacity (Q_t), gpm	19,400	19,400	19,400
DOH Criteria: Reliable Capacity (ADD + largest pump out of service)			
Surplus / (Deficit), gpm	15,854	15,348	14,730
DOH Criteria: Total Capacity (MDD + replenish FSS in 72-hours)			
Surplus / (Deficit), gpm	13,134	12,239	11,148
City Criteria: MDD + largest pump out of service			
Surplus / (Deficit), gpm	10,334	9,439	8,348

3.4.2.1.2 Lea Hill Service Area

Water supply for the Lea Hill Service Area is provided by the Lea Hill Pump Station and the Green River Pump Station. In 2014, the City added wholesale water supply from Tacoma through the 132nd Ave SW intertie, however the City has not purchased water for consumption from Tacoma since 2016. The intertie and pump stations feed the Lea Hill 563 pressure zone, which includes Reservoirs 4A and 4B. Therefore,

the Lea Hill and Green River Pump Stations were evaluated based on the open zone criteria. **Table 3-22** provides a summary of the pump station capacity into the Lea Hill Service Area compared with demand projections and DOH and City criteria. The results presented in **Table 3-22** demonstrate that the City has adequate pumping capacity within the open pressure zones of the Lea Hill Service Area to meet current and future demand projections for all required criteria.

Table 3-22 | Pump Station Capacity for Lea Hill Service Area Open Pressure Zones

Description	Lea Hill 2024 Scenario	Lea Hill 2034 Scenario	Lea Hill 2044 Scenario
Required Capacity (gpm)			
FSS Replenished in 72-hours	222	222	222
Maximum Day Demand, gpm	1,231	1,281	1,333
Average Day Demand, gpm	696	725	755
Available Capacity (gpm)			
Largest Pump (Q_L), gpm	1,166	1,166	1,166
Total Pumping Capacity (Q_t), gpm	6,664[1]	6,664[1]	6,664[1]
DOH Criteria: Reliable Capacity (ADD + largest pump out of service)			
Surplus / (Deficit), gpm	5,968	5,939	5,909
DOH Criteria: Total Capacity (MDD + replenish FSS in 72-hours)			
Surplus / (Deficit), gpm	5,433	5,383	5,331
City Criteria: MDD + largest pump out of service			
Surplus / (Deficit), gpm	4,267	4,217	4,165

Note:

1. The Green River Pump Station has a firm capacity of 3,498 gpm (largest pump out of service) and the Lea Hill Pump Station has a firm capacity of 1,200 gpm (largest pump out of service). The largest pump at Green River and Lea Hill PS have 1,166 gpm and 800 gpm capacity, respectively. Therefore, the firm and total pumping capacity of both pump stations is 4,698 gpm (two pumps out of service) and 6,664 gpm (all pumps in service), respectively.

3.4.2.1.3 Lakeland Service Area

The Lakeland Service Area is supplied from the Upland Well Field (Wells 5 and 5A) and by sources in the Valley Service Area using the Terrace View BPS. The Terrace View BPS supplies the Lakeland 630 pressure zone from the Valley Service Area, which is then distributed through the Service Area. Since the Lakeland 630 pressure zone contains two reservoirs (Reservoirs 5 and 6), the Terrace View BPS was evaluated based on the open zone criteria. **Table 3-23** provides a summary of the pump station capacity into the Lakeland Service Area compared with demand projections and DOH and City criteria. The results presented in **Table 3-23** demonstrate that the City has adequate pumping capacity within the open pressure zones of the Lakeland Service Area to meet current and future demand projections for all required criteria.

Table 3-23 | Pump Station Capacity for Lakeland Service Area Open Pressure Zones

Description	Lakeland 2024 Scenario	Lakeland 2034 Scenario	Lakeland 2044 Scenario
Required Capacity (gpm)			
FSS Replenished in 72-hours	130	130	130
Maximum Day Demand, gpm	629	719	823
Average Day Demand, gpm	356	407	466
Available Capacity (gpm)			

Description	Lakeland 2024 Scenario	Lakeland 2034 Scenario	Lakeland 2044 Scenario
Largest Pump (Q_L), gpm	500	500	500
Total Pumping Capacity (Q_t), gpm	1,500	1,500	1,500
DOH Criteria: Reliable Capacity (ADD + largest pump out of service)			
Surplus / (Deficit), gpm	1,144	1,093	1,034
DOH Criteria: Total Capacity (MDD + replenish FSS in 72-hours)			
Surplus / (Deficit), gpm	871	781	677
City Criteria: MDD + largest pump out of service			
Surplus / (Deficit), gpm	371	281	177

3.4.2.1.4 Academy Service Area

The Academy Service Area is supplied from the Valley Service Area using Academy Pump Station 3. The pump station operates based on levels in Reservoirs 8A and 8B located in the Academy 531 pressure zone. **Table 3-24** provides a summary of the pump station capacity into the Academy Service Area compared with demand projections and DOH and City criteria. The results presented in **Table 3-24** demonstrate that the City has adequate pumping capacity within the open pressure zones of the Academy Service Area to meet current and future demand projections for all required criteria.

Table 3-24 | Pump Station Capacity for Academy Service Area Open Pressure Zones

Description	Academy 2024 Scenario	Academy 2034 Scenario	Academy 2044 Scenario
Required Capacity (gpm)			
FSS Replenished in 72-hours	222	222	222
Maximum Day Demand, gpm	531	591	658
Average Day Demand, gpm	300	334	373
Available Capacity (gpm)			
Largest Pump (Q_L), gpm	700	700	700
Total Pumping Capacity (Q_t), gpm	2,800	2,800	2,800
DOH Criteria: Reliable Capacity (ADD + largest pump out of service)			
Surplus / (Deficit), gpm	2,500	2,466	2,427
DOH Criteria: Total Capacity (MDD + replenish FSS in 72-hours)			
Surplus / (Deficit), gpm	2,269	2,209	2,142
City Criteria: MDD + largest pump out of service			
Surplus / (Deficit), gpm	1,569	1,509	1,442

3.4.2.2 Booster Pump Station Analysis: Closed Pressure Zones

The City operates a closed zone in each of its Service Areas. Closed zones do not have a storage reservoir directly serving the zone and are required to supply the peak hour demand (PHD) and fire flow via a BPS. The BPS serving each closed pressure zone was evaluated using the closed zone criteria as defined by DOH.

3.4.2.2.1 Lakeland Hills BPS

The Lakeland Service Area has two closed pressure zones served by the Lakeland Hills BPS: Lakeland 697 and Lakeland 670. **Table 3-25** provides a summary of the BPS capacity into the Lakeland closed pressure

zones compared with demand projections and DOH and City criteria. The results presented in **Table 3-25** demonstrate that the City has adequate pumping capacity within the closed pressure zones of the Lakeland Service Area to meet current and future demand projections for all required criteria.

Table 3-25 | BPS Capacity for Lakeland Service Area Closed Pressure Zones

Description	Lakeland 670 & 697 2024 Scenario	Lakeland 670 & 697 2034 Scenario	Lakeland 670 & 697 2044 Scenario
Required Capacity (gpm)			
Fire Flow Required, gpm	3,125	3,125	3,125
Maximum Day Demand, gpm	231	261	296
Peak Hour Demand, gpm	372	419	476
Available Capacity (gpm)			
Largest Pump (Q_L), gpm	3,125	3,125	3,125
Total Pumping Capacity (Q_t), gpm	7,330	7,330	7,330
DOH Criteria: Firm Capacity (no storage; PHD + largest pump out of service)			
Surplus / (Deficit), gpm	3,833	3,786	3,729
DOH Criteria: Reliable Capacity (no storage; MDD + FSS + largest pump out of service)			
Surplus / (Deficit), gpm	3,974	3,944	3,909
City Criteria: PHD+ FSS + largest pump out of service			
Surplus / (Deficit), gpm	708	661	604

3.4.2.2.2 Academy East BPS

The Academy Service Area has one closed zone served by the Academy East BPS: Academy 585. **Table 3-26** provides a summary of the BPS capacity into the Academy closed pressure zone compared with demand projections and DOH and City criteria. The results presented in **Table 3-26** demonstrate that the City has adequate pumping capacity within the closed pressure zones of the Academy Service Area to meet current and future demand projections for all required criteria.

Table 3-26 | BPS Capacity for Academy Service Area Closed Pressure Zone

Description	Academy 585 2024 Scenario	2 Academy 585 2034 Scenario	Academy 585 2044 Scenario
Required Capacity (gpm)			
Fire Flow Required, gpm	2,500	2,500	2,500
Maximum Day Demand, gpm	87	98	111
Peak Hour Demand, gpm	140	158	179
Available Capacity (gpm)			
Largest Pump (Q_L), gpm	1,250	1,250	1,250
Total Pumping Capacity (Q_t), gpm	4,290	4,290	4,290
DOH Criteria: Firm Capacity (no storage; PHD + largest pump out of service)			
Surplus / (Deficit) of Supply, gpm	2,900	2,882	2,861
DOH Criteria: Reliable Capacity (no storage; MDD + FSS + largest pump out of service)			
Surplus / (Deficit), gpm	1,703	1,692	1,679
City Criteria: PHD+ FSS + largest pump out of service			

Surplus / (Deficit), gpm	400	382	361

3.4.2.2.3 Lea Hill BPS

The Lea Hill Service Area has one closed zone served by the Lea Hill BPS: Lea Hill 648. **Table 3-27** provides a summary of the BPS capacity into the Lea Hill closed pressure zone compared with demand projections and DOH and City criteria. The results presented in **Table 3-27** indicate that the Lea Hill BPS is currently deficient and cannot meet the required criteria for existing or future demands.

Table 3-27 | BPS Capacity for Lea Hill Service Area Closed Pressure Zone

Description	Lea Hill 648 2024 Scenario	Lea Hill 648 2034 Scenario	Lea Hill 648 2044 Scenario
Required Capacity (gpm)			
Fire Flow Required, gpm	2,500	2,500	2,500
Maximum Day Demand, gpm	110	124	141
Peak Hour Demand, gpm	178	200	227
Available Capacity (gpm)			
Largest Pump (Q_L), gpm	1,500	1,500	1,500
Total Pumping Capacity (Q_t), gpm	1,800	1,800	1,800
DOH Criteria: Firm Capacity (no storage; PHD + largest pump out of service)			
Surplus / (Deficit), gpm	122	100	73
DOH Criteria: Reliable Capacity (no storage; MDD + FSS + largest pump out of service)			
Surplus / (Deficit), gpm	(810)	(824)	(841)
City Criteria: PHD+ FSS + largest pump out of service			
Surplus / (Deficit), gpm	(2,378)	(2,400)	(2,427)

The Intertie Pump Station shares a building with the Lea Hill BPS and contains pumps which were originally purposed to serve the intertie for wholesale supply to CWD and LMWD. Since CWD and LMWD no longer rely on the City as their primary water source, the City plans to complete facility modifications so the pumps at the Intertie Pump Station can serve the Lea Hill 648 pressure zone. This project is discussed further in **Chapter 8** and will resolve the deficiencies identified in **Table 3-27**.

3.4.2.2.4 Game Farm Park Pump Station

The Valley Service Area has one closed zone served by the Game Farm Park Pump Station: Game Farm Park (no assigned pressure zone name). **Table 3-28** provides a summary of the BPS capacity into the Valley closed pressure zone compared with demand projections and DOH and City criteria. The results presented in **Table 3-28** indicate that the Game Farm Park Pump Station is currently deficient and cannot meet the required criteria for existing or future demands.

The Game Farm Park Pump Station provides service to a park restroom facility, two fire hydrants, and individual RV campsites. As this is a small BPS with the single purpose of providing service to a recreational area, and there are no residential or commercial property connections supplied by this facility, no actions are planned to resolve this deficiency. The DOH and City criteria are geared towards providing reliable service for residents and businesses and are not applicable for this minor facility. The City has reviewed this condition with the Fire Marshal, and no exceptions were taken. As further development progresses in and around the Game Farm Park Pump Station, modifications will be considered to address the deficiency.

Table 3-28 | BPS Capacity for Game Farm Park Closed Pressure Zone

Description	2024 Game Farm	2034 Game Farm	2044 Game Farm
Required Capacity (gpm)			
Fire Flow Required, gpm	1,500	1,500	1,500
Maximum Day Demand, gpm	0.4	0.4	0.4
Peak Hour Demand, gpm	0.6	0.6	0.7
Available Capacity (gpm)			
Largest Pump (Q_L), gpm	1,000	1,000	1,000
Total Pumping Capacity (Q_t), gpm	1,050	1,050	1,050
DOH Criteria: Firm Capacity (no storage; PHD + largest pump out of service)			
Surplus / (Deficit), gpm	49	49	49
DOH Criteria: Reliable Capacity (no storage; MDD + FSS + largest pump out of service)			
Surplus / (Deficit), gpm	(450)	(450)	(451)
City Criteria: PHD+ FSS + largest pump out of service			
Surplus / (Deficit), gpm	(1,451)	(1,451)	(1,451)

3.4.2.3 Storage Analysis

This section evaluates the City's existing water storage facilities to determine if there is sufficient capacity to meet existing and future storage requirements of the system.

3.4.2.3.1 Components of Storage

The City currently maintains a total of 15.7 MG of water storage in eight reservoirs located throughout the service area. Each Service Area has two reservoirs, providing redundancy for cleaning and maintenance. Historically, the City has evaluated each Service Area independently. However, new sources, pump stations, and PRV facilities now allow for reliable and redundant operation of the system as an interconnected whole, rather than as separate Service Areas. The storage analysis reflects the new operational ability by allowing sharing of emergency storage between the Service Areas. The existing infrastructure and customer expectations still require that other storage components, such as FSS, be stored in individual Service Areas.

Water storage requirements are typically defined by the following components: operational storage, equalizing storage, standby storage, fire suppression storage, and dead storage. A description of each storage component and the criteria used to evaluate the capacity of the City's reservoirs is as follows:

- Operational Storage: Operational storage is used to supply the water system under normal demand conditions and provides pump protection to avoid frequent starting and stopping of pumps for pump stations that are used to fill reservoirs. The operational storage is calculated per the DOH Design Manual as the pump supply firm capacity (in gpm) times 2.5-minutes.

- Equalizing Storage: When the source pumping capacity cannot meet the periodic daily (or longer) peak demands placed on the water system, equalizing storage must be provided as a part of the total storage for the system and must be available at 30 psi to all service connections. The criteria for determining the equalizing storage requirements for the City's system is based on the equalizing calculation in the DOH Design Manual (refer to equation 7-1).

- Standby Storage: Standby storage is the portion of the reservoir used to supply the water system when supply facilities are out of service. DOH allows water systems with multiple sources to require that standby volume be supplied with the largest supply source out of service but recommends a

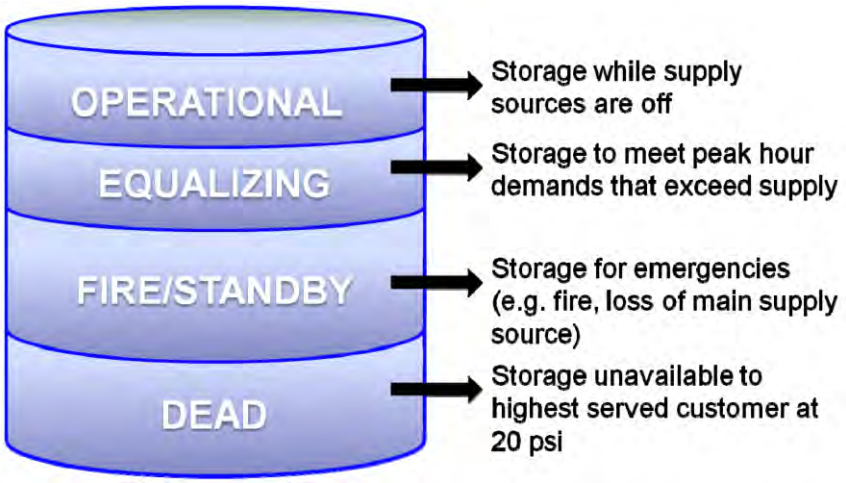
minimum standby storage of 200 gallons per ERU in the system. The City calculates standby storage as the maximum volume required to supply all ERUs at least 235 gallons (based on the DOH minimum times an 18 percent factor of safety).

- Fire Suppression Storage (FSS): FSS is the portion of the reservoir with sufficient volume to supply water to the system at the maximum rate and duration required to extinguish a fire at the building with the highest fire flow requirement. The required volume of the FSS is the product of the fire flow rate and duration of the system's maximum fire flow requirement.

- Dead Storage: Dead storage is the bottom portion of the reservoir that cannot be used because water is stored at an elevation that is too low to provide sufficient system pressure (below 20 psi at the highest elevation served by the reservoir). This unusable storage occupies the lower portion of many ground-level standpipe-type reservoirs. When the highest service elevation is not the limiting factor, the City defines dead storage as being 1-foot above the reservoir inlet elevation for operational reasons.

The City's reservoir storage requirements depend on the water system's configuration, seasonal and daily variation in water-use patterns, and the reliability of various water system components. This section describes the five components of storage, summarizes the existing system's capacity to meet the storage needs of each Service Area, and makes recommendations to address identified storage deficits.

Figure 3-7 | Illustration of Reservoir Storage Components



3.4.2.3.2 Storage Analysis Results

The storage available in the four Service Areas was evaluated to confirm each is provided with the required usable Operational, Equalizing, Fire Suppression, and Emergency Storage volumes. Reflecting the interconnectedness of the system, excess storage in higher Service Areas (i.e., Lea Hill, Lakeland and Academy) can be used in the Valley Service Area and vice versa through use of the system pump stations. The storage analysis compares the required storage, based on the criteria in Table 3-17, and the available storage. The FSS for each region was calculated using 4,000 gpm for four hours except for Lakeland, which used 3,125 gpm for three hours based on buildings with the highest fire flow requirement in each Service Area (see Table 3-20).

Table 3-29 summarizes the existing 2024 storage analysis and results. The results indicate a deficit in the Lea Hill Service Area, however, this deficit is offset by surplus storage available in other Service Areas.

Table 3-29 | System-Wide Storage Analysis for the 2024 Scenario

Description	RWSA 2024	Academy 2024	Lakeland 2024	Lea Hill 2024	Valley 2024
Usable Storage (MG)					
Maximum Storage Capacity	15.86	2.72	2.06	2.48	8.60
Algona Reserve Storage Capacity[1]	0.28	--	0.28	--	--
Algona Proposed Storage Capacity[2]	0.17	--	0.17	--	--
Dead Storage	1.50	0.06	0.44	0.36	0.64
Total Usable Storage	14.08	2.66	1.34	2.12	7.96
Required Storage (MG)					
Operational Storage	0.05	0.01	0.00	0.01	0.03
Equalizing Storage	0.00	0.00	0.00	0.00	0.00
Standby Storage (Emergency)	9.10	0.56	0.66	1.29	6.59
FSS (Emergency)	3.44	0.96	0.56	0.96	0.96
Total Required Storage	12.59	1.53	1.22	2.26	7.58
Surplus/ (Deficit) Storage	**1.49**	**1.13**	**0.12**	**(0.14)**	**0.38**

Notes:

1. The water supply interlocal agreement (IA3) between the City of Algona and the City of Auburn was updated in 2016. Through this updated agreement, Algona elected to financially participate in Lakeland Reservoir 6 to obtain a total share of 280,000-gallons of storage capacity. The agreement stipulates that if the City experiences any failure or decreased capacity, the supply of water to Algona may be decreased by the same percentage that is experienced by the City.
2. Algona has also requested an additional 170,000 gallons of storage capacity (anticipated to begin in 2025) by financially participating in the planned Reservoir 3.

Table 3-30 summarizes the 2034 storage analysis and results (10-year projections). The results indicate a deficit in the Lea Hill, Lakeland, and Valley Service Areas, however, this deficit is offset by surplus storage available in other Service Areas. Additionally, the deficit in the Lakeland Service Area may not be realized based on the City's terms and conditions of the IA3 agreement with Algona.

Table 3-30 | System-Wide Storage Analysis for the 2034 Scenario

Description	RWSA 2034	Academy 2034	Lakeland 2034	Lea Hill 2034	Valley 2034
Usable Storage (MG)					
Maximum Storage Capacity	15.86	2.72	2.06	2.48	8.60
Algona Reserve Storage Capacity[1,2]	0.45	--	0.45	--	--
Dead Storage	1.50	0.06	0.44	0.36	0.64
Total Usable Storage	13.91	2.66	1.17	2.12	7.96
Required Storage (MG)					
Operational Storage	0.05	0.01	0.00	0.01	0.03
Equalizing Storage	0.02	0.00	0.02	0.00	0.00
Standby Storage (Emergency)	10.26	0.62	0.76	1.35	7.53
FSS (Emergency)	3.44	0.96	0.56	0.96	0.96
Total Required Storage	13.77	1.59	1.34	2.32	8.52
Surplus/ (Deficit) Storage	**0.14**	**1.07**	**(0.17)**	**(0.20)**	**(0.56)**

Notes:

1. The water supply interlocal agreement (IA3) between the City of Algona and the City of Auburn was updated in 2016. Through this updated agreement, Algona elected to financially participate in Lakeland Reservoir 6 to obtain a total share of 280,000-gallons of storage capacity. The agreement stipulates that if the City experiences any failure or decreased capacity, the supply of water to Algona may be decreased by the same percentage that is experienced by the City.
2. Algona has also requested an additional 170,000 gallons of storage capacity by financially participating in the planned Reservoir 3, bringing the total storage capacity to 450,000 gallons.

The 2044 storage analysis was performed to determine the ability of the proposed storage facilities to meet the future storage requirements in 2044, based on projected demands. The analysis results indicate that the existing storage facilities do not have sufficient capacity to meet the future demands of the system based on the demand projections presented in Chapter 2. The City is currently planning a new reservoir in the Valley Service area to address these future deficiencies in the 20-year time frame. Table 3-31 summarizes the buildout 2044 storage analysis.

Table 3-31 summarizes the 2044 storage analysis and results (20-year projections). The results indicate an overall deficit in the RWSA, spurred largely by the projected growth within the Valley Service Area in the 20-year horizon.

Table 3-31 | System-Wide Storage Analysis for the 2044 Scenario

Description	RWSA 2044	Academy 2044	Lakeland 2044	Lea Hill 2044	Valley 2044
Usable Storage (MG)					
Maximum Storage Capacity	15.86	2.72	2.06	2.48	8.60
Algona Reserve Storage Capacity[1,2]	0.45	--	0.45	--	--
Dead Storage	1.50	0.06	0.44	0.36	0.64
Total Usable Storage	13.91	2.66	1.17	2.12	7.96
Required Storage (MG)					
Operational Storage	0.05	0.01	0.00	0.01	0.03
Equalizing Storage	0.05	0.00	0.05	0.00	0.00
Standby Storage (Emergency)	11.64	0.69	0.87	1.40	8.68
FSS Storage (Emergency)	3.44	0.96	0.56	0.96	0.96
Total Required Storage	15.18	1.66	1.48	2.37	9.67
Surplus/ (Deficit) Storage	**(1.27)**	**1.00**	**(0.31)**	**(0.25)**	**(1.71)**

Notes:

1. The water supply interlocal agreement (IA3) between the City of Algona and the City of Auburn was updated in 2016. Through this updated agreement, Algona elected to financially participate in Lakeland Reservoir 6 to obtain a total share of 280,000-gallons of storage capacity. The agreement stipulates that if the City experiences any failure or decreased capacity, the supply of water to Algona may be decreased by the same percentage that is experienced by the City.
2. Algona has also requested an additional 170,000 gallons of storage capacity by financially participating in the planned Reservoir 3, bringing the total storage capacity to 450,000 gallons.

Since most of the future storage deficiency is in the Valley Service Area, a new storage reservoir is planned in the northeastern portion of the Service Area (Valley 242 pressure zone). The reservoir is a planned capital project to be completed in the 20-year horizon and is discussed further in Chapter 8.

The Lea Hill PS has sufficient capacity to transfer standby storage from Valley to Lea Hill. In addition, there are multiple PRVs which can be used to transfer water from the Academy and Lakeland Service Areas back to Valley to utilize excess standby storage in those areas. No other projects are necessary to resolve this deficiency.

3.4.2.4 Distribution and Transmission Capacity Analysis

This section evaluates the City's existing distribution and transmission mains to determine if the water pipelines are sized and looped adequately to provide the required flow and pressures to meet existing and future system conditions. The evaluation used an updated version of the City's computerized hydraulic water system model and InfoWater Pro, a GIS-based modeling software developed by Autodesk (formerly Innovyze). The model was updated to accurately reflect the City's existing water system and verified against

field hydrant test data. Results from the model were used to evaluate the existing system and identify deficiencies.

3.4.2.4.1 Model Update

The following updates were made to the City's hydraulic model prior to conducting the capacity analyses:

- Facility updates
- Pipeline network updates
- Elevation updates
- Demand updates

Each update is described in further detail below.

Facility Updates

Existing facilities within the hydraulic model were reviewed and updated based on information provided by the City. The facilities reviewed included groundwater wells, springs, interties with adjacent water systems, potable water reservoirs, pump stations, treatment facilities, flow control valves, and PRVs. The following documents were used to confirm the accuracy of the facility information within the hydraulic model:

- Interlocal agreements
- Record drawings
- PRV calibration records
- Pump curves
- SCADA data
- Operations and maintenance data

Pipeline Network Updates

The existing pipeline network within the hydraulic model was compared to the City's existing GIS data to locate areas where pipelines may have been missing in the model. In addition, the pipeline material type was added to the model to match data available from GIS to more accurately reflect the existing distribution system.

Elevation Updates

Node elevations within the model were updated using United States Geological Survey (USGS) Digital Elevation Model (DEM). The DEM is a tile of the 3-Dimenional Elevation Program (3DEP) with data that is updated regularly and distributed in geographic coordinates in units conforming with the North American Datum of 1983 (NAD 83). All elevation values are in meters and, over the contiguous United States, are referenced to the North American Vertical Datum of 1988 (NAVD 88). The assigned elevations were converted to feet when applied to the model.

In addition to the general elevation update of the model nodes, the record drawings of the water reservoirs were used to verify the bottom and overflow elevations of the reservoirs within the model. Where necessary based on date, the as-built elevations were corrected to NAVD88 values, as some of the reservoirs were constructed using National Geodetic Vertical Datum of 1929 (NGVD 29). A conversion of 3.51 feet was used to update elevations from NGVD 29 to NAVD 88.

Demand Updates

Demands in the model were updated using the City's customer billing database. The meters were geolocated based on the customer's address and assigned to the closest model junction. No demands were allocated to transmission pipelines or facility nodes (i.e., pump station, reservoirs, etc.). Approximately 10 percent of the demand was unable to be allocated using this method. The remaining demand and non-billed usage, like DSL and construction meters, was distributed uniformly throughout the model by applying a scaling factor to match the 2022 production data. The demand sets in the model sought to distribute the demand projections provided in **Chapter 2**. A scaling factor was then applied to all demand nodes to equal the demand projection in years 2024.

As discussed in **Chapter 2**, TAZ data was used to determine growth projections and the future water demand. Based on the TAZ data, each Service Area was split between focused growth areas and non-growth areas. Future demands were allocated equally across all current demand nodes within the focused growth and non-growth areas of each Service Area. Demand peaking factors from **Chapter 2** were used to adjust demands to MDD for the fire flow analyses and PHD for the pressure analysis.

3.4.2.4.2 Model Calibration

To verify and calibrate the hydraulic model, the City collected field hydrant testing data. A map of the hydrant testing locations and testing plan is included in **Appendix K**. The City also collected static pressure at the test locations to verify the hydraulic grade line (HGL) of specific areas of the water system.

In addition to the hydrant tests results, the boundary conditions of the water system facilities at the time of each test were provided. The boundary conditions were used to calculate the demand observed during each test. The boundary conditions were also entered into the model for each hydrant test to accurately simulate the system conditions during the hydrant test. At most locations, hydrants were operated to stress the system to identify required changes to the boundary conditions and pipe roughness factors (C-factors) within the hydraulic model.

A fire flow calibration scenario was set up within the hydraulic model and each of the hydrant test locations was simulated. **Appendix K** provides the field flow data compared to the flow data input into the model and a comparison of the static pressures and pressure drops observed at each hydrant test. **Table 3-32** summarizes the final Hazen Williams C-factors used during the calibration based on piping material.

Table 3-32 | Final C-Factors for Piping Materials

Material	C-Factor
Cast Iron	90-120
Concrete	120
Ductile Iron	120
HDPE	130
PVC	130
RCP	120
Steel	120
Unknown	115

Valley Service Area

A total of 16 hydrant tests were conducted in the Valley Service Area, however the results from one test were excluded as the static pressure was not recorded. The static pressure and pressure drop in the calibrated model is now within 5 psi, or less, of the observed data for each of the hydrant tests.

Lea Hill Service Area

A total of nine hydrant tests were conducted in the Lea Hill Service Area. The static pressure and pressure drop in the calibrated model is now within 5 psi, or less, of the observed data for each of the hydrant tests.

The HGL from the hydrant testing was higher than the reported HGL in the hydraulic model for the Lea Hill 462 pressure zone. The PRV setpoints were referenced to confirm the higher HGL observed during the hydrant testing. As such, the naming for the pressure zone was updated to Lea Hill 480. The update and supporting calculations are included in Appendix K.

Academy Service Area

A total of five hydrant tests were conducted in the Academy Service Area. The static pressure and pressure drop in the calibrated model is now within 5 psi, or less, of the observed data for each of the hydrant tests.

The HGL from the hydrant testing was higher than the reported HGL in the hydraulic model for the Academy 350 and Academy 445 pressure zones. The PRV setpoints were referenced to confirm the higher HGL observed during the hydrant testing. As such, the naming for each pressure zone was updated to Academy 400 and Academy 470 respectively. The updates and supporting calculations are included in Appendix K.

Lakeland Service Area

A total of ten hydrant tests were conducted in the Lakeland Service Area, however the results from one test were excluded as the recorded static pressure was determined to be incorrect. The static pressure and pressure drop in the calibrated model is now within 5 psi, or less, of the observed data for each of the hydrant tests.

The HGL from the hydrant testing varied from the reported HGL in the hydraulic model for the Lakeland 440, Lakeland 441, Lakeland 446, and Lakeland 485 pressure zones. The PRV setpoints were referenced to confirm the HGLs observed during the hydrant tests. As such, the naming for each pressure zone was updated as follows:

- Lakeland 440 pressure zone was split into two pressure zones: Lakeland 450 and Lakeland 405.
- Lakeland 441 pressure zone was updated to Lakeland 385
- Lakeland 446 pressure zone was updated to Lakeland 415
- Lakeland 485 pressure zone was updated to Lakeland 455.

The hydrant test for Lakeland 575 was not simulated in the model as observed in the field since a static pressure of 101 psi was recorded during the hydrant test. According to the PRV setpoints, the HGL on the test date was anticipated to be an error. The City re-checked the hydrant on February 8, 2024, and a static pressure of 69 psi was recorded. It was concluded that the original hydrant test data was inaccurate, and the test was voided. The Lakeland 575 pressure zone was updated to Lakeland 560 instead based on the PRV setpoints and static pressure reading completed in February 2024. The updates and supporting calculations are included in Appendix K.

3.4.2.4.3 Hydraulic Analysis

PHD Analysis

During PHD conditions, the water system must maintain a minimum pressure of 30 psi at all service nodes, a maximum velocity of 8 fps in wall water mains, and a maximum velocity of 5 fps in all transmission mains in accordance with DOH and City standards. The hydraulic model was set up to evaluate pressures and velocities throughout the system under PHD conditions for the 2024 (existing conditions), 2034 (10-year), and 2044 (20-year) scenarios. The results of this analysis are shown in **Figure 3-8**, **Figure 3-9**, and **Figure 3-10** respectively. The results of this analysis indicate that all areas of the water system meet these requirements under existing and future conditions.

Figure 3-8 | 2024 PHD Scenario – Pressure and Velocity

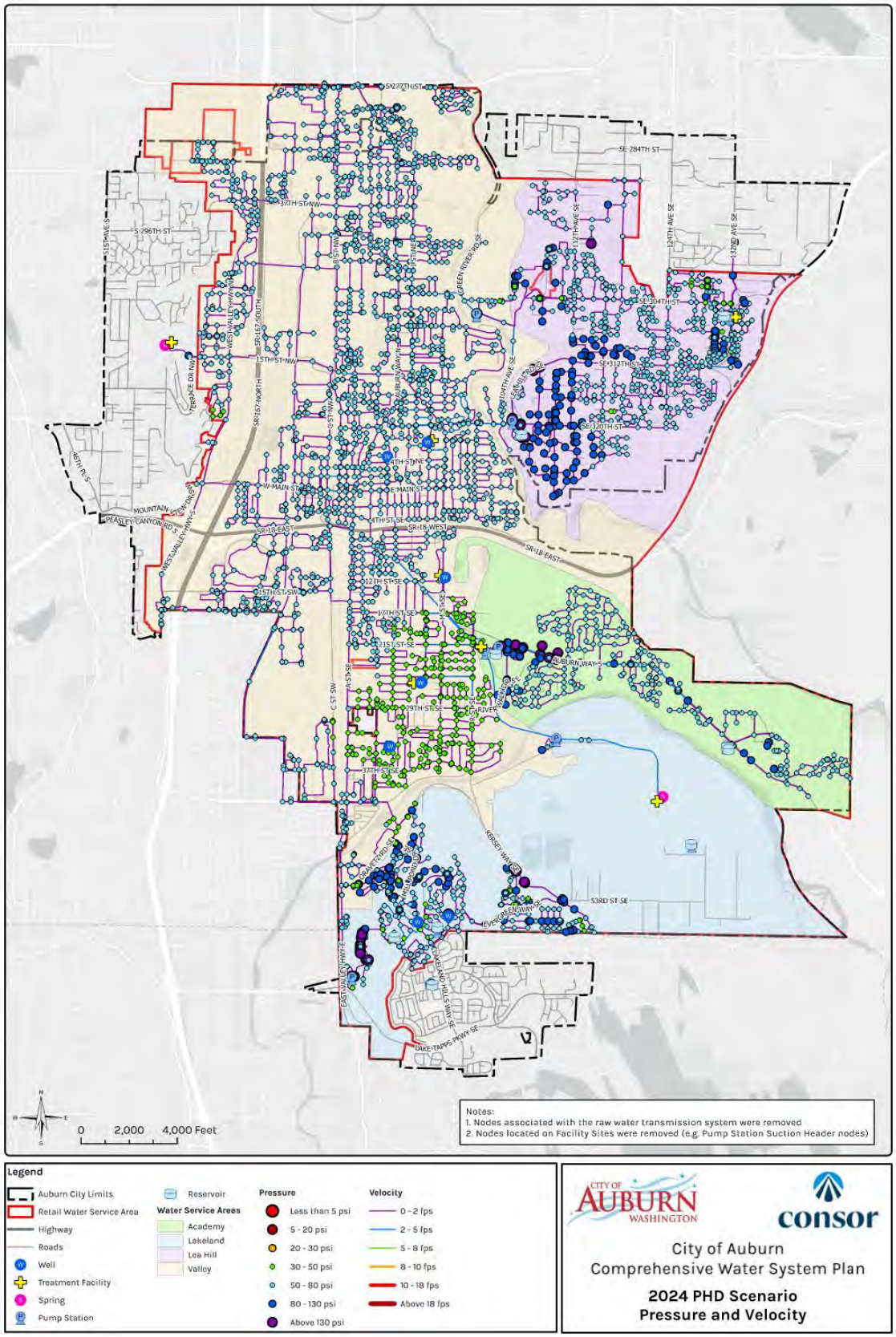


Figure 3-9 | 2034 PHD Scenario – Pressure and Velocity

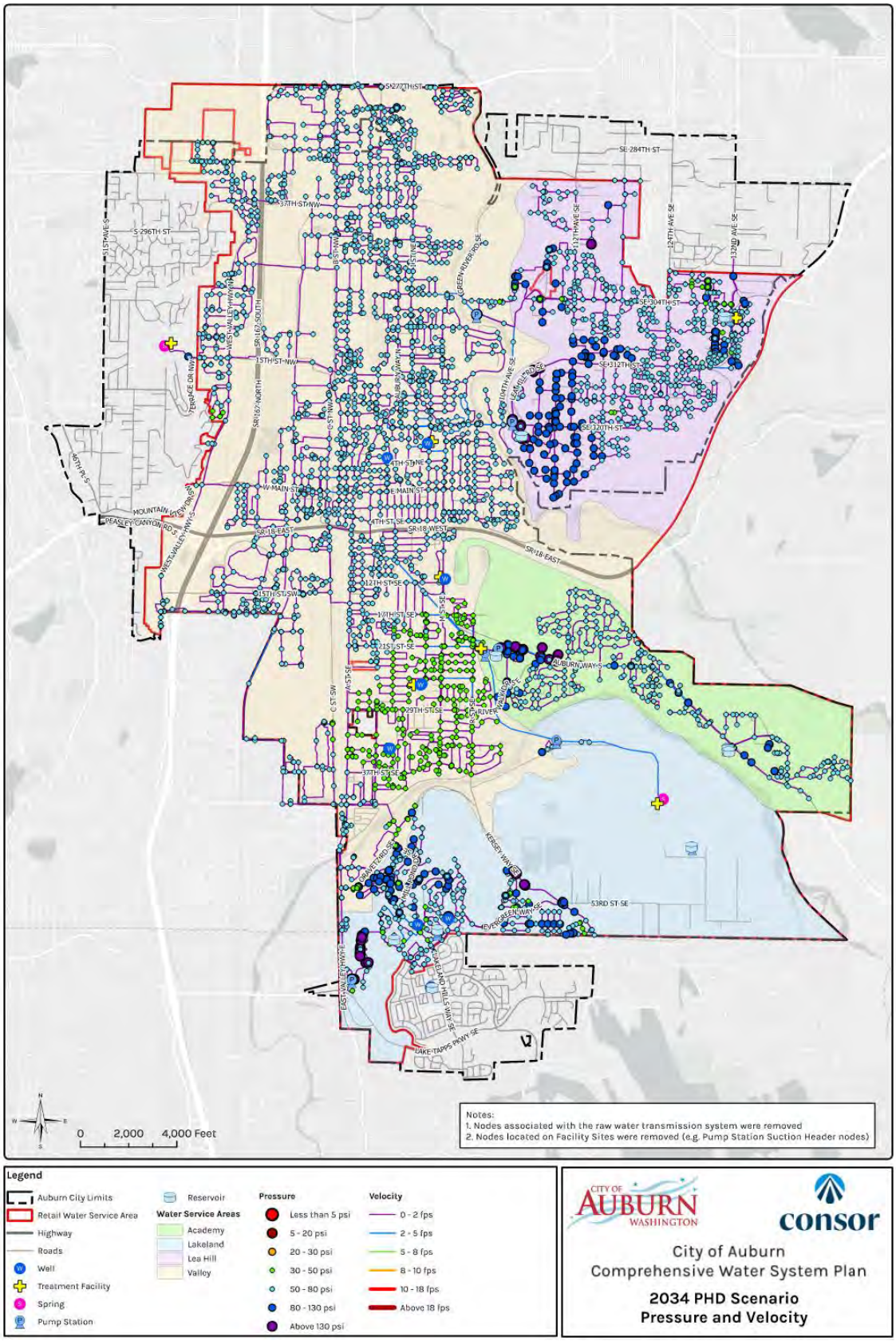
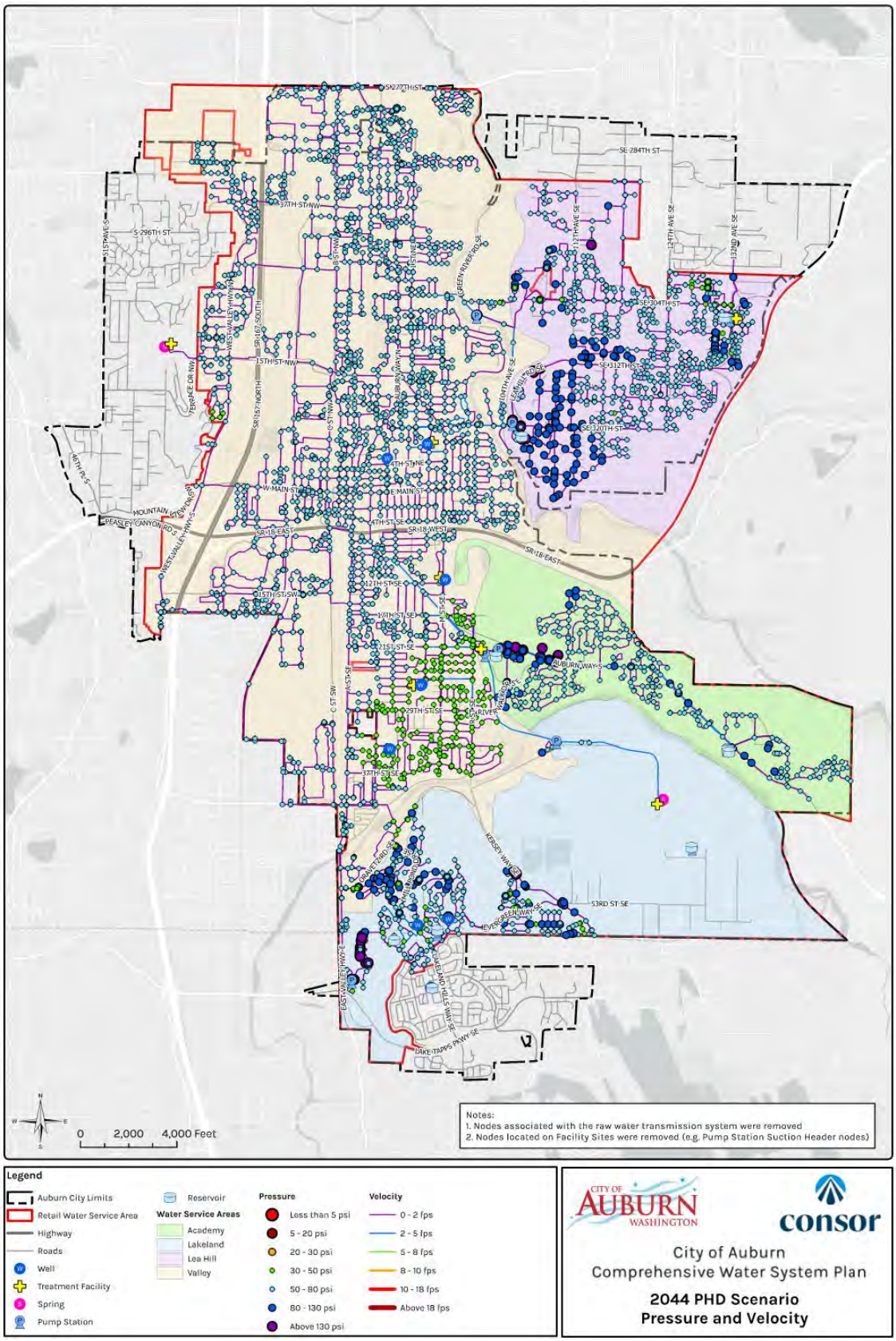


Figure 3-10 | 2044 PHD Scenario – Pressure and Velocity



Fire Flow Analysis

The fire flow analysis assesses each hydrant node in the hydraulic model to determine the available fire flow while maintaining a minimum residual pressure of 20 psi throughout the respective pressure zone. To complete the analysis, the water elevation in each reservoir was set to top of dead storage (below operational, equalizing and standby storage) per DOH recommendations. In addition, the system demands were set to MDD for each scenario (2024, 2034 and 2044). For each node, the modeled available fire flow was compared to its target fire flow requirement as follows:

- Single Family Residential Meters: 1,500 gpm of fire flow required.
- All Other Meters (i.e., multi-family, commercial, etc.): 2,500 gpm of fire flow required.
- Specific Buildings with Higher Fire Flow Requirements: Assessed individually per **Table 3-20**.

Fire flow requirements were assigned to the model nodes based on account classifications of the assigned water meters. Where multiple meters with different account classifications were assigned to the same node, the highest fire flow requirement was assigned to the node. The hydrant locations provided in the City's GIS system do not correspond to the exact location of the hydrant node in the model. Therefore, the nodes that were predicted to have fire flow below what is required were checked based on their proximity to the nearest hydrant to verify whether the appropriate hydrant could provide the required fire. As shown in **Figure 3-11** the results of this analysis indicated that multiple areas of the system under current and future demand conditions have fire flow deficiencies. A summary of the proposed pipeline improvements to resolve the deficiencies is shown in **Figure 3-12** and summarized in **Table 3-33**. **Figure 3-12** also includes on-going projects currently being completed by the City or developers.

Valley Service Area

Multiple deficiencies are identified in the Valley Service Area. The highest priority project assists with raising the HGL of the highest critical node on the west side of the RWSA. This project will increase the available fire flow at most of the western failure locations. The remaining improvements assist with specific failure locations by upsizing water mains experiencing significant headloss.

Additionally, a new PRV facility is proposed to rezone a portion of the Valley 242 pressure zone to the Academy 350 pressure zone to resolve deficiencies in the area. This PRV facility will also allow storage transfer from the Academy Service Area where this is surplus storage to the Valley Service Area to resolve the 2034 storage deficit projections. This project is discussed further in **Chapter 8**.

Lakeland Service Area

There were no failure locations identified within the Lakeland Service Area for the existing and future demand conditions.

Lea Hill Service Area

Multiple deficiencies are identified in the Lea Hill Service Area. The highest priority project in this area is to rezone a portion of Lea Hill 563 pressure zone to the Lea Hill 648 pressure zone. In addition, deficiencies were noted in the northern part of Lea Hill 563, in the vicinity of 112th Avenue, 290th Street, 295th Street, and 293rd Street. These pipelines were replaced recently and provide an available fire flow of approximately 1,350 gpm after the rezoning of the Lea Hill 563 pressure zone is completed. Therefore, a project was not proposed in this area and was confirmed with the Fire Marshal. The remaining improvements assist with specific failure locations by upsizing water mains experiencing significant headloss.

Figure 3-11 | MDD+FF Deficiency Locations for 2024, 2034 and 2044 Scenarios

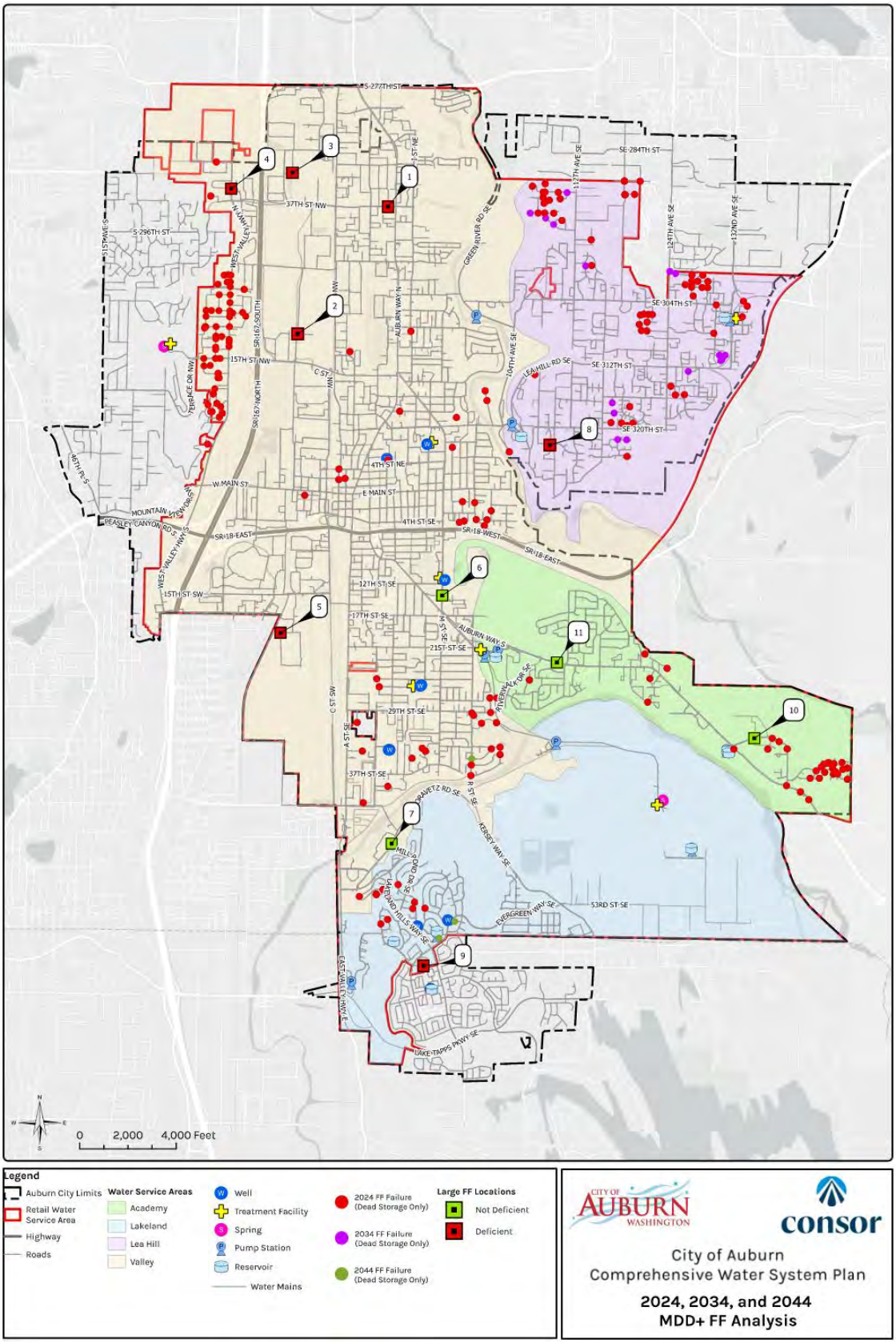
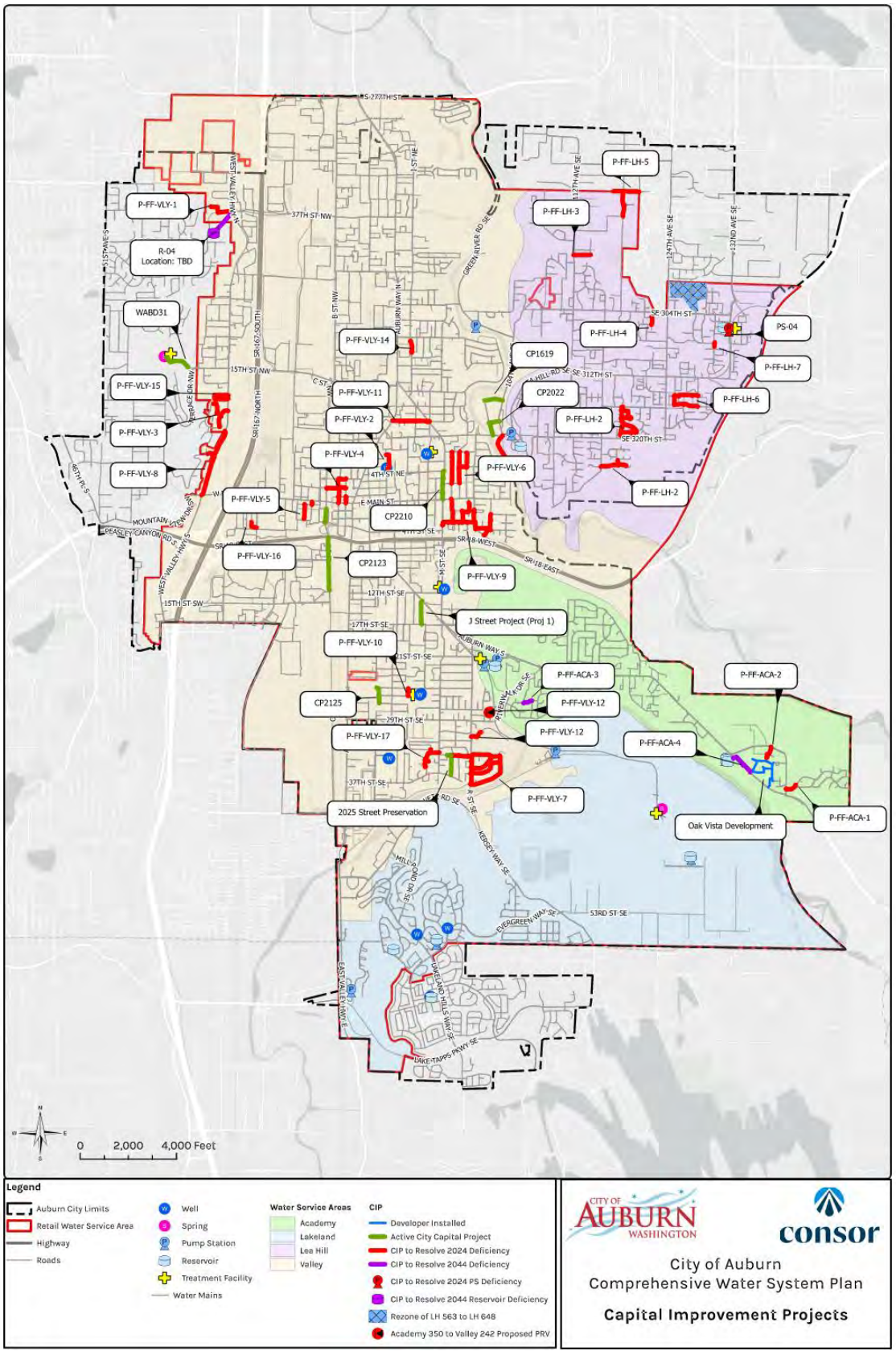


Figure 3-12 | Capital Improvement Projects Addressing Fire Flow Deficiencies



Academy Service Area

Multiple deficiencies are identified in the Academy Service Area. The planned Oak Vista Development provides a significant increase in available fire flow in Academy 585 pressure zone. The remaining improvements assist with specific failure locations by upsizing pipelines with high predicted headloss.

Table 3-33 | Prioritized Pipeline Improvements to Address Fire Flow Deficiencies

Project Priority	Service Area	Project ID	Summary of Deficiency	Summary of Improvements
1	Valley	P-FF-VLY-8	2024 Scenario: Hydrants less than 500 gpm	Replace existing with 3,200 LF of 16-inch diameter piping.
2	Lea Hill	P-FF-LH-3	2024 Scenario: Hydrants less than 1,000 gpm	Replace existing with 690 LF of 12-inch diameter piping.
3	Lea Hill	P-FF-LH-7	2024 Scenario: Hydrants less than 1,000 gpm.	Replace existing with 180 LF of 8-inch diameter piping. Move hydrant connection to higher zone.
4	Lea Hill	P-FF-LH-5	2024 Scenario: Hydrants less than 1,000 gpm	Replace existing with 1,080 LF of 12-inch diameter piping and 1,170 LF of 16-inch diameter piping.
5	Valley	P-FF-VLY-15	2024 Scenario: Hydrants less than 1,000 gpm	Replace existing with 1,320 LF of 12-inch diameter piping.
6	Valley	P-FF-VLY-6	2024 Scenario: Hydrants less than 1,000 gpm	Replace existing with 3,590 LF of 8-inch diameter piping.
7	Valley	P-FF-VLY-7	2024 Scenario: Hydrants less than 1,500 gpm	Replace existing with 7,9840 LF of 8-inch diameter piping and 4,380 LF of 12-inch piping.
8	Valley	P-FF-VLY-13	2024 Scenario: Hydrants less than 1,000 gpm	Replace existing with 1,290 LF of 12-inch diameter piping.
9	Valley	P-FF-VLY-12	2024 Scenario: Hydrants less than 1,000 gpm	Replace existing with 1,440 LF of 8-inch diameter piping and 550 LF of 12-inch piping.
10	Lea Hill	P-FF-LH-1	2024 Scenario: Hydrants less than 1,500 gpm	Replace existing with 4,540 LF of 8-inch diameter piping.
11	Lea Hill	P-FF-LH-2	2024 Scenario: Hydrants less than 1,500 gpm	Replace existing with 1,300 LF of 8-inch diameter piping.
12	Lea Hill	P-FF-LH-6	2024 Scenario: Hydrants less than 1,500 gpm	Replace existing with 2,470 LF of 12-inch diameter piping.
13	Academy	P-FF-ACA-2	2024 Scenario: Hydrants less than 1,500 gpm.	Replace existing with 590 LF of 8-inch diameter piping.
14	Academy	P-FF-ACA-1	2024 Scenario: Hydrants less than 1,500 gpm.	Replace existing with 500 LF of 12-inch diameter piping.
15	Lea Hill	P-FF-LH-4	2024 Scenario: Hydrants less than 1,500 gpm	Replace existing with 340 LF of 8-inch diameter piping.
16	Valley	P-FF-VLY-9	2024 Scenario: Multiple hydrants less than 1,500 gpm	Replace existing with 190 LF of 8-inch diameter piping and 5,765 LF of 12-inch piping.
17	Valley	P-FF-VLY-14	2024 Scenario: Hydrants less than 2,500 gpm	Replace existing with 510 LF of 12-inch diameter piping.
18	Valley	P-FF-VLY-2	2024 Scenario: Hydrants less than 2,500 gpm	Replace existing with 910 LF of 12-inch diameter piping.

Project Priority	Service Area	Project ID	Summary of Deficiency	Summary of Improvements
19	Valley	P-FF-VLY-17	2024 Scenario: Hydrants less than 2,500 gpm	Replace existing with 170 LF of 8-inch diameter piping and 1,270 LF of 12-inch piping.
20	Valley	P-FF-VLY-4	2024 Scenario: Hydrants less than 2,500 gpm	Replace existing with 2,610 LF of 12-inch diameter piping.
21	Valley	P-FF-VLY-10	2024 Scenario: 4-inch Cast Iron near 1,500 gpm dead end	Replace existing with 320 LF of 12-inch diameter piping.
22	Valley	P-FF-VLY-3	2024 Scenario: Hydrant less than 1,500 gpm available.	Replace existing with 1,010 LF of 8-inch diameter piping and 660 LF of 12-inch piping. Complete P-FF-VLY-8 has higher priority for initial improvement in this area.
23	Valley	P-FF-VLY-1	2024 Scenario: Hydrants less than 2,500 gpm	Replace existing with 960 LF of 12-inch diameter piping.
24	Valley	P-FF-VLY-11	2024 Scenario: Hydrants less than 2,500 gpm	Replace existing with 1,630 LF of 12-inch diameter piping.
25	Valley	P-FF-VLY-16	2024 Scenario: Hydrants less than 2,500 gpm	Replace existing with 390 LF of 12-inch diameter piping.
26	Valley	P-FF-VLY-5	2024 Scenario: Hydrants less than 2,500 gpm	Replace existing with 750 LF of 12-inch diameter piping.
27	Academy	P-FF-ACA-3	2044 Scenario: Hydrants less than 2,500 gpm	Replace existing with 380 LF of 12-inch diameter piping.
28	Academy	P-FF-ACA-4	2044 Scenario: Hydrants less than 2,500 gpm	Replace existing with 1,040 LF of 16-inch diameter piping.

3.4.2.5 System Capacity Analysis Results

Chapter 2 of this WSP calculated the ADD ERU planning value to be at 182 gallons per day per Equivalent Residential Units (gpd/ERU) and an MDD ERU planning value of 322 gpd/ERU. An analysis of the water system's overall physical capacity in terms of ERU using DOH Worksheet 4-1 is provided in Appendix V. Demand projection values include retail customer demands, distribution system losses, authorized unbilled consumption, and wholesale demand from Algona. Projections for the MIT Fish Hatchery and LMWD are not included. LMWD is not included since they do not rely on the City as their main source of water and have an interruptible wholesale agreement. Demand from the MIT Fish Hatchery is also not included since it is unknown when this facility will be constructed or what the actual demands will be.

The results of the ERU analysis included in Appendix V are summarized in Table 3-34. The analysis indicates that the existing system has sufficient capacity to serve the current and projected water demands through 2034 (10-year planning horizon). Under 2024 and 2034 demand conditions, storage is the limiting system component for growth and development. In 2044 (20-year planning horizon) storage is deficient, which is consistent with the analysis findings summarized in Section 3.4.2.3 and is planned to be resolved with a new reservoir project included in Chapter 8.

Table 3-34 | System Capacity Analysis in ERU Basis

Description of Capacity Parameter	2024	2034	2044
Demands per ERU Basis			
Average Day Demand, gpd/ERU	182	182	182
Maximum Day Demand, gpd/ERU	322	322	322
Peak Hour Demand, gpd/ERU	518	518	518
Projected Retail Customer Demand, ERUs	**38,731**	**43,626**	**49,515**
Algona (Firm Wholesale) Projected ADD, ERUs	2,005	2,120	2,246
Algona (Firm Wholesale) Projected MDD, ERUs	2,150	2,274	2,409
Total ERUs Required for Qa Analysis (ADD), ERUs	**40,736**	**45,746**	**51,761**
Total ERUs Required for Qi and Qs Analysis (MDD), ERUs	**40,881**	**45,900**	**51,924**
Source Capacity (Qi)			
Total Supply Capacity, Qi (20 hours of pumping), gpd	23,092,800	23,092,800	23,092,800
Maximum Day Demand, gpd/ERU	322	322	322
Maximum Supply Capacity, ERUs	**71,744**	**71,744**	**71,744**
Projected MDD Demand, ERUs	40,881	45,900	51,924
Remaining Qi Capacity Surplus/(Deficit), ERUs	**30,863**	**25,845**	**19,820**
Water Rights (Qa)			
Supply Capacity, Qa (Total), gpd	18,749,377	18,749,377	18,749,377
Average Day Demand, gpd/ERU	182	182	182
Maximum Supply Capacity, ERUs	**102,938**	**102,938**	**102,938**
Projected ADD Demand, ERUs	40,736	45,746	51,761
Remaining Qa Capacity Surplus/(Deficit), ERUs	**62,202**	**57,192**	**51,177**
Pumping Capacity (Qs)			
Total Pumping Capacity, Qs (20 hours of pumping), gpd	18,732,000	18,732,000	18,732,000
Maximum Day Demand, gpd/ERU	322	322	322
Maximum Supply Capacity, ERUs	**58,196**	**58,196**	**58,196**
Projected MDD Demand, ERUs	40,881	45,900	51,924
Remaining Pumping Capacity Surplus/(Deficit), ERUs	**17,315**	**12,297**	**6,272**
Storage Capacity			
Maximum Usable Storage Capacity, MG	14.08	13.91	13.91
Available Standby and Equalization Storage Capacity, MG	10.58	10.44	10.42
Standby Storage Requirement, gal/ERU	235	235	235
Equalizing Storage Requirement, gal/ERU	-	-	-
Maximum Storage Capacity, ERUs	**45,038**	**44,442**	**44,335**
Projected Retail System ERUs	38,731	43,626	49,515
Remaining Storage Capacity Surplus/(Deficit), ERUs	**6,308**	**816**	**(5,181)**
System Capacity Analysis Summary			
Limiting Component of System Capacity Surplus/ (Deficit), ERUs	**6,308**	**816**	**(5,181)**

3.4.3 New Source of Supply Analysis

The City has a pending water right application for 13,443 acre-feet from the existing Wells 6 and 7 and a future Well 8. The location of the future Well 8 has not been determined but is expected to be located near Wells 6 and 7. Flows from future Well 8 would be treated at the Fulmer Field CCT Facility. It is anticipated that water quality from Well 8 would be similar to Wells 6 and 7 and may require manganese treatment.

Calculations presented in the Water Rights Self-Assessment Form (**Appendix I**) conclude that the City's existing water rights are anticipated to be adequate to meet the current, 10-year, and 20-year demand projections for maximum instantaneous flows (Qi) and total annual withdrawal (Qa).

The City has established a policy of maintaining the capability to supply the MDD while the largest water source is out of service. The system analysis documented in this chapter confirms that, with projected demands over the 20-year planning period, the City will maintain the capability to meet MDD with the largest pumping source is out of service with the use of the Tacoma interties as an available source.

Mitigation obligations due to the proposed water right for Wells 6, 7, and 8 are listed below and are described in detail in the Conceptual Mitigation Plan (**Appendix S**):

- Mitigation of impacts to Green River,
- Mitigation of impacts to White River, and
- Mitigation of impacts to Mill Creek.

Water Use Efficiency measures described in **Chapter 4** will be applied to the expanded supplies from Wells 6 and 7 and the new supply from Well 8 if the pending water right is approved.

Aside from the pending water right application, the City has several projects planned over the 20-year horizon to improve supply production or fully utilize their existing water rights, as discussed in **Section 3.1.2**.

3.5 Summary of System Deficiencies

Table 3-35 provides a summary of the system deficiencies described in this chapter. Proposed improvements include pump station improvements, storage improvements, and distribution system improvements. Total project costs and the anticipated source of funding for each project are provided in **Chapter 8**.

Table 3-35 | Summary of System Deficiencies

CIP Improvement	Classification of Deficiency	Description of Project Solution	Location in WSP Where Deficiency is Identified	Location in WSP Where Analysis Demonstrates Deficiency will be Addressed by Project
Supply Improvements	Reliability, Resiliency	• Coal Creek Springs Rehabilitation • Well 2 Replacement • Well 2 and Well 6 Cleaning Program • Wells 5/5A Upgrades • Well 7 Back-up Power • Algona Well 1 Study	Section 3.1.2	Section 3.1.2 and Chapter 8

CIP Improvement	Classification of Deficiency	Description of Project Solution	Location in WSP Where Deficiency is Identified	Location in WSP Where Analysis Demonstrates Deficiency will be Addressed by Project
Treatment Improvements	Reliability	• Wells 3A/3B Treatment • Well 5 Chlorination • Well 7 Treatment • Coal Creek Springs Chlorination Building Replacement • Wells 1 and 4 On-site Chlorination Improvements • Fulmer Field CCT Facility Chlorination Improvements	Section 3.1.3	Section 3.1.3and Chapter 8
Storage Improvements	Growth, Fire Flow, Reliability, Resiliency	• Reservoir 2 Valve Improvements • Reservoirs 4 and 8 Seismic Rehabilitation • Additional storage in the Valley Service Area	Section 3.1.4 and Section 3.4.6	Section 3.1.4, Section 3.4.6, and Chapter 8
Pump Station Improvements	Reliability, Fire Flow	• Modifications to Lea Hill BPS/Intertie PS	Section 3.4.5	Section 3.4.5 and Chapter 8
Distribution Improvements	Growth, Fire Flow	• Coal Creek Springs Transmission Improvements • West Hill Springs Transmission Improvements • Replacing and upsizing pipelines where needed	Section 3.1.2 and Section 3.4.7	Section 3.1.2, Section 3.4.7, and Chapter 8

CHAPTER 4

Water Use Efficiency Program

The purpose of this chapter is to describe the water system's program to improve water use efficiency (WUE). WUE contributes to the long-term water supply reliability and promotes good stewardship of the state's water resources.

This chapter addresses the following topics.

4.1 Source and Service Metering
4.2 Distribution System Leakage
4.3 Water Use Efficiency Program
4.4 Water Use Efficiency Savings
4.5 Climate Change Resiliency

Table 4-1 lists the requirements of the WUE Rules from the DOH 2020 Water Use Efficiency Guidebook and reflects the City's level of compliance with these requirements.

Table 4-1 | WUE Rule Requirements

Category	Requirement	City of Auburn Compliance Status
Meters		
	Meter all sources.	Yes, all sources are metered.
	Meter all service connections.	Yes, all services are metered.
Data Collection		
	Provide annual consumption by customer class.	Yes, provided in Section 2.2.2.
	Provide "seasonal variations" consumption by customer class.	Yes, provided in Section 2.5.
	Evaluate reclaimed water opportunities.	Yes, provided in Section 4.3.5.
	Consider water use efficiency rate structure.	Yes, the City has an inverted block rate structure to promote conservation.
	Provide monthly and annual production for each source.	Yes, provided in Section 2.3.1.
Distribution System Leakage		
	Calculate annual volume and percent using formula defined in WUE Rules.	Yes, distribution leakage is calculated and reported in Section 4.2.
	Report annually: annual leakage volume, annual leakage percent, and for systems not fully metered, meter installation progress and leak minimization activities.	Yes, distribution leakage is reported to DOH on an annual basis.
	Develop water loss control action plan (if leakage is over 10% for 3-year average).	N/A, system has a 3-year average water loss of less than 10%.
Goals		
	Establish measurable (in terms of water production or usage) conservation goals and re-establish every 6 years. Provide schedule for achieving goals.	Yes, measurable goals were established via a public process. See Section 4.3.3.
	Use a public process to establish goals.	

Category	Requirement	City of Auburn Compliance Status
	Report annually on progress.	Yes, report submitted annually to DOH.
WUE Program		
	Describe existing conservation plan.	Yes, see Section 4.3.
	Estimate water saved over last 6 years due to conservation program.	Yes, see Section 4.3.1.
	Describe conservation goals.	Yes, see Section 4.3.3.
	Implement or evaluate 1-12 measures, depending on size. Nine measures for City of Auburn.	Yes, see Section 4.3.4.
	Describe conservation programs for next 6 years including schedule, budget, and funding mechanism.	Yes, see Section 4.3.6.
	Describe how customers will be educated on efficiency practices.	Yes, see Section 4.3.4.
	Estimate projected water savings from selected measures.	Yes, see Section 4.4.
	Describe how efficiency program will be evaluated for effectiveness.	Yes, see Section 4.3.1.
	Estimate leakage from transmission lines (if not included in distribution system leakage).	N/A, transmission line leakage included in distribution system leakage as system does not have true transmission lines.
Demand Forecast		
	Provide demand forecast reflecting no additional conservation.	Yes, provided in Section 4.4.
	Provide demand forecast reflecting all "cost effective" evaluated measures.	
Performance Reports		
	Develop annual report including goals and progress towards meeting them, total annual production, annual leakage volume and percent and, for systems not fully metered, status of meter installation and actions taken to minimize leakage.	Yes, reports will be submitted annually to DOH.
	Submit annually by July 1 to DOH and customers and make available to the public.	

4.1 Source and Service Metering

4.1.1 Source Meters

Source meters, also known as production meters, measure the amount of water emitted from the City's springs and wells. Each of the City's sources are metered to measure the amount of water produced. The meters are calibrated annually by an outside contractor under the direction of the Water Operations Supervisor to ensure an accurate accounting of water produced. If a meter cannot be calibrated properly, it is replaced with a new one. Propeller source meters are being replaced with electromagnetic (MAG) meters in conjunction with planned capital improvements projects, or as the budget allows.

Table 4-2 | Source Meter Details

Source Meter ID	Manufacturer	Meter Type	Meter Size	Years in Service	Date of Last Calibration
Coal Creek Springs	Siemens	Magnetic	24-inch	26	August 2023
West Hill Springs	Siemens	Magnetic	10-inch	10	Unknown
Algona Well 1	N/A	N/A	Not in use	Not in use	Not in use
Valley Well 1	Siemens	Magnetic	12-inch	14	August 2023
Valley Well 2	Siemens	Magnetic	10-inch	24	August 2022
Valley Well 3A	Sparling	Turbine	Not in use	Not in use	Not in use
Valley Well 3B	Sparling	Turbine	Not in use	Not in use	Not in use
Valley Well 4	Siemens	Magnetic	12-inch	39[1]	August 2023
Lakeland Well 5	Sparling	Turbine	8-inch	41[1]	August 2023
Lakeland Well 5A	Siemens	Magnetic	4-inch	34	August 2023
Lakeland Well 5B	Siemens	Magnetic	Not in use	Not in use	Not in use
Valley Well 6	Siemens	Magnetic	12-inch	24[1]	August 2023
Valley Well 7	Sparling	Turbine	Not in use	Not in use	Not in use

Note:
1. Years in service assumed to be from source's original construction date.

4.1.2 Service Meters

Water meters are installed on every service line to measure the quantity of water used by a customer per WAC 246-290-496 and City Code Chapter 13.06.320. All new direct service connections must be metered at the time-of-service activation per WAC 246-290-496(2)(d). All meters shall remain the property of the City and shall not be removed except by the City. In all cases where meters are lost, damaged or broken by carelessness, negligence, or willful actions of owners/operators of premises, they shall be replaced or repaired by or under the direction of the City. The actual cost of repairs or replacement of meters will be charged against the owners/operators. In case of nonpayment of fees, fines, charges, or penalties, the water shall be shut off and will not be turned on until all charges are paid.

In 2015, the City began installing an Automated Metering Infrastructure (AMI) system, as a part of the Water Meter and Billing System Improvements project, which was completed in 2018. With the new AMI system, the City automatically receives meter reads via radio transmission and can integrate the data into the billing software. The benefits of an AMI system include increased accuracy and efficiency, early leak detection, and improved customer service. The AMI system is anticipated to have a 20-year life, including the system components and batteries in the radios.

In conjunction with the AMI system installation, the City also completed a meter changeout in 2018. Since 2015, the City has installed 15,156 meters, ranging in size from ¾ inch to ten inches. Meter replacement will be on a 20-year program to coincide with the AMI system. Large source meters and three-inch and larger commercial meters will be tested and calibrated annually. Small meters (less than three inches) are not calibrated.

All new service connections under three inches, in addition to repairs, retrofits or replacements of existing services, are typically conducted by Water Distribution Staff unless unusual circumstances arise. Meter

services consist of meters, meter vaults, meter boxes, service lines, valves, setters, re-setters, and other associated equipment.

- Small Meters (3/4 to two inch)
  - Replacement Cost: $700 - $1,620
  - New Installation Cost: $550 - $1,500
- Large Meters (three to eight inch)
  - Replacement Cost: $3,300 - $12,000
  - New Installation Cost: $2,800 - $11,500

The City uses master meters when beneficial to the City and its customers. Master meters are used at certain locations such as mobile home parks, the Auburn Business Park (formerly the Federal General Services Administration Property), and Muckleshoot Indian Tribe (MIT) commercial properties.

4.1.2.1 Large Meters

Large meters are used to measure water consumption by customers with significant demand requirements. They are usually employed by the following customer classes.

- Commercial
- Farms or Parks – Irrigation
- Schools
- Multifamily Complexes
- Industrial / Manufacturing Businesses
- Wholesale Customers
- Municipal Buildings

Large meters are defined as water meters three inches or larger and new meters are installed by contractors rather than City maintenance staff. There are a total of 127 large meters in the City's system. All large meters are calibrated for accuracy each year, usually between the months of April and June, as part of the City's System Loss Program. Calibration of large meters is conducted by an outside contractor, but two maintenance staff members under the direction of the Water Distribution Supervisor assist in the process. If a meter cannot be calibrated, it is replaced with a new one by City maintenance staff.

4.2 Distribution System Leakage

Distribution System Leakage (DSL) represents the difference between production and documented water use (retail, wholesale, and authorized unmetered). It may include inaccurate master and service connection meters, unaccounted-for non-revenue water use, pipeline leakage, and unauthorized use. DSL does not include authorized water usage such as water used for fire protection, flushing, construction, and other maintenance and operations practices. However, to be credited, this must be accounted for by metering or estimating using credible means.

The DSL is calculated as the difference between the total amount of water produced and the sum of water sold plus any authorized unmetered water usage. The City's estimated DSL for 2015 through 2022 is presented in Chapter 2, Table 2-11. For the City's water system, the 2022 three-year rolling average DSL was 6.7 percent of total production (corrected value submitted by the City to DOH in 2024). This falls below the DOH requirement that the three-year average DSL be under ten percent to minimize water waste.

The City is committed to maintaining DSL below the required ten percent and is actively working to identify and minimize DSL. To minimize DSL, the City has ongoing leak detection, meter calibration, and an active repair and replacement program for water system infrastructure, as detailed in Chapter 6 – Operations and Maintenance. The City completes a leak detection study of 25 percent of the water distribution system every year to detect and fix leaks. Additionally, the City has recently increased its efforts to reduce non-payment of bills and water theft. The City recently completed a major SCADA system upgrade in 2024. These investments should significantly increase the City's ability to measure DSL both temporally and geographically. The resulting information may allow the City to better target its WUE activities to reduce DSL.

4.2.1 Water Audits

The City has implemented AMI throughout the system, completing installations between 2015 and 2018. AMI is a tool that improves the effectiveness of the WUE Program measures, providing detailed water use data for each customer that allows the City to better understand water use patterns and target WUE Program measures to specific customers. Data can be sent in real-time or stored for several weeks or months. Potential AMI capabilities vary depending on the chosen hardware and software however, most systems can aid in the WUE Program. Below is a summary of how the City can use the AMI data.

- Advanced algorithms and metering data will allow the City to identify customer leaks.
- Advanced metering will provide cost savings in the Leak Detection and Repair and Service Meter Replacements programs.
- Advanced metering will aid in the City's efforts to reduce non-payment of bills and water theft.
- By comparing production and customer water use, DSL can be evaluated in greater temporal and geographic detail. For example, DSL may be calculated by month or for a given service area.
- Advanced metering data will help the City identify groups of customers to target for WUE measures and can be used to track the effectiveness of the measures for the same customers.
- Advanced metering data will allow additional reporting options to educate customers, such as their peak water use.

The City reports DSL annually; refer to Appendix M for the previous three annual WUE reports. The newly installed AMI system will provide substantial benefits for the WUE Program and improve savings, further outlined in Section 4.4 of this chapter.

4.3 Water Use Efficiency Program

In 2003, the Washington State Legislature passed the 2003 Municipal Water Law (MWL) which added a requirement that water purveyors use water efficiently. This law was expanded in January 2007 with the WUE Rule and has since been updated. WUE requirements are listed under WAC 246-290 and include:

- Publicly establishing a water savings goal.
- Evaluating water use efficiency opportunities specific to each community.
- Developing a WUE planning program.
- Meter installation on all customer connections by January 22, 2017.
- Achieve a standard of no more than ten percent water loss, on a three-year rolling annual average.
- Annual reporting on WUE progress.

The City's WUE Program provides for efficient water use and supports continued growth. This program fulfills all the necessary requirements of DOH. The selected program measures will allow the City to meet its WUE goals, resulting in decreased water demand. Measures are interrelated and will help the City achieve its goals to both reduce average water use and peak water use per customer. Public education measures (showing water use in bills, workshops, school outreach, fairs/trade shows, etc.) will continue to be a focus of the WUE Program to increase customer awareness and knowledge of WUE opportunities. Public education is needed to support the City's other WUE measures and to support reductions in both average and peak water use. Continued appliance rebates and shower head giveaways help customers implement what is learned in the public education campaign. With the implementation of AMI, it is expected that the City and customers will be able to identify more water loss reduction opportunities than previously possible. Therefore, customer and City leak detection, water audits, and meter repair and replacement may have a prominent role in the 2024-2034 WUE Program. The program will also continue to provide financial disincentives for excessive water use through metering and WUE pricing. This aspect of the program is likely to help reduce peak water usage further. These measures will result in the City being able to achieve its WUE goals, which includes reduced demand.

The 2024-2034 WUE Program will be a continuation of the City's successful existing WUE Program. The program has also been updated to leverage the City's investments in improved SCADA, leak detection, and AMI. The 2024 Plan complies with regulations as set forth in WAC 246-290-830 and DOH's 2020 Water Use Efficiency Guidebook. This section summarizes the program's goals, demand and supply side measures, reclaimed water, and DSL. The projected demand with the conservation goals, program budget, and cost savings are also presented.

4.3.1 Program Requirements

The WUE requirements emphasize the importance of measuring water usage and evaluating the effectiveness of the City's program. There are three fundamental requirements of a WUE Program that the City follows.

- **Planning Requirements** – Municipal water suppliers are required to:
  - Collect data.
  - Forecast demand.
  - Evaluate WUE measures.
  - Calculate DSL.
  - Implement a WUE Program to meet their goals.
- **Distribution Leakage Standard** – Municipal water suppliers are required to meet a distribution system leakage standard to minimize water loss from their distribution system.
- **Goal setting and performance reporting** – Municipal water suppliers are required to set WUE goals through a public process and report annually to their customers and DOH.

The DOH requires that the City estimate the amount of water saved through implementation of the system's WUE program over the last six years. **Table 4-3** shows the average day demand per-capita from 2017 to 2022. Water use per-capita dropped from 112 gpd per capita in 2017 to 103 gpd per capita in 2022. The net water savings over this period equates to approximately 195.2 million gallons or 39.0 million gallons per year. This was calculated by multiplying the population for each individual year (over the six-year period) by the difference in calculated savings in gpd per capita year after year. The result was then multiplied by the total days in each year. Annual totals were summed for the entire six-year period.

Table 4-3 | Annual Average Day Demand (gpd) per Capita[1]

2017	2018	2019	2020	2021	2022
112	109	106	100	105	103

Note:

1. Average day demand per capita was calculated by dividing the Average Day Demand from Table 2-9 by the population served from Table 2-1 and converting to gpd.

4.3.2 Mandatory Measures

The WUE Program includes supply side measures that the City implements to understand and control leakage including new meters, leak detection surveys, and water audits. Per the WUE requirements, the following measures shall be continued for the 2024-2034 WUE program.

- Install production (source) meters.
- Install consumption (service) meters.
- Perform meter calibration.
- Implement a water loss control action plan to control leakage if the three-year rolling average exceeds ten percent.
- Educate customers about water use efficiency practices.

Additionally, the following measures that must be evaluated are:

- Rates that encourage water demand efficiency (discussed in **Chapter 9**)
- Reclamation opportunities (discussed below)

The City has complied with these requirements in the past and will continue to comply with these regulations.

4.3.3 Program Goals

Per the WAC 246-290-830(4)(a), all water purveyors with 1,000 or more connections were required to set efficiency goals through a public process. The City's 2024-2034 Conservation Program builds upon the goals and framework established through the public process conducted in July 2009, during which the City's water conservation goals were developed and posted to the City's website for public review, in alignment with WAC 246-290-830(4)(a). This process ensured transparency and community engagement in shaping measurable conservation objectives.

The goals established in 2009, including a 1 percent reduction per year in Equivalent Residential Unit (ERU) values, continue to guide the City's Conservation Program today. These goals emphasize efficient water usage and public education. The 2024-2034 Program incorporates updates to comply with WUE regulations and address evolving community needs, as detailed in **Section 4.3.4**. The City has chosen to focus on implementing voluntary measures to decrease both the average and peak water usage. The 2024 program has established the following goals.

- Water Use per ERU Goal: Decrease the planning ERU value (gpd/ERU) one percent annually from the current planning ERU value of 182 gpd/ERU, which is the 75th percentile of eight years of

historical data (2015 – 2022). Revaluate goal when the planning ERU value reaches less than 172 gpd/ERU.

  - To be conservative, an ERU planning value higher than the average was used by the City for demand forecasting. The 75th percentile of the eight-years of data was used to select the planning ERU value of 182 gpd. This methodology is consistent with the City's 2015 Plan. The ERU value of 182 gpd is seven percent lower than the 2015 Plan's ERU planning value of 195 gpd per ERU.

- MDD/ADD Peaking Factor: Decrease the planning peaking factor from the current 1.77, which is equal to the 75th percentile of eight years of historical data (2015-2022), to a planning peaking factor of less than 1.68, the average peaking factor from 2015-2022.

- Distribution System Leakage: Maintain three-year average DSL under ten percent to minimize water waste.

- Customer Support: Provide the service and support necessary to those water customers expressing a desire to conserve water as a part of their environmental ethic and as a means of minimizing water bills.

The WUE Program measures, as summarized below, are designed to help meet these established goals.

4.3.4 2024-2034 Demand-Side Program Measures

To encourage WUE and support customers, the City has incorporated program measures that target demand reductions. Under the WUE requirements, a program measure may include water efficient devices, actions, business practices, or policies that promote efficient water use. With 14 measures as part of the 2024 Program, the City exceeds the minimum DOH requirement of nine measures. WUE measures can target specific customer classes or a combination of customer classes. The City's demand-side program measures are summarized below.

1. School Outreach: The City will continue to participate in programs arranged to educate students on efficient water usage as requested by schools.

2. Speakers' Bureau: The City will seek speaking opportunities to discuss efficient water use with a wide audience spectrum. Topics could include water efficient fixtures and appliances, curbing seasonal peak demands, lawn watering practices, etc.

3. Program Promotion: The City will seek opportunities for social media, television, and/or radio public service announcements for WUE and submit news articles to local papers and Auburn Magazine on efficient water usage especially during the spring and summer months.

4. Theme Shows/Fairs: The City hosts an annual Kids Day fair. The fair includes a wide range of activities for all ages of kids. As part of the fair, the City has fun, water-related activities and provides water efficiency brochures and other materials. The City will conduct outreach at other Theme Shows/Fairs if requested. Water saving device kits are distributed to interested single-family and multiple-family residential customers.

5. Water Audits: The City will conduct a water audit upon the request of a customer, including industrial, commercial, and institutional customers. The audits will review items such as:

recirculation of cooling water, reuse of cooling and process water, reuse of treated wastewater, efficient landscape irrigation, low water using fixtures, fixing leaks, and process modifications.

6. Customer Leak Detection: The City identifies potential leaks through investigation of the water meter upon request of customers. The City runs multiple reports in the AMI system to analyze data and investigate water meters to identify leaks.

7. Bills Showing Consumption History: The City will continue to provide customer bills showing the previous year's water usage. The City provides water usage information from AMI on the customers e-portal.

8. Water Saving Device Kits: The City will participate in distribution of water use efficiency kits through education events such as speakers' bureaus, theme shows, fairs, and through bill insert request forms.

9. WUE Pricing: The City has an inverted block rate structure for single-family residential customers to encourage WUE. The City will consider WUE in future cost of service/rate studies. Studies should determine the most appropriate water structures and rate levels to achieve the City's WUE goals, while generating sufficient revenues for utility operations. It is recommended that the studies consider uniform rates by class, inverted block rates, seasonal rates, and excess use rates.

10. Water Efficient Toilet Rebate Program: The City will continue to provide rebates to customers that replace old toilets with new high-efficiency toilets through their Environmental Protection Agency (EPA) WaterSense Toilet Rebate program.

11. Low-Flow Shower Heads Giveaways: The City gives away free low-flow shower heads at the Utility Billing Counter.

12. School Outdoor Water Use Reduction: The City will target schools to reduce their outdoor water consumption. Water audits and education on the benefits of replacing inefficient irrigation systems or landscaping (including turf) will be conducted.

13. City Water Use Reduction: The City will audit the water use of City accounts to identify both indoor and outdoor water saving opportunities. The Water Utility staff will help educate City account holders on WUE; however, no water budget has been allocated to implement water saving devices at City facilities.

14. Rainwater Harvesting: The City will evaluate implementation of a rainwater harvesting (rainwater reclamation) promotion program as a means to reduce irrigation water usage by commercial, public, and residential customers. The City's Stormwater Utility's requirements to use Low Impact Development (LID) measures, where feasible, strives to keep rainwater on the property, further reducing irrigation demands.

It is important to note that in addition to the water cost savings for the WUE measures, other benefits result, both to the utility and to its customers, from WUE activities. Such additional benefits could include:

- Significant customer energy savings because water heaters are the second largest energy users in the home. Hot water use can be reduced by almost one-third by cost-effective WUE measures, such as water efficient fixtures and appliances. Significant energy savings can also occur for industrial processes requiring water heating and other power uses.

- Efficient landscaping and irrigation techniques save on maintenance costs.
- Reductions in water production decrease energy required by utilities to treat and distribute water and to collect and treat wastewater. Chemical costs are also reduced in water and wastewater operations.
- System measures could provide substantial benefits in addition to water production cost savings including:
    - Identification of non-revenue water could result in recovery of unbilled revenue (inaccurate meters) and reduced unauthorized water usage (theft).
    - Leak detection helps prevent major main breaks, which could result in significant repair costs.
    - Leak detection reduces a utility's liability due to prevention of potential property damage.
    - Repair and/or replacement of service and source meters allows a utility to recover unbilled water revenues.

4.3.5 Reclaimed Water

According to WAC 246-290-100 and the WUE requirements, water systems with over 1,000 connections must collect and evaluate information on reclaimed water opportunities. The City is committed to wastewater reuse and rainwater reclamation, as stated in its official water system policies summarized in Appendix A. The City participates in the King County reclaimed water program, which completed a Reclaimed Water Comprehensive Plan in 2012. Additionally, the City has completed the King County Water Reclamation Evaluation Checklist, included as Appendix L. Currently, there are no reclaimed water users in the City. The City considers the most likely candidates for use of reclaimed water to be the irrigation customer class. Since the City conveys all sewage to King County's regional sewerage system, there is not an opportunity for the City to sell reclaimed water without significant capital investments to develop a reclaimed water distribution system, and there is not currently an alternative reclaimed water source in the area.

The City will implement reclaimed water as a conservation measure and include these savings in the demand projections when specific opportunities arise. The City, in conjunction with King County, may develop projects or consider participation in water reuse projects and programs developed by adjacent purveyors and others as appropriate. The efforts may include demonstration or pilot projects developed in accordance with applicable federal, state, and local laws and regulations.

4.3.6 WUE Budget

The City has established a budget for each program measure from 2023 to 2029, as required per WAC 246-290-810 4.e, shown in Table 4-4. WUE measures are funded through rates.

Table 4-4 | Annual WUE Budget

Measure	2023	2024	2025	2026	2027	2028	2029
School Education (NPDES & Water)	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000
Conservation Public Education/ WQ Report	$6,350	$6,350	$6,350	$6,350	$6,350	$6,350	$6,350

Toilet Rebates & Low-flow Shower Heads	$11,000	$11,000	$11,000	$11,000	$11,000	$11,000	$11,000
Large Meter Test/Repair/Replace	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000
WSP Update (WUE)	$22,000	-	-	-	-	-	-
Total	**$89,350**	**$67,350**	**$67,350**	**$67,350**	**$67,350**	**$67,350**	**$67,350**

4.4 Water Use Efficiency Savings

The WUE Program primarily provides cost savings in two ways, reducing demand and reducing DSL. Reducing demand may reduce or delay capital projects for additional supply and expanded distribution infrastructure. Reducing DSL can provide additional revenue, as well as increase the efficiency of supplying existing water uses. Additionally, advanced metering will provide cost savings in the Leak Detection and Repair and Service Meter Replacements programs.

The City has completed a cost analysis of their proposed WUE Program using historical data and projected annual water savings. Table 4-5 shows projected demands with and without annual water savings. This analysis maintains the target water use efficiency goal of one percent reduction per year in the planning ERU value. This goal will be reached through implementation of the proposed program measures. These reductions in demand can be translated into tangible benefits once realized, such as more time before new sources must be developed, increased ERUs that can be served by the existing water infrastructure, and cost savings in power and water treatment.

Table 4-5 | Demand Forecast With and Without Projected WUE Savings

Year	ADD (mgd)				MDD (mgd)			
	Without WUE	With WUE	Savings	% Savings	Without WUE	With WUE	Savings	% Savings
2024	7.05	6.98	0.07	1%	12.47	12.34	0.12	1%
2025	7.14	6.99	0.14	2%	12.61	12.36	0.25	2%
2026	7.22	7.00	0.22	3%	12.76	12.38	0.38	3%
2027	7.31	7.01	0.29	4%	12.91	12.39	0.52	4%
2028	7.39	7.02	0.37	5%	13.06	12.41	0.65	5%
2029	7.48	7.03	0.45	6%	13.22	12.43	0.79	6%
2030	7.57	7.04	0.53	7%	13.38	12.44	0.94	7%
2031	7.66	7.05	0.61	8%	13.54	12.46	1.08	8%
2032	7.75	7.06	0.70	9%	13.70	12.47	1.23	9%
2033	7.85	7.06	0.78	10%	13.87	12.48	1.39	10%
2034	7.95	7.07	0.87	11%	14.04	12.50	1.54	11%

4.5 Climate Change Resiliency

In 2023, the Washington State Legislature passed House Bill 1181, which requires all group A community public water systems serving 1,000 or more connections to include a climate resilience element in water system plans initiated after June 30, 2025. Though this requirement is not yet in effect, the following section is included to initiate discussion and planning for climate resilience and to supplement the Climate Element being incorporated into the City's 2024 Comprehensive Plan update.

4.5.1 Expected Climate Changes for the City of Auburn

Climate is a key factor driving water use as temperature, precipitation, and other climate-driven weather patterns affect irrigation, and commercial and industrial cooling. Auburn's maritime climate is characterized by wet cool winters and dry warm summers. The City's temperate climate is largely protected from continental weather by the Cascade Mountains to the east.

According to the publication Climate Change Impacts and Adaptation in Washington State, Washington State is projected to experience decreases in snowpack, increases in stream temperatures, and widespread changes in streamflow timing, flooding, and summer minimum flows. Climate change is expected to cause more frequent summer water shortages, especially in fully allocated watersheds with little management flexibility. The average spring snowpack in Washington is projected to decline by 38 percent to 46 percent by the 2040s[1].

To estimate the impact of this change in climate on the City's water demands, results from the Water Supply Forum's 2009 Regional Water Supply Outlook (WSF 2009 Outlook) were used. The impacts of climate change on sources that rely on groundwater are mostly unknown due to the variability between aquifers and site-specific effects, such as recharge rates.

Continued increases in average annual and seasonal air temperatures in the Puget Sound are projected due to climate change, as well as increases in extreme heat. Projected changes in annual precipitation are generally minor, although summer precipitation is projected to decrease and heavy rainfall events are projected to become more severe[2].

No changes to demand projections were made for the 20-year planning period to account for potential climate change due to the uncertain magnitude and timing of local effects. However, it is recognized that demands have the potential to increase in the future given these changes. In the event the City experiences an increase in demand, to understand the scale of the impact, the City will run a model of the City water system that would compute firm yield from inputted streamflow data, replacing historic inflows with projected inflows from three climate change scenarios as described by the WSF 2009 Outlook. Those climate change scenarios for King County are provided in Table 4-6.

Table 4-6 | Predicted Increase in Demand from Baseline Due to Climate Change[1]

Climate Change Scenario	2005	2020	2030	2040
Baseline	0.0%	0.0%	0.0%	0.0%
Warm	3.5%	4.4%	4.9%	5.4%
Warmer	4.6%	4.9%	5.8%	7.4%
Warmest	4.8%	6.2%	7.6%	9.5%

4.5.2 Extreme Weather Events and Significant Challenges

To meet the requirements for risk and resilience assessments in America's Water Infrastructure Act (AWIA) of 2018, the City completed a Risk and Resilience Analysis (RRA) in December 2020 using the EPA's Vulnerability Self-Assessment Tool (VSAT). VSAT was developed to serve as an all-hazards assessment tool for water and wastewater utilities of all sizes and addresses malevolent acts, dependency/proximity

[1] Climate Change Impacts and Adaptation in Washington State: Technical Summaries for Decision Makers (uw.edu)
[2] *2009RegionalWaterSupplyOutlook.pdf (amazonaws.com)

threats, and natural hazards. Through this effort, the City has identified the following assets as the most vulnerable to flood hazards.

- Coal Creek Springs aquifer
- Coal Creek Springs and West Hill Springs piping
- Valley Aquifer (Wells 1, 2, 3A, 3B, 4, 6, 7)
- Green River and Lea Hill pump stations
- Distribution System

Climate change exacerbates existing challenges with flooding, landslides, droughts, wildfire, and other natural hazards by potentially changing the frequency, intensity, and duration of these events. Heavier rainfall increases the threat of flooding. In addition to immediate flood threats, flood waters can damage and contaminate wells and water treatment plants resulting in short-term outages and increased risk of waterborne diseases in drinking water. Higher levels of pathogens in runoff from areas around drinking water wells and surface water intakes from flooding of the wells themselves.

In October 2018, the Intergovernmental Panel on Climate Change (IPCC) released the Special Report on Global Warming of 1.5 degrees Celsius (^{O}C). Warming of 1.5^{O}C is projected to decrease summer streamflow in the Puget Sound by 23 percent. Average temperatures in 2015 were 2.7^{O}C warmer than pre-industrial era temperatures which resulted in low summer streamflow and warmer waters[3]. According to the King County Climate Change GIS map "Summer Runoff: Change, 2040s", summer (July-September) runoff in the City of Auburn is expected to decrease by 2.4 percent by the 2040s from historical conditions (1970-1999)[4]. The WSF 2009 Outlook believes the region is reasonably well prepared for drought, however further actions could improve drought preparation. During droughts, water supplies may fall short of meeting demands, especially in summer months. In the past, water utilities in the Puget Sound have adapted to fluctuations in water supplies from droughts through reservoir management and system adaptations such as long-term conservation programs and short-term demand curtailments[1].

Warming of 1.5^{O}C is also expected to bring larger and more frequent wildfires, which could disrupt regional water supplies. Significant water quality impairments from a wildfire include increased turbidity and introduction of radionuclides, metals, and fire-retardant chemicals[5], although impacts to the City's water quality is not likely as there are not surface water sources. The City can maintain existing emergency interties to mitigate wildfires that affect adjacent systems more severely than the City's. While the City contains land that is considered Wildland-Urban Interface, the United States Forest Service has classified the City as either Very Low or Non-burnable in its Potential Wildfire Hazard GIS map (2020)[6].

4.5.3 Assessment of Actions to Protect System

In the face of continued warming, there are actions the City can take to improve the resiliency of the water system from the impacts of climate change. Below are possible short-term and long-term actions for the City to consider. The short-term measures can improve resiliency within three to five years while the long-term measures may require decades to be fully implemented[5].

[3] NoTimeToWaste_CIG_Feb2019.pdf (uw.edu)
[4] https://climate-kingcounty.opendata.arcgis.com/maps/bab86832a962416cbdbb35644dacb11b
[5] Phase2SummaryReport20180731FINAL.pdf (amazonaws.com)
[6] https://hub.arcgis.com/datasets/usfs::wildfire-hazard-potential-version-2020-classified-image-service/explore?location=47.307822%2C-121.937736%2C10.98

4.5.3.1 Short-Term Actions

Source Inventory: Identify sources that will remain online in the event of a 100-year or 500-year flood. Utilize GIS or other mapping tools to create a map to visualize which sources are at risk of inundation in such events. Develop protocols for isolating these sources. Determine how sources could be used for critical health and safety following an extreme weather event and how these sources relate to emergency shelters and critical facilities, such as hospitals.

Groundwater Supplies: Develop new groundwater supplies or augment existing groundwater supplies to improve drought resiliency and offset challenges posed by the wetter winters and drier summers expected with warming temperatures. Establish models to understand the effects of drier summers and increased risk of drought on groundwater supplies. Evaluate impacts of lower snowpack levels in the Cascade Mountains on aquifer recharge.

Wildfire Mitigation: Evaluate fire-fighting capacity for open space areas such as Game Farm Park and Wilderness Area.

Interaction with Research Community: Build and sustain routine interactions with the research community on the subject of climate change and water supply. Consider opportunities to fund water-industry research with direct application to water supplies in western Washington. Explore opportunities to have imbedded persons, such as employing a scientist with climate change expertise.

Rate Factors: Implement less frequently used rate factors, such as a rate for drought periods, to encourage lower demands.

Floodproofing: Build flood barriers such as levees and dikes to protect critical infrastructure. Elevate critical equipment or place it within waterproof containers or foundation systems.

Power Supplies: Extreme weather events can cause power outages. Consider alternative or on-site power supplies to provide resiliency during such events.

4.5.3.2 Long-Term Actions

Monitor Aquifer Conditions: Establish a program of long-range monitoring of aquifer recharge and water levels as affected by climate change. Assess risk of saltwater intrusion. Establish models to assess source redundancy in extreme drought events.

Green Infrastructure: Apply green infrastructure strategies to collect and manage stormwater. Regional or water-shed scale plans for stormwater management can be more cost effective than individual plans.

Water Use Efficiency: Continue to invest in and evaluate WUE programs to reduce water consumption and improve efficiency. Consider partnering with King County to assess reclamation and reuse programs to augment non-potable water demands.

Water Rights: Invest in permanent or mobile infrastructure to ensure access to all available water rights to maximize available sources.

CHAPTER 5

Source Water Protection

The City relies on groundwater sources to meet current water supply demands. This chapter's objective is to update the City of Auburn's (City's) program to protect and improve source water used by the City. As the City's sources only include groundwater wells and springs which are not under the influence of surface water, a Watershed Control Program is not required.

This chapter addresses the following topics:

5.1 Sanitary Control Area
5.2 Wellhead Protection Program

5.1 Sanitary Control Area

Sanitary Control Areas (SCAs) have been established for each of the City's water sources per WAC 246-290-135(2). An SCA is the front-line protection against contamination of the water source. The standard SCA for wells has a minimum radius of 100 feet from the wellhead. The standard SCA for spring sources has a minimum radius of 200 feet from the spring head. All City water sources have SCAs that were established and approved by DOH, and are documented in the susceptibility forms provided in Appendix T. All properties within the SCA for each water source are under the City's ownership and control.

5.2 Wellhead Protection Program

DOH has developed regulations that require Group A water systems using groundwater sources to develop and implement a Wellhead Protection Program (WHPP) in accordance with WAC 246-290-135. The basic elements required of a WHPP are:

- Assessment of initial groundwater susceptibility (physical susceptibility to contamination) for each water supply source,
- Delineation of the wellhead protection area (WHPA) that directly contributes groundwater to each water supply well,
- Identification of potential sources of contamination within each WHPA,
- Documentation of notification to owner/operators of known or potential hazards, and
- Development of spill prevention plans and water contingency plans that minimize or eliminate the possibility of contamination to the groundwater supply and development of options for maintaining water supply in the event the aquifer contributing to a source is contaminated.

The City maintains its WHPP for 12 groundwater sources. A WHPP was prepared in 2014 for the City's 2015 WSP; this remains the current WHPP for the City. The purpose of the WHPP is to help prevent the City's water supply from becoming contaminated and to develop contingency and emergency response procedures in case one or more sources are lost due to contamination. This is accomplished by providing

WHPAs around public groundwater sources, identifying existing groundwater contamination sources, and managing potential groundwater contamination sources prior to their entry into the drinking water system.

The WHPP provides tasks for the City to implement wellhead protection and the City prioritizes those tasks by criteria such as available staff, time to complete, cost, and urgency due to limited available resources. The City maintains an annual operating budget for implementing tasks related to the wellhead protection program, as well as identifying and monitoring potential new hazards. The City allocates budget annually for the Water Resources Protection Program, as discussed in **Chapter 8.**

5.2.1 Susceptibility Assessment

Susceptibility Assessment Forms have been completed by the City and submitted to the DOH. The forms are provided in **Appendix T**. The DOH's susceptibility assessment rating for each source is summarized in **Table 5-1.**

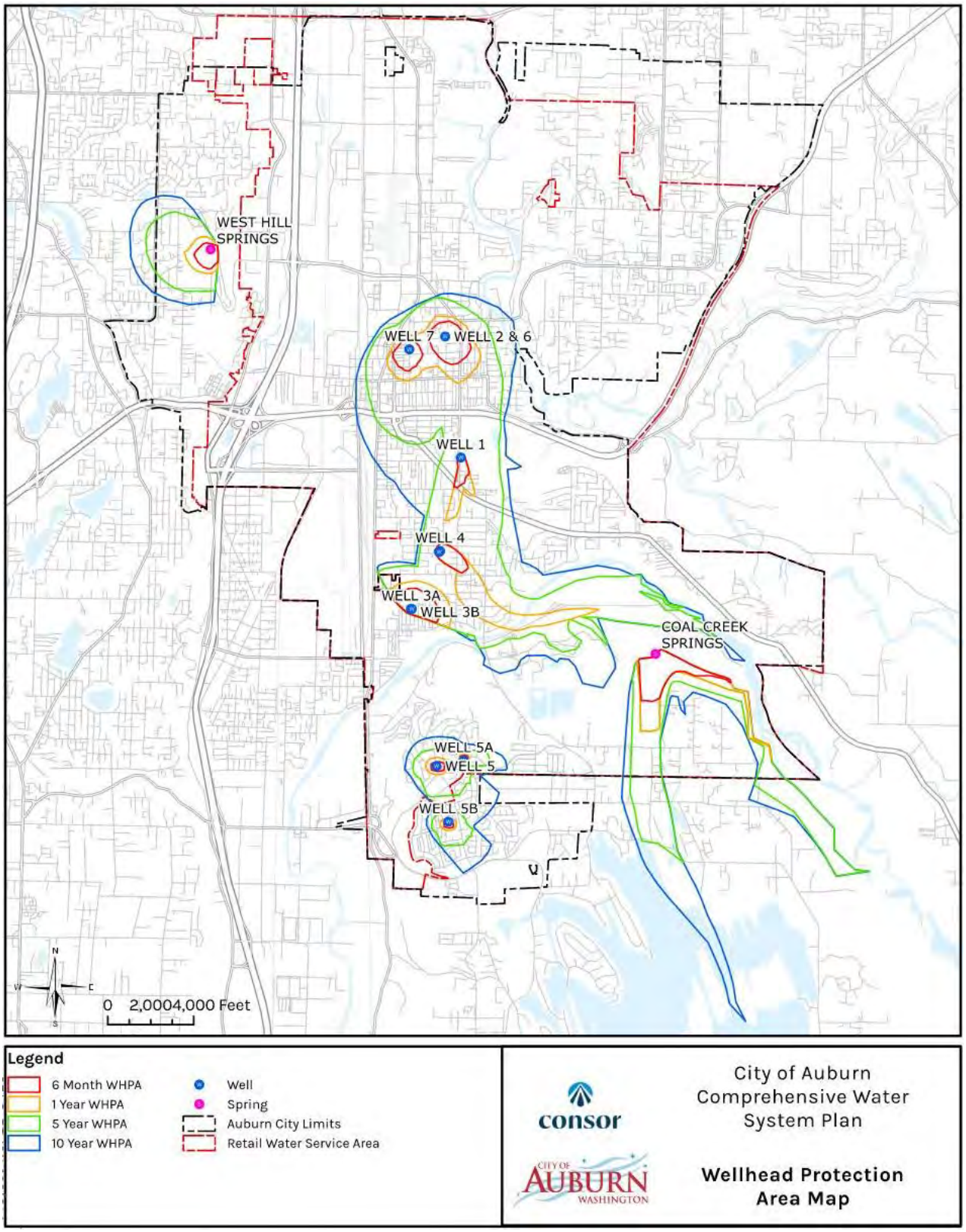
Table 5-1 | Source Susceptibility Assessment Ratings Issued by DOH

Source	Susceptibility Rating
Coal Creek Springs	High
West Hill Springs	High
Well 1	Moderate
Well 2	High
Well 3A	Low (Off-line)
Well 3B	Low (Off-line)
Well 4	Low
Well 5	Low
Well 5A	Low
Well 5B	Low (Off-line)
Well 6	High
Well 7	High (Off-line)

5.2.2 Wellhead Protection Area Delineation

The WHPA defines the area around a groundwater source that has the potential to contaminate the source. This area is based on the source's capture zones, which are the zones of the source aquifer and ground surface that can contribute water to the source in six months, one year, five years, or ten years. The City's 2014 WHPP largely replaced the initial plan created in 2000. The study area, physiographic settings, and WHPAs were defined in the 2000 WHPP and remain valid. Capture zones were delineated using a three-dimensional particle-tracking program with a steady-state head distribution created by a numerical model. The established WHPAs are shown in **Figure 5-1.**

Figure 5-1 | Wellhead Protection Area Map



5.2.3 Contaminant Source Inventory and Notification of Findings

A summary of potential contaminant sources for the City's water sources was updated in April 2024. The Contaminant Source Inventory (CSI) was updated utilizing Ecology's Facility/Site ID database. The contaminant sources are organized by water source and time travel zones, and are included in **Appendix T**.

DOH requires notifications be sent to landowners with potential contaminant sources, as well as state and local agencies, of the CSI findings. Letters and WHPA maps were mailed to landowners in June 2024; copies of the notification letter template and maps that were sent to landowners are included in **Appendix T.**

State and local agencies use the CSI findings and WHPAs to help prioritize local and state pollution control outreach, to provide incentives to landowners for risk reduction, and to support local land-use planning decisions. DOH requires that state and local emergency responders be notified of the WHPAs, results of the susceptibility assessment, CSI findings, and the contingency plan. Copies of the notifications sent to emergency responders and regulatory agencies, as well as the WHPA maps, are included in **Appendix T**. A list of state and local agencies that were sent notifications letters, along with the date of the notification is summarized in **Table 5-2**.

Table 5-2 | State and Local Agencies Notified of CSI Findings

Agency	Notification Date
Washington Department of Ecology	June 2024
Washington State Department of Health Southwest Regional Office	June 2024
King County Public Health	June 2024
Auburn Police Department	June 2024
East Pierce Fire and Rescue	June 2024
King County Fire Protection District 31	June 2024
Mountain View Fire and Rescue	June 2024
South King Fire and Rescue	June 2024
Valley Regional Fire Authority	June 2024

5.2.4 Contingency Plan

The City developed a Water Source Loss Mitigation Plan (City of Auburn Standard Operating Procedure 5.2.1) to address how the water system will provide consumers with adequate supply of potable water in the event one or more sources become temporarily or permanently unavailable; this plan is included in **Appendix T**. Should one water source be unavailable, the City has sufficient capacity across the remaining sources and interties to supply potable drinking water to its customers; water supply availability is evaluated in greater detail in **Chapter 3**.

CHAPTER 6

Operations and Maintenance Program

This chapter provides an overview of the City of Auburn's (City) Water Utility organization, operations and maintenance (O&M). The purpose of the chapter is to document existing procedures and to identify areas where improvements or changes could enhance system operation.

The following topics are addressed in this chapter:

6.1 Water System Management and Personnel
6.2 Operations and Preventive Maintenance
6.3 Comprehensive Water Quality Monitoring
6.4 Emergency Preparedness and Response
6.5 Safety Procedures
6.6 Cross Connection Control Program
6.7 Sanitary Survey Findings
6.8 Customer Complaint Response Program
6.9 Recordkeeping and Reporting
6.10 Summary of O&M Deficiencies and Recommended Improvements

6.1 Water System Management and Personnel

6.1.1 Mission Statement

The mission statement of the City's Water Utility is to provide for the efficient, environmentally sound, and safe management of the existing and future water system within the City's service area.

6.1.2 Department Overview

The Water Utility is responsible for providing potable water to the City's customers that meets or exceeds the recognized standards of today and the future by efficiently administering, operating, and maintaining the water supply. The Water Utility will also continue to enhance its customer service through public education and information. A primary responsibility of the Water Utility is implementing the Comprehensive Water Plan (Plan).

6.1.3 Internal and External Factors

The objective of the Water Utility is based on compliance with internal and external factors. An internal Work Plan Overview is generated at the beginning of each work year with a review process at the end of the year. The Work Plan Overview describes budget goals, performance measures, engineering tasks,

capital projects, and maintenance and operations tasks. External factors include adoption of goals, recommendations, and standards established by the following regulatory or professional practice agencies:

- Washington State Department of Health (DOH)
- Washington State Department of Ecology (Ecology)
- American Public Works Association (APWA)
- Association of Washington Cities (AWC)
- Department of Homeland Security (DHS)
- American Water Works Association (AWWA)
- Washington Cities Insurance Authority (WCIA)
- Municipal Research and Services Center of Washington (MRSC)
- United States Environmental Protection Agency (USEPA)

6.1.4 Water Utility Division Organization

The Auburn Water Utility is operated as a utility enterprise under the direction of the Public Works (PW) Director. Specific Water Utility Management Responsibilities within the PW Department fall under either the Utilities-Water Section of Engineering Services or the Water Division of Maintenance and Operations Services.

The Utilities-Water Section of Engineering Services is responsible for comprehensive water system planning, development of a Capital Improvement Program (CIP), as well as programming the design, construction, and inspection of projects related to the water system.

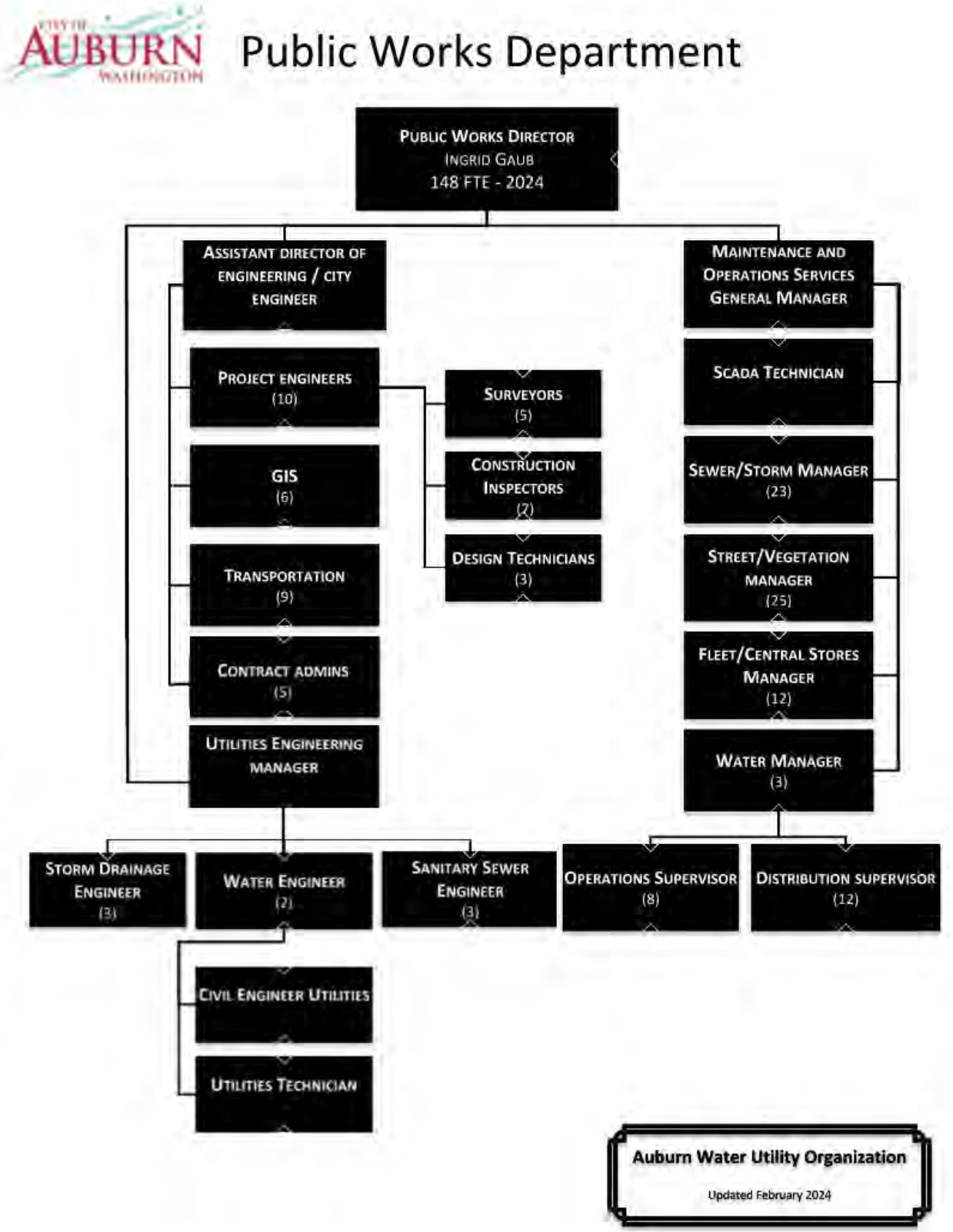
The Water Division of Maintenance and Operations Services is responsible for operating and maintaining the water system, performing daily operation and inspection, water quality monitoring as required by DOH, and line management of the Water Utility.

The organization of the Water Utility is shown within the Public Works Organizational chart in **Figure 6-1**. The responsibilities of each staff within the Utilities-Water Section of Engineering Services, including professional and technical support staff from within Engineering Services that are not specifically within the Water Utility are summarized below.

- Utilities Engineering Manager and Water Utility Engineer: Primarily responsible for development of the comprehensive water plans, water capital facility plan, annual project budgeting, technical design, and construction standards, "as-built" drawings, and designs, utilized in the construction of the water systems facilities. They also provide technical computations, water modeling and other analysis required to support system operation. Additional responsibilities include engineering, consultant contracts, capital projects planning, and customer assistance with City code, drawings, and permits.

- Water Quality Programs Coordinator: Assist with the Water Quality and Water Conservation Programs and is responsible for compiling DOH sampling data and verifying DOH sampling was conducted per the sampling schedule.

Figure 6-1 | Auburn Water Utility Organizational Chart



- City Engineer: Responsible for issuance of the City's Design and Construction Standards. Responsible for the management and the design and construction of capital projects managed by Project Engineers, including consultant-designed projects and construction contractors. Under the direction of the City Engineer, GIS Specialists are responsible for the transfer of data from "as-built" drawings to the GIS database. GIS is a mapping software that records and locates infrastructure related to the water system. GIS Specialists are also responsible for provision of maps and statistics to staff within the PW Department.

- Utilities Technician: Assist with certain permit-related activities involving the water system. The Technician is also responsible for customer inquiries, assistance with applications, tracking water system usage for reporting, and updating and updating water system records.

- Utilities Civil Engineer: Review City capital improvements and development projects pertaining to water system improvements and provides customer assistance regarding projects and permit activities.

Personnel lists for Engineering and Maintenance and Operation (M&O) staff that are responsible for daily operations are summarized in **Table 6-1** and **Table 6-2**. Operations staff provide daily O&M of wells, corrosion control treatment facilities, pump stations, and reservoirs. They also implement the cross connection control program and provide locating services for all City utilities. Distribution staff maintains the complete distribution system including water mains, valves, hydrants, pressure reducing stations, and meters.

The City has a mayor-council form of government; therefore, the PW Director reports to the Mayor. The City Council provides oversight of the Water Utility regarding policy, planning, and management of the water system.

6.1.5 Communication System

The City maintains a robust communication system to contact Water Utility personnel during normal work hours and after hours. This system is necessary to respond to customer requests, routine maintenance, or emergency situations. Maintenance staff vehicles and other rolling stock are all equipped with radios and personnel carry cellular phones. The Water Utility also has access to an inventory of portable emergency use radio units, should they be required.

A Standby Call-Out Program was initiated in 2006 to ensure that coverage for after-hours response was guaranteed. One staff member in Operations and one staff member in Distribution always carry a dedicated cell phone during their off hours. Standby duration runs for one week before responsibility is rotated to the next staff member on the roster.

Water problems involving service leaks, quality issues, main breaks, broken hydrants, etc., that occur outside normal working hours, are reported through the City's 911 emergency response system. An "Emergency Call-Out List" is provided to the emergency operators who will attempt to contact the designated standby Water Distribution or Water Operations employee, based on the type of service required. If contact cannot be made, the operator will contact the designated Standby Public Works Maintenance and Operation Manager.

Table 6-1 | Water Operations and Distribution Staff and Certifications

Position	Primary Function(s)	Certification(s)[1]
Water Manager	Management	Water Distribution Manager 4
Water Operations Field Supervisor	Management (Operations)	Water Distribution Manager 4, Water Treatment Plant Operator 1, Cross Connection Specialist
Water Distribution Field Supervisor	Management (Distribution)	Water Distribution Manager 3
Maintenance Lead (Distribution)	Management (Distribution)	Water Distribution Manager 2
Cross Connection Control Specialist	Cross Connection Control & Backflow Assembly Tester	Water Distribution Manager 1, Cross Connection Specialist, Backflow Assembly Tester
Distribution Specialist	Distribution Operations Maintenance	Water Distribution Manager 1
Maintenance Worker II / Locator	Operations & Distribution Maintenance	N/A
Maintenance Worker I	Operations & Distribution Maintenance	N/A

There are 12 staff members on the On-Call Manager Standby List and one of them has call-out responsibility for an entire week until it rotates to the next staff member. The 12 staff positions on the Standby List are:

- Water Manager
- Water Distribution Supervisor
- Water Operation Supervisors
- Sanitary Sewer and Storm Drainage Manager
- Sanitary Sewer Supervisor
- Storm Drainage Supervisor
- Streets and Vegetation Manager
- Street Supervisor
- Vegetation Supervisor
- Fleet/General Service Manager
- Maintenance & Operations (M&O) Support Supervisor
- M&O Services General Manager

There are also three other maintenance staff members on standby that can be called out as needed. The staff members are employed by Sanitary Sewer Division, Storm Drainage Division, and Street Division. The 911 operator also has phone access to the other Public Works staff, if the situation warrants it.

Telemetry alarms that occur after hours are handled by an automated Supervisory Control and Data Acquisition (SCADA) alarm and an automated dialer for notification called WIN911. The SCADA alarm calls standby staff from the WIN911 list. If no one responds within 15 minutes, then WIN911 calls the Water Operations standby staff on the call out list. The system will continue to cycle through the roster of seven employees until contact is made.

6.1.6 Operator Certification Program

The Washington Administrative Code (WAC) 246-292, requires minimum standards for the certification status of water operators. Also, the City has recognized the value of having a knowledgeable and well-trained staff operating the Water Utility and encourages employees to obtain the highest level of certification available. The City currently serves a population of greater than 50,000, which classifies their

distribution system into a group 4 according to WAC 246-292-040. Certifications required per staff role are summarized in Table 6-1.

The City pays for annual certification fees, provides time and tuition for certification training courses, and allows time for certification examinations. In addition, the City provides opportunities for staff to obtain continuing education units (CEUs) to maintain certification. Professional growth requirements for certification CEUs are monitored and maintained by the Washington Certification Services.

6.1.7 Education and Training Program

Continuing educational opportunities are fundamental for staff in the Water Utility. The Water Utility training budget is funded to support staff in maintaining their technical awareness and skill sets. Seminars, conferences, and college coursework: 1) broaden their knowledge and 2) allow them to network with other professionals involved in Water Utility work. Subjects include cross connection control, pumps, motors, pressure reducing valves, hydrants, chlorination, generators, forklift training, confined space, first aid, CPR, electrics, and other essential topics.

Most staff are tasked with specific job functions during their normal work shift and the consistent nature of the work allows them to complete their jobs in a very professional and efficient manner. However, all staff are rotated through an active cross training program to cope with employee absences such as vacation, sickness, retirement, and termination.

6.2 Operations and Preventive Maintenance

The City's water system is comprised of pump stations, chlorination stations, corrosion control facilities, reservoirs, springs, and wells. Figure 1-3 presented in Chapter 1 provides an overview map of the major existing system facilities. These components all work together to ensure that water is available to meet customer demands. Primary operation of the water system is maintained via the SCADA computerized control system. AVEVA software works in association with SCADA to provide real time graphical display of system data for staff interpretation and control. The SCADA system is often referred to as the Telemetry system based on one of the definitions of Telemetry (the science and technology of the transmission and measurement of data from a distant source). The City's SCADA system is monitored in the Public Works M&O Building, 1305 C Street SW, and responsibility for the system related to the Water Utility falls under the Water Manager and associated staff.

Some of the functions that SCADA monitors, records, and controls include:

- Reservoir levels
- Source meter production
- Pumps
- Motors
- Valves
- Chlorination
- Pressures: Low, High, Discharge, Suction
- Alarms: Intrusion, Fire, Generator Run, Low Fuel, Overflows, Failures, Turbidity

Status reports are continuously received via radio and information regarding system demand is used to determine system activation. The SCADA system includes logic programming which automates the process; however, Operations staff can manually override most computer decisions, if necessary. The alarm infrastructure is linked to WIN911 for after-hour call-out and response.

All data monitored by the SCADA system is electronically recorded by a computer server maintained by the Innovation & Technology (IT) Department. A back-up copy is made each evening to ensure that records are retrievable should hardware or software failures occur. SCADA records are available to all PW staff via the City's computer server. Access and control of the system is relegated to two dedicated computer terminals at the M&O Building. The computer terminal that houses SCADA is password protected and entry into the building is keycard access controlled.

The SCADA software and historical data is maintained on the City's Wide Area Network (WAN). Staff have access to the system via workstations connected to the WAN or remote network applications. A telephone connection provides the auto-dialer for the WIN911 notification to phones or pagers. An Ethernet radio connected to the computer system at the M&O Building sends and receives radio signals to/from the Programmable Logic Controllers (PLCs) at the water facilities. PLCs at the facilities are also able to communicate directly with each other via radio signal.

The City recently completed a SCADA Upgrade Project, completed in 2024, which updated the system platform to the most current version, modernizing the City's SCADA system from its last major upgrade in 2015. Major components were also replaced throughout the system to provide more reliable communication. The new hardware, in conjunction with software upgrades, provides additional control of the city's facilities.

6.2.1 Inspections, Preventive Maintenance, Repairs, and Replacement

Systematic inspection of Water Utility facilities is conducted on a daily or weekly basis by Distribution Specialists under direction of the Water Operations Supervisor as summarized in Table 6-2. The inspection process serves the following purposes:

- System Confirmation - proper operation of automated control and monitoring equipment
- Sound Check - listen for unusual noises
- Well Levels - static and dynamic
- Equipment Check - pumps, motors, valves, chlorination, heaters, vents, generators, etc.
- Security Verification - intrusion, vents, hatches, locks, gates, graffiti, etc.

A portion of the maintenance tasks handled by the Operations staff are associated with a Preventive Maintenance Program and some of those activities are arranged to coincide with the Facility Inspection Schedule shown in Table 6-2. The maintenance activities are based on equipment manufacturer recommendations and maintenance staff observations for infrastructure located within and outside the facility. Preventive maintenance tasks are essential for reliable operations and preservation of investment so adherence to the program is stressed. Additional maintenance activities handled by Water Operations staff include repairs, replacement, small improvement projects, and response to customer requests.

The Distribution staff is involved in the same activities as Water Operations staff regarding inspection, preventive maintenance, repairs, replacement, and response to customer requests. Water Distribution staff activities are usually in response to damage or leaks involving mainlines, service laterals, meters, meter boxes, and hydrants. Other Distribution tasks include fire flow testing, system flushing, meter installation, and miscellaneous small improvement projects.

Most customer requests are associated with water quality concerns and water pressure issues. Those requests are handled by the Distribution staff and/or Cross Connection Specialists, on a case-by-case basis.

Table 6-2 | Water Operations - Facility Inspection Schedule

Type of Facility	Facility Name	Daily Inspection 5 Day Workweek	Weekly Inspection
Booster Pump Station	Academy Pump Station 3	X	
	Academy East Booster Pump Station	X	
	Green River Pump Station	X	
	Lea Hill Pump Station	X	
	Lea Hill Booster Pump Station		X
	Lea Hill Intertie Booster Pump Station	X	
	Terrace View Booster Pump Station	X	
	Lakeland Hills Booster Pump Station	X	
	Game Farm Park Pump Station		X
	Braunwood Booster Pump Station	X	
Chlorination Facility	Lea Hill Intertie Pump Station (Re-chlorination)	X	
	Terrace View Booster Pump Station (Re-chlorination)	X	
	Coal Creek Springs – Chlorine Gas	X	
	West Hill Springs - Chlorine Gas	X	
	Well 1 – Hypochlorite	X	
	Well 3A – Chlorine Gas (when well is in operation)		Off-line
	Well 3B – Chlorine Gas (when well is in operation)		Off-line
	Well 4 - Hypochlorite	X	
	Fulmer Field Corrosion Control Facility – Onsite Generated Hypochlorite (Treats Well 2, 6, and 7 sources)	X	
	Well 5A - Hypochlorite	X	
	Braunwood Well - Hypochlorite	X	
Corrosion Control Facility	Howard Road Corrosion Control Treatment Facility (Treats Coal Creek Springs source)	X	
	Fulmer Field Corrosion Control Treatment Facility (Treats Well 2, 6 and 7 sources)	X	
Metals Removal Facility	Well 5B (Treats iron and manganese)		Off-line
Reservoir	Reservoir 1 – Valley Service Area	X	
	Reservoir 2 – Valley Service Area	X	
	Reservoir 4A – Lea Hill Service Area	X	
	Reservoir 4B – Lea Hill Service Area	X	
	Reservoir 5 – Lakeland Service Area	X	
	Reservoir 6 – Lakeland Service Area	X	
	Reservoir 8A - Academy Service Area	X	
	Reservoir 8B - Academy Service Area	X	
	Braunwood Reservoir	X	
Spring Source	Coal Creek Springs	X	
	West Hill Springs	X	

Type of Facility	Facility Name	Daily Inspection 5 Day Workweek	Weekly Inspection
Well Source	Well 1	X	
	Well 2	X	
	Well 3A (Off-line)		Off-line
	Well 3B (Off-line)		Off-line
	Well 4	X	
	Well 5	X	
	Well 5A	X	
	Well 5B (Off-line)		Off-line
	Well 6	X (when on)	X (when off)
	Well 7 (Off-line)		Off-line
	Braunwood Satellite Well	X	
Intertie Supply	Tacoma B Street Intertie		X
	Tacoma 132nd Avenue Intertie		X

6.2.2 Reservoir Maintenance

Reservoirs are a fundamental part of the water distribution system. They act as storage and regulating devices for water flow and maintaining them in prime physical condition is an essential activity. The Water Utility began a rigorous reservoir maintenance program in 1997 and it has evolved into an annual routine function. Each year, two of the reservoirs have their interiors thoroughly inspected by a contractor experienced in reservoir maintenance. The annual inspection process is based on a rotational schedule to ensure inspection of each reservoir on a 5-year timetable.

Since the reservoirs are usually filled with water, a diver must conduct the inspection. The diver is equipped with lights and an audio/video device to record the process. Issues of concern include corrosion, cracks, and condition of coating on the walls, valve, fasteners, etc. The diver is also equipped with a vacuum unit to remove sedimentation. The contractor also performs a visual inspection of the exterior of the reservoir for the same elements noted for the interior. The recording is reviewed by the contractor, a report is generated based on the interior and exterior inspection and a copy of the report and recording are given to the Water Manager and Water Utility Engineer for review.

If the report and recording indicate that a reservoir needs major repair, relining, or repainting, another contractor is acquired for a recommended course of action. If interior work is required, the reservoir must be drained of water. In those situations, a carefully orchestrated timetable and shifting of water resources is necessary to balance maintenance with the needs of the City's customers.

6.2.3 Pump Station Maintenance

Pump Stations are inspected daily or weekly depending on the station by Water Operations staff. The inspection checklist includes confirming that proper operation of the automated controls and monitoring equipment align with the standard operating procedures for the equipment, sound checks for unusual noises, static and dynamic well level checks, equipment checks (pumps, motors, valves, chlorination, heaters, vents, generators, etc.), security checks through visual inspection of the facility grounds for intrusion, graffiti, or issues with vents, hatches, locks, gates, and anything else that may seem unusual or misaligned.

6.2.4 Treatment Facility Maintenance

Treatment Facilities are inspected daily by Water Operations staff. The inspection checklist includes confirming that proper operation of the automated controls and monitoring equipment align with the standard operating procedures for the equipment, sound checks for unusual noises, equipment checks (pumps, motors, valves, chlorination, heaters, vents, generators, aeration towers, etc.), security checks through visual inspection of the facility grounds for intrusion, graffiti, or issues with vents, hatches, locks, gates, and anything else that may seem unusual or misaligned.

6.2.5 Pressure Reducing Valve Stations

Pressure Reducing Valve (PRV) Stations are inspected every month by Water Operations staff. The inspection checklist includes condition of the vault, valves, inlet pressure, outlet pressure, and pilot controls. Staff inspections are supplemented by a more thorough inspection and calibration process conducted annually by a contractor that specializes in PRVs. Repair or replacement maintenance, unless minor, is usually performed by the contractor. The City plans to implement an in-house repair maintenance program.

Rebuilds of PRVs are typically done every three to five years based on the rebuild schedule.

6.2.6 Utility Locating Service

Two Water Utility staff are designated as the Utility Locators for all City utilities and roadway infrastructure (Water, Storm Drainage, Sanitary Sewer, and Street lights and traffic signals) and additional staff may also be present to provide flagging when safety issues arise. The number of location requests varies daily but averages out to a full-time commitment. The Utility Locators report to the Water Operation Supervisor, but location requests may be made indirectly by the Water Distribution, Sanitary Sewer, or Storm Drainage Supervisors.

6.2.7 Fire Hydrant Inspection

In 1999, a fire hydrant inspection goal was initiated. The intent was to inspect, repair, and test at least one third of the utility owned fire hydrants in the system each year. The importance of this program cannot be understated since fire hydrants are the first defense against loss of life or property due to fire. The inspections also improve water quality due to the stagnant water that is purged from the hydrant stubs. A water de-chlorination program, in response to Ecology guidelines, was initiated in 2001 to treat water purged from hydrant stubs. The Water Distribution Supervisor has made public hydrant inspection a year-round routine task of Water Utility operations. Secondary maintenance of public hydrants such as rust removal, painting, street reflector replacement, clearing obstructions, etc., is handled by seasonal part time staff when time permits. Property owners with private hydrants are solely responsible for obtaining annual, satisfactory inspections of their private hydrants from a qualified inspector.

6.2.8 Dead-end Flushing

A key component of water quality control is dead-end line flushing. The City has approximately 548 dead-end mains throughout the distribution system. The water in dead-end mains tends to stagnate due to lack of turnover which can have an impact on water quality for customers in the immediate vicinity. Flushing dead-ends is the only effective way to purge the lines of stagnant water and associated particulate matter. In 2000, an engineering consulting firm was hired to assist the City with the development of a Dead-end Flushing Program. They examined the City's distribution system via GIS data and supplemented the study

with field inspections. A comprehensive operating procedure detailing separate flushing instructions for each dead-end was developed and continues to be used today.

Maintenance staff, under the direction of the Water Distribution Supervisor, follow the program instructions and record their activities. This program has been incorporated into the Unidirectional Flushing program, see Section 6.2.10.

6.2.9 Valve Exercising

The AWWA technical manual *M44 Distribution Valves: Selection, Installation, Field Testing, and Maintenance*, suggests that valve exercising should be conducted each year and more frequently for valves 16 inches and larger.

The Water Utility has a Valve Exercising Program, which is in concert with the Unidirectional and Dead-end Flushing programs. Historically, distribution valves have only been exercised on a limited and sporadic basis. Through the Valve Exercising Program, the City's goal is to exercise 25 percent of the distribution valves each year. Hydrant foot valves are not included in the valve exercising program and instead, are exercised as part of the hydrant inspection process.

Opening and closing valves by hand is a repetitive, ergonomically unsafe, and time-consuming task. The City has purchased a portable valve exercising machine and vacuum device to speed up removal of debris that collects in the bottom of valve boxes. Valves requiring repair or replacement are documented and corrected by City Staff or contractors.

Additionally, Distribution staff work with GIS staff to correct inaccurate valve information in the City's GIS data.

6.2.10 Unidirectional Flushing

In 2013, the City implemented a comprehensive Unidirectional Flushing (UDF) program to flush its water system. The program's goals include:

- Improving cleaning of accumulated deposits on pipes,
- Reducing water use, as compared with conventional flushing, and
- Reducing the impact on customers.

The Water Distribution Supervisor is responsible for the UDF program to maintain Water Quality.

The UDF process concentrates flow within a pipe by closing valves and using specific hydrants to isolate each pipeline and create flow in a single direction. The concentrated flows increase velocities within the pipe that results in scouring of accumulated deposits on pipes. UDF may remove sand, gravel, plastic, biofilms, and other accumulated materials that are not removed by conventional flushing. The cleaned mains may have improved water clarity or color, reduced turbidity, and improved chlorine residual.

Flushing times of a half hour or less are typical, which can equate to substantial water savings. Therefore, UDF is a key component of the City's Water Use Efficiency (WUE) program. The reduced flushing time also limits the impact on the Water Utility's customers.

As previously mentioned, the City has incorporated the valve exercising and dead-end flushing programs into the UDF program. Valves not used as part of a flushing sequence along each pipe length are exercised by distribution system staff to complete the Valve Exercising Program. While the UDF program flushes

dead-end mains, more frequent dead-end main flushing may be required for water quality reasons. The UDF program also provides static pressure measurements.

The City's goal is to conduct UDF of approximately 20 percent of the system each year.

6.2.11 System Loss Program

The City has committed to an active System Loss Program to maintain water loss under 10 percent. The achievement is documented each year in the Distribution System Leakage Report. Elements of the Program include Leak Detection, Source Meter Calibration, Large Meter Testing, and Meter Replacement. Each of these is discussed in detail below.

6.2.11.1 Leak Detection

The City is committed to a tight, non-leaking water distribution system. As of 2016, the city implemented an in-house Leak Detection program, with a goal to inspect 90 miles of water main every year.

6.2.11.2 Source Meters

Source meters, also known as production meters, measure the amount of water emitted from the City's springs and wells. They are calibrated by an outside contractor under the direction of the Water Operations Supervisor and if a meter cannot be calibrated properly, it is replaced with a new one.

6.2.11.3 Meter Replacement Program

Between 2017 and 2018, the City replaced all service meters with an Automated Metering Infrastructure (AMI) system, under the Water Meter and Billing System Improvements project. The system automatically receives meter reads via radio transmission and integrates the data into the City's billing software. The benefits of an AMI system include increased accuracy and efficiency; early leak detection; high usage, zero usage, and backflow detection; and improved customer service. This has saved staff time associated with regular meter reading, missed or incorrect reads, final reads for customer account close-out, and confirmation of high reads for potential leaks. An optional interactive customer portal allows customers to view their monthly, daily, and hourly usage to see exactly when they are using water and how much. This allows customers to better understand their water usage, encourages conservation, and potentially saves them money.

The AMI system is anticipated to have a 20-year life. That includes the system components and batteries in the radios. Meter replacement will be on a 20-year program to coincide with the AMI system.

6.2.11.4 Meter Services

Water Distribution staff are responsible for all new service connections under three inches and contractors are usually secured for installation of sizes three inches and larger. Repairs, retrofits, or replacements of existing services are typically conducted by Water Distribution Staff unless unusual circumstances arise. Meter services consist of meters, meter vaults, meter boxes, service lines, valves, setters, and other associated equipment. The City uses master meters when beneficial to the City and its customers. Master meters are currently used at several mobile home parks, the Auburn Business Park, and Muckleshoot Indian Tribe (MIT) commercial properties.

6.2.11.5 Large Meter Testing

Large meters are devices that measure water consumed by customers with significant demand requirements. They are usually employed by the following customer classes:

- Commercial
- Farms or Parks – Irrigation
- Schools
- Multifamily Complexes
- Industrial / Manufacturing Businesses
- Wholesale Customers
- Municipal Buildings

Large meters are defined as water meters three inches or larger. The system contains a total of 151 large meters, all of which are calibrated annually, as part of the City's System Loss Program.

Calibration of large meters is conducted by an outside contractor, but one maintenance staff member under the direction of the Water Distribution Supervisor assists in the process. If a meter cannot be calibrated, it is replaced with a new one.

6.2.12 Distribution System Corrosion Inspection

One program that the Water Distribution Division would like to activate, if additional funds and labor resources are available, is a Distribution System Corrosion Inspection program. A significant percentage of the City's piping system is constructed of metal which is subject to corrosive deterioration. Corrosion is an electrochemical reaction whereby metal is eroded and reduced. It is not possible to stop corrosion of metal pipe, but it can be substantially reduced if proper anti-corrosive measures are taken.

The Distribution System Corrosion inspection will identify which pipes can benefit from corrosion resistance measures, resulting in a longer serviceable life. Popular measures taken to resist corrosion include coatings, poly-bagging, and anode packs, and they are described further below:

- Coatings are electrical insulator types of finishes applied to a surface and is the most common method of corrosion protection. Though coatings are common, they are subject to damage and decay. Damage from soil stress such as contraction and expansion can rip coatings from pipes. Pinholes in the insulation, also known as holidays, can allow seepage between the coating and pipe and accelerate corrosion. Penetration of the pipe occurs even more rapidly when pinholes are present than it would on a bare line.

- Anode packs are metal cylinders that are connected to a metal structure via electrically conductive wires and inserted into the ground adjacent to the structure. The ground is subject to stray electric currents and these currents are the electrical component of the electrochemical nature of corrosion. Anode packs become the sacrificial metal to corrode in lieu of the structure. This type of treatment, when initiated, provides benefits in two ways: 1) it could save substantial amounts of money by reducing unnecessary, early replacement of pipe and 2) it would reduce possible disruptive service to the City's customers that could occur if pipe replacement were necessary. Though anodes packs are effective and economical, their current capacity is limited and they typically have a short lifespan.

- Poly-bagging is the process of wrapping the exterior of buried water mains and appurtenances, typically under the influence of corrosive soils, with polyethylene, creating a protective layer around the mains and appurtenances. Poly-bagging is an effective method for corrosion protection of water mains and they are resistant to tearing or puncturing. Though economical, they are not as environmentally friendly and add another layer to maintenance activities.

6.3 Comprehensive Water Quality Monitoring

The Water Operations staff maintains an active and ongoing program of water quality monitoring and reporting to ensure a safe, high quality water supply. Two staff members are responsible for water quality monitoring, sampling, control, and record keeping. The Water Operations staff also receives assistance from the Engineering Services - Water Quality Program Coordinator. A detailed description of the City's water quality monitoring and results is presented in Appendix Q, which includes the following:

- Summary of the City's water quality monitoring programs.
- Summary of recent water quality testing results.
- Summary of the Wholesale Interties Blending Evaluation.

The City's Water Quality Monitoring Program is detailed in a manual entitled "City of Auburn Public Water System Water Quality Monitoring Plan" provided in Appendix O. The document includes plans associated with coliform, lead and copper, disinfection by-products and treatment specific monitoring, and the Water Quality Monitoring Schedule. These plans comply with DOH regulations for Group A public water systems. All sampling is conducted in accordance with the annual Water Quality Monitoring Schedule received from DOH. The City samples for inorganic and physical parameters, synthetic and volatile organic compounds, asbestos, nitrate and nitrite, radionuclides, coliforms, residual chlorine, disinfection byproducts, lead and copper, fluoride, and per and poly-fluoroalkyl substances (PFAS). A map of the sampling locations is included with the documents provided in Appendix O.

Additional sampling also occurs based on special requests by DOH or by customers concerned about water quality issues involving unusual taste, odor, or color.

The Water Manager maintains hard copies of the water quality analysis laboratory reports. These reports are kept at the M&O Building in files organized by years and analysis type. As specified by DOH regulations, chemical analysis reports are kept indefinitely, and bacteriological reports are maintained for a minimum of five years.

The City will comply with the Follow-Up Action Requirements of WAC 246-290-320 whenever water quality results exceed a prescribed level. The Water Utility also complies with the requirements of WAC 246-290 for public notification, as established by the Safe Drinking Water Act (SDWA) and DOH.

Forms for "Water Boil Notification" and "Drinking Water Problem Corrected Notification" have been developed and are available for immediate distribution, if necessary. A list of the appropriate print, TV, and radio media to contact for public notice is included in the electronic Emergency Response Manual. An additional procedure described in the Emergency Response Manual to address water quality issues involves an "Action Plan for Water System Contamination Via Threat Warning."

The City maintains equipment to perform some basic water quality monitoring functions. However, all testing required for water quality regulatory compliance is contracted to independent testing laboratories. The current primary laboratory used by the City is:

Water Management Laboratory
1515 80th Street East
Tacoma, Washington 98404
206-531-3121

If testing cannot be done on a timely basis, the City also uses the following laboratory:

Analytical Resources, Inc.
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200

6.4 Emergency Preparedness and Response

The City has prepared an electronic Public Works Emergency Response Manual (Manual) as a guide for management of emergency situations, with the objective of protecting life and property and restoration of essential services, such as providing clean water, as quickly as possible. The Manual is only one element of the City's overall Emergency Response Plan, which serves as a guide and was first developed in 1999 in response to the potential impact of Y2K. The Emergency Response Plan is updated annually at the first of the year. It is not all-inclusive for every type of disaster that could occur but is a valuable tool for dealing with many of the emergency situations that most utilities could face.

The Manual contains a detailed table of contents and is tabbed to allow quick access to information. Three copies of the Manual have been published. Copies are located at the M&O Building, in Engineering Services with the Public Works Director, and at the Valley Regional Fire Authority, Station 31. The Manual is also available in digital format on the City's computer server.

The master response program for the entire City is documented in the Comprehensive Emergency Management Plan (CEMP), which provides guidance to the Emergency Management Organization for mitigation, preparedness, responsibilities, recovery operations, training, and community education activities. The CEMP also describes the functions of local government and incorporation of essential non-governmental organizations into the Emergency Management Organization. Copies are in each City Department, the Public Works M&O Building, and the Valley Regional Fire Authority, Station 31. The CEMP is also available in digital format on the City's Emergency Operation Center (EOC) computer server.

An additional emergency response manual that is available for use is the Water Division Intertie Locations and Policy Manual. This manual contains contact names, addresses, and phone numbers for cities and water districts that have intertie connections with the City. Included are photos of the intertie vaults, valves, and meters, along with information for activating or deactivating an intertie. Three copies have been published and are located at the M&O Building, in Engineering Services with the Water Utility Engineer, and at the Valley Regional Fire Authority, Station 31.

The City has been involved with several tabletop exercises to prepare for emergencies and they are an ongoing feature of the City's Emergency Response Program. Staff, depending on their position, have also been trained for emergencies in accordance with the Federal Emergency Management Authority (FEMA)

under the auspices of Homeland Security. The training program, known as the National Incident Management System (NIMS), offers educational classes tailored for the Incident Command System (ICS).

The NIMS and ICS program is a solid blueprint for federal and local emergency command activities, but it does not provide the type of response details needed by PW maintenance staff and managers. Consequently, the PW Emergency Response Manual is the reference tool referred to on a more intimate scale.

6.4.1 Vulnerability Assessment

The City's Vulnerability Assessment (VA) was prepared in 2004 under the guidance of an engineering consultant firm and it was submitted to the USEPA on November 15, 2004. A Water System Security Improvement Plan (WSSIP) was also prepared in conjunction with the VA to prevent or significantly lessen the impact of intrusive activities.

Recommendations noted in the WSSIP have been adequately addressed by completing the SCADA system upgrades and physical security project. As further upgrades are completed at City facilities, the recommendations noted in the WSSIP are considered, as well as other considerations as technology continues to advance.

6.4.2 Wellhead Protection Program

The City's wellhead protection program is key to managing potential sources of groundwater contamination prior to their entry into the drinking water system. The wellhead protection plan (WHP) was updated as part of the Plan and summarized in Chapter 5.

Engineering Services staff are charged with implementation of the program. Staff track and follow up on construction projects, spills, and monitor possible contamination sources, as possible.

6.4.3 Water Shortage Contingency Plan

In Auburn City Code (ACC) 13.14 the Mayor may order water use restrictions and conservation measures, when necessary, to protect public health, safety, and welfare during a water shortage or emergency caused by drought conditions, city water utility damage or destruction, or any other cause which threatens to disrupt or diminish the City's water supply below its ability to meet normal demands.

The City has also updated its Water Shortage Contingency Plan, attached as Appendix R, which establishes actions and procedures during impending or actual water shortages. These actions and activities maintain levels of service essential for public health and safety, minimize adverse impacts on economic activity, and protect customers' lifestyles. The plan addresses both progressive situations, such as those that are weather-related, and more drastic and immediate situations such as facility emergencies (e.g., a pipeline break). Initial stages of the Water Shortage Contingency Plan may coincide with efforts in the WUE program; however, it is distinct as it is a response to a specific situation, and it may lead to mandatory restrictions and curtailment.

6.5 Safety Procedures

The City has a comprehensive safety program that meets Occupational Safety and Health Administration (OSHA) and Washington Industrial Safety and Health Act (WISHA) regulations. The safety policies and procedures for the water department are documented in 25 policies that are summarized in Table 6-3. The

policies cover the full range of hazards staff may experience while operating the water system. These include, but are not limited to, operation of motor vehicles and equipment, chemicals, confined spaces, falls, traffic, and fires. Each policy includes a purpose, organization affected, references, the policy, definitions, procedures to implement the policy, and responsibilities for the implementation. Responsibilities are assigned to individual roles, such as employee, supervisor, or safety manager. The policies and procedures clearly identify contact information of the applicable regulating agencies in case of a serious incident. All policies are available on the City's intranet.

Table 6-3 | Safety Policies and Procedures

Number	Policy Name	Description
300-01	Workplace Health & Safety	Document workplace health and safety policy
300-03	Hearing Conservation	Implement program to protect employee hearing
300-04	Personal Protective Equipment	Establish policy that requires employees to always use personal protective equipment when performing certain tasks or when in an unsafe environment
300-05	Flagger Certification	Flagger certification requirements
300-06	First Aid	Employee first aid training, first aid supplies and emergency stations
300-07	Hazard Reporting	Procedure to report an obvious or potential safety or health hazard
300-08	Incident Reporting	Procedures for reporting non-vehicular incidents
300-09	On The Job Injury	Establish policy to monitor on-the-job injuries
300-10	Safety Inspection of City Owned Facilities	Procedure for inspection of all City-owned and operated facilities
300-11	Central Safety Committee	Establish function and structure of Central Safety Committee
300-13	Emergency Evacuations of City Buildings	Procedure for evacuation of City buildings in the event of an emergency
300-14	Safety Restraints & Seat Belts	Requires mandatory use of safety restraints/seat belts while driving or riding in the City vehicles
300-15	Excavation Trenching & Shoring	Establish policy for shoring and sloping all excavations or trenches over four (4) feet in depth
300-16	Safety Line Procedure All Cranes, Backhoes, & Hoists	Procedures for controlling moving loads being hoisted or swinging ground or truck using hoists, backhoes, cranes, or any mechanical device use in moving loads
300-17	Chemical Hazard Communication (Worker Right To Know)	Establish chemical and global hazard communication program to assure the health and safety of City employees
300-18	Welding, Brazing, & Cutting	Procedure for welding, cutting or brazing work or practices which may result in an injury or death
300-19	Lockout & Tagout	Requirements for the lockout or tagout of energy isolating devices
300-20	Bloodborne Pathogens	Procedure to prevent exposure to blood or other substances and materials that may carry bloodborne pathogens. Procedures for decontamination of equipment and evaluation and treatment of employees who experience exposure.
300-21	Reporting Vehicle Accidents	Procedure for reporting vehicle accidents
300-22	Heat Related Illness	Training for potential heat related illness

Number	Policy Name	Description
300-23	Confined Spaces	Procedures for entering a confined space
300-24	Green Housekeeping Guidelines	Procedures that sustain a "Green Cleaning" environment
300-25	Respiratory Protection Program	Procedures that will prevent employees from inhaling hazardous airborne chemicals
300-26	Fall Protection & Rooftop Safety	Procedures for rooftop safety and use of fall protection
300-27	Powered Industrial Trucks	Training, operation, and safety of powered industrial vehicles

In addition to the policies, all M&O staff receive safety training. The contents of the training are periodically reviewed and updated, if necessary, through departmental and city-wide safety committees. The Human Resources and Risk Management Department maintains information and schedules on safety training.

The City maintains appropriate safety equipment and information. Each vehicle and facility have a fire extinguisher and first aid kit. All staff use personal protective equipment, such as hard hats, safety glasses, safety vests, etc., appropriate to the task. Climbing equipment and lockout/tagout equipment is available and stored at the M&O Building and the Well 7 storage facility. Additionally, each site with chemicals has a Safety Data Sheets (SDS) book that contains the Material Safety Data Sheets (MSDS) for all chemicals on site. A master sheet of all chemicals used by the Water Utility is maintained at the M&O Building.

6.6 Cross Connection Control Program

The City's Cross Connection Control Program (provided in Appendix Q) protects the public water system as defined by WAC 246.290.010, WAC 246.290.490, and Auburn City Code (ACC) 13.12 from contamination via cross connection hazards. It describes minimum operating policies, provides guidelines for installation, testing, and maintenance of approved backflow prevention assemblies, permitting process, inspection, and survey requirements for existing and new water service connections. The program is maintained by two Cross Connection Specialists under the direction of the Water Operations Supervisor. The specialists are responsible for identification and elimination of potential and actual cross connections and contamination hazards within the public water system.

6.7 Sanitary Survey Findings

DOH completes periodic inspections of the City's water facilities, their operations, and facility records to identify potential health risks to the public. The sanitary survey, conducted by DOH on August 22, 2022, identified significant deficiencies such as air gaps or backflow assemblies that must be added to the water supply lines at Wells 5 and 5A. Additionally, repair needs were identified for the reservoir overflow screens at Reservoirs 8A and 8B.

DOH identified the need to terminate the pump to waste line at Well 5 above grade and either raise the casing at Well 5A or provide a sump pump or alarms to address potential water accumulation in the vault. Weekly vault inspections, especially after significant storms, were recommended until a permanent solution is implemented.

The survey noted that the reservoir vents at Reservoirs 4A, 4B, and 8A should open downward to prevent debris entry. It also identified a need for evaluation of the overflow piping at Reservoirs 2, 4A, and 4B, to ensure compliance with regulations.

The next DOH sanitary survey is scheduled for 2027.

The City has taken the following actions to address some of the deficiencies identified in the sanitary survey.

- A backflow assembly was installed at Well 5A.
- The reservoir overflow screen at Reservoirs 8A and 8B was repaired on September 13, 2022.
- The City implemented an inspection and maintenance program to conduct weekly inspections at Well 5A and immediately after a significant storm even.
- The direct connections of reservoir overflows (Reservoirs 4A and B to drains, sanitary sewer, and/or storm sewer) have been addressed.

The following deficiencies identified in the sanitary survey will be addressed with ongoing or planned Capital Improvement Projects identified in Chapter 8 and are captured in Section 6.10.2 as recommended improvements:

- Reservoir vents will be retrofitted or replaced as part of the ongoing Reservoirs 4A, 4B, 8A, and 8B Seismic Valves Retrofit capital project.
- The request for the pump to waste line at Well 5 to terminate above grade will be addressed with a capital improvement project.
- The direct connections of reservoir overflows (Reservoirs 2) to drains, sanitary sewer, and/or storm sewer, will be addressed with a capital improvement project.

6.8 Customer Complaint Response Program

One member of the Water Distribution staff is a Customer Service Representative. This individual is responsible for meter turn-on and turn-off, delinquency notices, meter rereads, new service reads, final service reads, leak adjustments, high consumption investigations, account documentation, and other duties, as assigned. The employee maintains a modified work schedule, which provides more flexibility in dealing with emergency service requests by customers.

Beginning in 2006, the Water Utility, along with the rest of PW transitioned to an asset management software system called CarteGraph. Some of the benefits include:

- Ability to assign and track citizen complaints and requests
- Produce work orders
- Monitor work and maintenance projects
- Track costs for labor, equipment, and material
- Enhanced inventory control
- Integration with GIS
- Benchmark analysis
- Generate reports
- Track infrastructure conditions – GASB 34

The City has a customer service program accessible by the public and City staff via the City's website. Customers fill out the online Citizen Report form and describe the services they are seeking. The submitted form downloads into the CarteGraph system for review and action by staff. In addition, customers can stay connected with the City on mobile devices with a SeeClickFix application. The SeeClickFix app allows customers to report graffiti, abandoned vehicles or potholes, water issues, etc.

6.8.1 Customer Request Response Program

As described above, the CarteGraph system can assign and track customer requests (or complaints) and produce work orders. The City maintains a list of requests and identifies the work done to respond to any requests from the public. The City categorizes the citizen reported issues into the following five categories:

- Water Appearance: contains all requests related to the color of the water (brown, discoloration, cloudy, etc.)
- Odor: contains all requests related to water smell (chemical, sulfur, chlorine smell, etc.)
- Pressure: contains all requests related to change in water pressure (pressure drop, high water pressure, fluctuation in pressure, etc.)
- Taste: contains all requests related to water taste (poor, bitter, strong chlorine taste, etc.)
- Water Quality: contains all requests related to a combination of odor, taste, and discoloration issues.

Customer requests are entered into the CarteGraph or SeeClickFix and a work order is generated. Typically, a Distribution staff member or team will investigate the issue and respond directly to the customer.

A table summarizing the number and type of requests or complaints is provided in Chapter 3.

6.9 Recordkeeping and Reporting

All recordkeeping and reporting practices follow DOH regulations as specified in WAC 246-290-480. The Water Manager maintains hard copies of the water quality analysis laboratory reports. These reports are kept at the M&O Building in files organized by year and analysis type.

Analytical laboratories submit reports directly to DOH. As specified by the regulations, chemical analysis reports are kept indefinitely, and bacteriological reports are maintained for a minimum of five years. Additionally, Construction Completion Reports are submitted to DOH, as required. Construction Completion Reports for distribution main projects are maintained on file at the City and are available upon request by DOH, in accordance with WAC 246-290-125.

Water production and purchase source meters are read daily (during the work week). Paper copies are scanned at the end of the month and digital copies in pdf format are maintained on the City computer server by month and year. Annual summary spreadsheets are also maintained on the computer server. This data is added to the monthly DOH reports. Records are maintained for a minimum of 10 years.

Chlorine residual samples are collected in the distribution system and analyzed on a weekly basis. Summary spreadsheets are maintained on the City computer server by year. Records are maintained for a minimum of three years.

Monthly reports containing water production and treatment data are submitted to DOH by the 10th day of the following month, using forms provided by DOH. Signed paper copies are scanned to produce a digital copy and are maintained on the City computer server, organized by year. Digital copies are maintained for a minimum of 10 years.

Most records that Water Utility collected in the past are based on hard copy paper forms. This includes forms that track maintenance and inspection records used for pumps, valves, meters, reservoirs, hydrants, operating equipment, etc. A portion of the integration process with CarteGraph involved the collection and collation of historical data into a form that can be downloaded into the software system. The City's goal is a near-paperless documentation system that can be accessed by staff in the office, field, or home on a 7-day, 24-hour basis. Existing electronic records include those described below.

6.9.1 Cross Connection Control Program

Cross Connection Control records are managed with Tokay software and Laserfiche. Test reports conducted are stored in Laserfiche and are kept for 5 years. Tokay is used for creating reports, identifying and updating when tests are required, and general data entry and management of cross connection devices per parcel.

6.9.2 Water Meter Consumption

Water meter consumption records are maintained by the Finance Department using the Springbrook Utility Billing System. These records include customer account data for classes of customers, billing, service, comments, and questions. The system also includes a tracking feature for water sold each month as well as annual total water sales. The tracking feature is useful because data on water consumption by customer type and season supports the City's WUE Program, per Chapter 4. The Finance Department also provides staff with monthly financial reports regarding Water Utility operations.

The City also uses AMI throughout the system as a tool for the WUE Program. Using AMI data, the City may be able to identify customer leaks and, as a result, provide cost savings in the Leak Detection, Repair, and Service Meter Replacements programs. Advanced metering also aids the City's efforts to reduce non-payment of bills and water theft.

6.9.3 Supervisory Control and Data Acquisition (SCADA)

The SCADA system monitors, records, and controls water system operations at various facilities. The electronic records are maintained by the IT Department and a back-up copy is made each evening to ensure that records are retrievable should hardware or software failure occur.

Please note that the SCADA system is discussed more thoroughly in Section 6.2 of this chapter.

6.9.4 Water Meter Reading

Effective January 1, 2019, the City transitioned to monthly consumption billing. The Utility Billing staff imports the water meter reads monthly into the City Utility Billing System. With the implementation of the AMI system, the City obtained a Cloud-Based Data Analytics Solution with meter data management capabilities called Sensus Analytics. Within Sensus Analytics, is a billing access application, which enables Utility Billing staff to generate and export a billing request file defined by a billing cycle and billing window. Subsequently, the file that contains meter numbers, account numbers, and current water meter reads are imported into the City Utility Billing System. The Utility Billing staff reviews abnormally high or low consumption levels compared to previous readings from the previous year, same period.

Water service meters are read monthly to document customers' water usage for billing purposes. The AMI system automatically stores and transmits the water use data for utility billing, without the need for personnel to collect the data on site.

6.10 Summary of O&M Deficiencies and Recommended Improvements

6.10.1 Water Facilities Evaluation Study

The City completed an extensive Water Facilities Evaluation Study in 2014. The study conducted a physical inspection and evaluation of 40 out of the City's 97 water supply facilities. Inspections included pump stations, treatment facilities, reservoirs, wells, transmission mains, and PRVs. Inspections considered general conditions, corrosion and rust, structural deficiencies, ability to meet current code, and operational constraints. In addition to the inspections, the remaining useful life of the facilities were developed in a desktop analysis for pump, motor, pipe, valve, general electrical equipment, and major electrical equipment.

Where notable deficiencies were identified in the inspections or assets exceeded their usable life, improvements were recommended. Many of the recommended improvements have been completed or are currently scheduled to be completed and identified in the Capital Improvement Plan. Remaining improvements less than or equal to $10,000 are considered capital maintenance projects, which the City staff or a small works contractor will address as part of the normal M&O budget and are not identified in the Capital Improvement Plan.

Based on the observed facilities, general maintenance improvements are recommended for each facility to create a schedule of improvements based on the facility's remaining useful life. Regular facility inspections are also recommended, as summarized Table 6-4. Additionally, maintenance plans were developed for each inspected water system facility. These plans included the improvement type, estimated project cost, and frequency the improvement is required.

Table 6-4 | Recommended Inspections

Asset Type	Recommended Inspection	Frequency (years)
Pump	Perform pump test	5
Motor	Check motor amp draw	5
Reservoir	Inspect coating thickness	5
Reservoir	Inspect reservoir interior	5
PRV Station	Inspect for corrosion and signs of flooding	1
Structure	Inspect for cracks in grout (where applicable)	1
Piping	Inspect for general coating conditions	3

6.10.2 Recommended Improvements

The City operates and maintains an efficient, environmentally sound, and safe water system. Recommended improvements include the outstanding projects identified from the 2014 Facility Evaluation Study, outstanding items to be corrected from the 2022 Sanitary Survey, and general continued repairs and maintenance activities that are conducted by M&O staff or contracted out. Table 6-5 provides a summary of the identified O&M projects and their costs.

Table 6-5 | O&M Improvement Projects

O&M Deficiency	Planned Year	Notes
The pump to waste line at Well 5 to terminate above grade will be addressed with a capital improvement project. (Identified in 2022 Sanitary Survey)	2026-2028	Included with the Well 5/Well 5A Upgrades Project
Raising the casing at Well 5A to terminate above grade or the provision of a sump pump or alarms to activate when water accumulates in the vault. (Identified in 2022 Sanitary Survey)	2026-2028	Included with the Well 5/Well 5A Upgrades Project
Reservoir vents will be retrofitted or replaced as part of the ongoing Reservoirs 4A, 4B, 8A, and 8B Seismic Valves Retrofit capital project. (Identified in 2022 Sanitary Survey)	2024-2025	Included in CP2219 – Reservoirs 4 and 8 Seismic Rehabilitation
The direct connections of reservoir overflows at Reservoirs 2 to drains, sanitary sewer, and/or storm sewer, will be addressed with a capital improvement project. (Identified in 2022 Sanitary Survey)	2024-2025	Included in Reservoir 2 Valves Project
Conduct inspections of facilities at frequency recommended in the Facilities Evaluation Study.	--	Refer to **Table 6-4**. To be completed via annual M&O operating budget.
Continue distribution system corrosion inspection.	TBD	To be completed via annual M&O operating budget as funds are available.
Develop a UDF Program for the Lakeland Service Areas.	TBD	To be completed via annual M&O operating budget as funds are available.
Replace source water supply meters with flow transmitters for improved electronic data transmission and record keeping.	TBD	To be completed via annual M&O operating budget as funds are available.
Continue PRV Vault Repairs	2024-2026	To be completed via annual M&O operating budget as funds are available.
Continue Pump and Equipment Repairs and Maintenance	2024-2026	To be completed via annual M&O operating budget as funds are available.
Continue Annual HVAC Maintenance and Repairs	2024-2026	To be completed via annual M&O operating budget as funds are available.
Continue Fencing Repairs at Water Facilities	2024-2026	To be completed via annual M&O operating budget as funds are available.
Continue Generator Maintenance and Repair	2024-2026	To be completed via annual M&O operating budget as funds are available.
Continue Large Meter Repair and Testing	2024-2026	To be completed via annual M&O operating budget as funds are available.
Continue Chlorine Feed and Analyzer Maintenance	2024-2026	To be completed via annual M&O operating budget as funds are available.

O&M Deficiency	Planned Year	Notes
Continue Vegetation Control and Maintenance at Water Facilities	2024-2026	To be completed via annual M&O operating budget as funds are available.

CHAPTER 7

Distribution Facilities Design and Construction Standards

This chapter outlines the Engineering Design and Construction Standards (EDCS) of the City of Auburn (City), concerning its water system. It encompasses policies and procedures governing project review and approval. To ensure the highest level of water system reliability, integration of the EDCS into the broader city infrastructure is essential. The City recognizes the interdependence of its water system with other municipal services. As such, there is an ongoing collaborative effort between the Water Division and other relevant City departments, such as Community Development and Finance, as well as non-City stakeholders, such as the Valley Regional Fire Authority (VRFA).

The integration of the EDCS in this Water System Plan empowers the City to employ an alternative review process for distribution main projects, through the submittal exception process, which permits the City to approve project reports and construction documents without written approval from the Department of Health (DOH). This submittal exception is granted provided the conditions specified in WAC 246-290-125(2) are met.

The submittal exception does not apply for source of supply, reservoir, pump station, and water treatment projects. For those projects, the City will seek approval from DOH through the submittal process outlined in WAC 246-290-110 and 246-290-120.

The following topics are addressed in this chapter:

7.1 Project Review Procedures
7.2 Policies and Requirements for Outside Parties
7.3 Design and Construction Standards
7.4 Construction Certification

7.1 Project Review Procedures

For all construction activities related to the City's water system, coordination must be done directly through the City's Water Department. The City's Water Department reviews plans, including calculations, reports, and AutoCAD files, to verify conformity with development requirements, City standards, City policies, as well as other federal, state, and local requirements. The plan sets are required to feature an overall utility plan illustrating public water facilities and private connections within the water service boundary, regardless of whether the project is inside or outside the City limits. City staff also review projects proposed by developers or other water purveyors to determine impacts to the City's water system facilities.

Development review processes are detailed in the Engineering Design Standards (EDS), available on the City's website. Compliance with Washington State Department of Transportation (WSDOT) "Standard Specifications for Road, Bridge, and Municipal Construction," and relevant City, State, and Federal regulations is also evaluated during the review process.

All water-related improvements projects, whether for capital improvement or development, undergo a thorough review process by the Water Division, including evaluation by the VRFA and City's Fire Authority for fire protection standards. Additionally, all plans involving main extensions, modifications, and fire service installations must be stamped by a Professional Engineer licensed in Washington State.

7.2 Policies and Requirements for Outside Parties

The City manages the water utility in accordance with established water- system policies that govern various facets of utility operations. City policies are established by the City to provide a vision or mission of the water utility and to provide a framework for the design, operation, and ongoing wellbeing of the City's water utility.

Policies are developed specifically for the City's multi-source municipal water system and seek to provide consistent treatment to all utility customers and to provide documentation to current water-system customers as well as those considering service from the City. What is included in these policies is limited to those things related to the water system and its design, maintenance, and operation. There are other policies and criteria that pertain to the water utility the City has in place regarding land use, development, and financial components that could still have an impact on the needs of the water system. These policies and criteria may include factors such as zoning regulations, building codes, infrastructure requirements, and financing options. These additional factors will be considered when planning for the water system, to meet the needs of the community in a sustainable and effective matter.

Policies set forth for development are described in the Water System Policies provided as Appendix A of this Plan.

7.3 Design and Construction Standards

Within the Retail Water Service Area (RWAS), the City has established specific standards governing the design and construction of water mains, detailed in the City's EDCS. The EDCS collectively contains the following:

- City of Auburn Engineering Design Standards (EDS).
- City of Auburn Engineering Construction Standards (ECS):
  - City of Auburn Engineering Construction Standards – Standard Details (STD DTL)
  - City of Auburn Engineering Construction Standards – General Special Provisions (GSP)
  - City of Auburn Engineering Construction Standards – Technical Special Provisions (TSP)

These standards undergo periodic updates, with the most recent revision in 2024. The City's 2024 design standards and construction specifications related to the water system are outlined in Appendix P. Additionally, this plan incorporates relevant sections of the City's current construction standards, including materials, methods, and standard details applicable to the construction of water system appurtenances.

For detailed information, the latest versions of the collective EDCS are accessible for view on the City's Public Works web page.

Table 7-1 lists sections of the EDCS sections for the specifications, drawing standards, and special conditions of water main installations, extensions, and replacements. Standards for supply sources, reservoirs, pump stations, and water treatment facilities are not presented due to the complex nature of these facilities. For

those projects, the City will seek approval from DOH through the submittal process outlined in WAC 246-290-110 and 246-290-120.

Table 7-1 | Water Main Design and Construction Standards

Specifications for:	
Pipe material and pipe class. ANSI/NSF Standard 61 certified materials required for all pipes.	EDS Section 7.01.02
Disinfection procedures (include de-chlorination or chlorinated water disposal specifications).	TSP – 7.09.3(24)
Pipe bedding and installed depth of bury.	EDS Section 9.05
Bacteriological testing.	TSP – 7.09.3(24)N
Pressure and leakage testing.	TSP – 7.09.3(23)
Separation from sewer mains, non-potable conveyance systems, and other buried utilities.	EDS Section 6.02
Valve spacing.	EDS Section 7.03
Construction Drawings Standards	
Plan and profile views drawn to a particular scale	EDS Sections 3.03, 3.04 & 3.04.07
Easement locations and dimensions	EDS Sections 2.02, 3.04 & 3.04.07.B, 6.01, 7.01.04, 7.01.05, 7.02.01, 7.03 and STD DTL W-06.3, W-22.2, W-23.3,
Appurtenant Design Standard Drawings	
Pipeline trench cross-section, including pipe bedding, backfill, compaction, and road restoration standard details	STD DTL T-01
Hydrants (for fire, flushing)	STD DTL W-07, W-08
Valves	STD DTL W-17, W-18, W-19
Service Meters	STD DTL W-15, W-16, W-16a
Service lines and service connection to main	STD DTL W-9, W-13, W-14
Air relief, vacuum relief, and combination air-vacuum relief valve and valve vault	STD DTL W-02
Pressure reducing valve stations	Submittal review (project specific)
Thrust blocking	STD DTL W-01
Backflow prevention assemblies	STD DTL W-21, W-22, W-23, W-24, W-25
Blow-offs	STD DTL W-03, W-04
Special Conditions	
Pipeline corrosion mitigation measures	TSP 7.09.03(25)
Potable/non-potable pipeline crossing construction details	EDS Section 6.02
Stream-crossing construction details	N/A
Individual service booster pumps	N/A
Temporary water service (i.e., employed during water main replacement or emergency repair)	N/A

7.4 Construction Certification

Construction work aimed at improving City roads and utilities, whether initiated by private developers or the City itself, must adhere to approved contract documents. City approval is mandatory for any modifications to approved plans before implementation, especially for work within the public right-of-way (ROW) or designated easements. Compliance with general WSDOT/APWA Standard Specifications, approved plans, and the City's EDCS is strictly enforced.

Prior to the start of construction, a pre-construction meeting must be held by the City and the developer, contractor, and/or designated representative. Pre-construction meetings establish the first touch point between the City and developer/contractor to discuss the schedule, certain unique aspects of the work, any special restrictions, and general coordination and communication protocols. Consistent presence of the approved set of plans with redline markups identified and requisite permits at the job site during construction is a shared responsibility of the City, the developer, and the construction contractor. The City exercises its authority to enforce standards through appointed project engineers, assistants, and inspectors, ensuring collective adherence to specified standards. Inspections, test measurements, and actions outlined in the City's Development Guidelines and Public Works Standards are pivotal. Post-construction, the submission of as-built drawings is mandated.

Non-compliance with approved project documents can lead to stop-work orders and potential removal of completed elements, subject to penalties established by ordinance. The project's conclusive status is granted only when the City issues a formal letter of acceptance to the responsible party.

Upon completion of construction activities related to the water system, including disinfection, flushing, and pressure testing for water mains, a construction completion report must be submitted. This document becomes part of the project records, and the release of water meters for any lot or building linked to a project is contingent upon final acceptance.

CHAPTER 8

Capital Improvements Program

This chapter's objective is to develop a cohesive Capital Improvement Program (CIP) for the City of Auburn (City) by summarizing and prioritizing all capital projects identified in the previous chapters. The CIP provides a comprehensive accounting of capital projects needed to continue consistent, efficient water supply to the City's Retail Water Service Area (RWSA) through the 20-year planning horizon. The recommended projects were developed in coordination with City staff.

Projects identified as part of the City's asset management program that are anticipated to cost greater than $50,000 were included as capital projects. The capital projects discussed in Section 8.2 include water supply and storage improvements, improvements to the distribution system, and upgrades or replacement of aging facilities and distribution piping as discussed in Chapter 3.

Projects were allocated to the 10-year (2025 to 2034) and 20-year (2035-2044) planning horizons. Planned projects coincide with the City's current Capital Facilities Plan (CFP) and have been placed into specific years for planned completion. These timeframes are intended to be a framework for future funding decisions that directs when future actions and decisions are intended to occur. However, these timeframes are estimates, and depending on factors involved in the processing of applications and project work, and availability of funding, the timing may change from the included timeframes. The framework does not represent actual commitments from the City, which may depend on funding and staffing resources available.

8.1 Prioritization

8.1.1 Project Identification

Capital projects are organized into two categories to help provide a better understanding of the primary project driver as follows:

- Capacity Projects (CAP): These projects are needed to expand infrastructure capacity to meet increased demands associated with current deficiencies or projected growth.
- Non-Capacity (Non-CAP): These projects are needed to address aged and/or obsolete equipment to maintain and/or improve the reliability of the infrastructures system. These projects are needed to improve existing infrastructure for reasons other than capacity.

The capital projects are also identified and grouped into categories based on the infrastructure they are focused on. Each project is assigned an identification number (Project ID) with the following ID prefixes:

- Supply (S): These projects are associated with the City's water supply sources and treatment facilities.

- Storage (R): These projects are associated with the City's storage reservoirs or allow modifications in the system impacting reservoir storage transfer throughout the RWSA.
- Pump Stations (PS): These projects are associated with the City's pump stations or booster pump stations (BPS).
- Distribution (D): These projects are associated with the City's transmission and distribution piping systems.
- General Improvements (G): General improvement projects do not fit into the other categories and may be broader, impacting multiple components of the City's water system.

8.1.2 Prioritization Factors

The capital projects for the facilities improvements were prioritized based on system deficiencies, safety concerns, maintenance or capacity requirements, and regulatory requirements.

The capital projects for the capacity driven distribution system improvements were prioritized based on the fire flow availability; projects resolving the largest deficits were prioritized higher, and as such are planned to be completed sooner than projects resolving smaller deficits. The capital projects for the condition driven distribution improvements were prioritized based on the existing pipe age, size, and material. More details are discussed in Chapter 3.

The priority order of these improvements is reflected in the schedule of improvements, which is presented in Section 8.3 and Appendix W.

8.1.3 Estimated Costs

"Active projects" are projects that are currently underway for completion. The project costs presented include total project costs for the current and future years and are presented in 2024 dollars.

For projects already included in the City's 2023 CFP, it was assumed that the project cost in 2024 dollars remains the same, unless the costs were identified as needing to be reassessed.

For planned capital projects identified in the 2015 WSP that have not been completed and are not included in the City's 2023 CFP, the project costs were escalated from 2014 dollars as presented in the 2015 WSP to 2024 dollars using the Engineering News Record (ENR) Construction Cost Index (CCI).

For all other projects that were newly identified, modified, or reassessed, planning-level project cost estimates were developed for the improvements using average costs from RSMeans, HeavyBid Construction Cost Data, recent City of Auburn project bid tabs, City input, industry experience, and local contractor and supplier costs. These project costs are planning-level estimates and are categorized as Class 5 estimates, as defined by the Association for the Advancement of Cost Engineering (AACE) International:

> *Class 5 estimates are generally prepared based on very limited information, and subsequently have wide accuracy ranges. As such, some companies and organizations have elected to determine that due to the inherent inaccuracies, such estimates cannot be classified in a conventional and systemic manner.*
>
> *Class 5 estimates are prepared for any number of strategic business planning purposes, such as but not limited to market studies, assessment of initial viability, evaluation of alternate schemes, project*

screening, project location studies, evaluation of resource needs and budgeting, long-range capital planning, etc.

Typical accuracy ranges for Class 5 estimates are -50 % to -20% on the low side and +30% to +100% on the high side, depending on the construction complexity of the project, appropriate reference information and other risks (after inclusion of an appropriate contingency determination). Ranges could exceed those shown if there are unusual risks.

All project descriptions and cost estimates in this WSP represent planning-level accuracy and opinions of costs (-50 percent to +100 percent).

During the pre-design phase of each project, the project definition, scope, and specific information (e.g., pipe length and diameter, roadway restoration requirements, permitting requirements) should be verified. The final cost of individual projects will vary depending on actual labor and material costs, site conditions, market conditions, regulatory requirements, project schedule and other factors. Because of these factors, project feasibility and risks must be carefully reviewed prior to making specific financial decisions or establishing project budgets to support proper project evaluation and adequate funding.

Total estimated project costs were developed through a progression of steps and multiple methodologies. The steps included development of component unit costs, construction costs and, finally, total project costs. The component unit cost includes the sum of materials, labor and equipment of a project's basic features. The construction cost is the sum of component costs and construction markups, which includes a 30 percent allowance for contingency and 10.2 percent for sales tax. The total project costs presented is the sum of construction costs with the following additional allowances:

- 15 percent for City management, survey, legal, and project administration.
- 15 percent engineering design.
- 15 percent construction management and inspection.

The following costs are not included, unless specifically noted:

- Land or right-of-way acquisition.
- Maintenance expenses.
- Operation expenses.

All cost estimates were developed as total project costs in March 2024 dollars. In Table 8-10, costs have been inflated and escalated using an annual increase rate from 2024 dollars to their planned implementation year. For projects that will be designed or constructed in 2024, an annual increase of eight percent was used. For projects that will be designed or constructed after 2024, an annual increase of five percent was used. For future budgeting purposes, the latest engineering news record (ENR) Construction Cost Index (CCI) can be used to project current estimates to the year of implementation. The cost estimates for the Auburn area used the ENR CCI in Seattle of 15,477 (March 2024).

8.1.3.1 Pipeline Component Unit Costs

The pipelines unit costs were developed using recent City construction bid tabs assuming the use of ductile iron pipe and a typical cover depth of four feet. The estimated unit cost is provided by pipe diameter per linear foot of pipe in Table 8-1, which includes the cost for the pipe, trench, roadway restoration, appurtenances, installation, and direct construction markups. As the diameter of pipe and the trench width increase, the costs also increase.

Table 8-1 | Water Pipeline Construction Costs per Linear Foot

Pipe Diameter (inch)	Unit Construction Cost ($/linear foot)
8	$490
10	$510
12	$520
14	$570
16	$630
18	$730
20	$780
24	$880

8.1.3.2 Reservoir Component Unit Costs

Reservoir (storage tank) unit costs were determined based on the tank volume in gallons. Conceptual costs for tanks vary based on the material of storage: prestressed concrete and welded steel being the most common options. Unit costs for the different reservoir options are presented in Table 8-2 in terms of cost per gallon of storage. The unit costs do not include site piping, site improvements, land acquisition, repair, or recoating. Storage reservoir costs are sensitive to site-specific geotechnical and seismic considerations. A tank siting study is necessary whenever a new tank project is initiated to obtain the information required to inform the design.

Table 8-2 | Reservoir Tank Construction Costs per Gallon

Tank Material	Unit Construction Cost ($/gallon)
Prestressed Concrete	$1.50
Welded Steel	$1.25

8.2 Capital Improvement Program Summary and Schedule

8.2.1 Completed Projects

The following projects have been completed since 2015 WSP was completed:

- S-01: Onsite Improvements Projects, completed in 2016.
- S-02: Emergency Power Improvements Project, completed in 2016.
- S-17: West Hill Springs Flow Control Improvements, completed in 2017.
- S-19: Fulmer Field Improvements Project, completed in 2018.
- R-01: Lakeland Hills Reservoir 5 Improvements, completed in 2016.
- D-03: SCADA Upgrades, completed in 2015.
- D-10: Pipeline Asset Management Study, completed in 2020.
- D-13: Lea Hill PRV Station Improvements, completed in 2018.
- D-14: Valley AC Main Replacement, completed in 2015.
- PS-03: Green River Pump Station Emergency Power, completed in 2020.
- PS-07: Academy Pump Station No.1 Improvements, completed in 2023.
- G-06: Muckleshoot Indian Tribe (MIT) Casino Master Meters, completed in 2016.
- G-09: Water Meter & Billing System Improvements, completed in 2018

The following projects have been eliminated since 2015 WSP was prepared:

- G-05 - Utilities Field Operations Center: This project was replaced with a more comprehensive upgrade to the City's Operations and Maintenance Facilities as reported in the 2021 Limited Comprehensive Plan Update.

- D-12 - Academy Transmission Replacement: This project was eliminated, after further investigation found no issues with the existing pipeline.

- D-15: Braunwood Transmission: This project was split from Reservoir Seismic Rehabilitation (R-06) identified in the 2015 WSP. This project was originally planned to incorporate the Braunwood Satellite System, however after further evaluation, there is not a business case to support this project. Instead, it is replaced in this WSP with a mechanical upgrades project for the Braunwood Pump Station to maintain operation. The potential for incorporation of the Braunwood Satellite System may be more viable in the future pending potential development in the southern portion of the City's RWSA.

- D-16 - Game Farm Park Transmission: This project was originally planned to allow for the decommissioning and removal of the Game Farm Park Pump Station, however after further evaluation, there is not a business case to support this project. Instead, it is replaced in this WSP with a mechanical upgrades project to maintain operation of the Game Farm Park Pump Station. Elimination of the Game Farm Park Pump Station may be more viable in the future pending potential development in the southern portion of the City's RWSA.

- S-12 - West Hill Springs Water Quality Improvements: The City had planned to replace the aging West Hill Springs chlorination building and equipment with a new liquid chlorination system. However, since this project is not required to meet regulatory requirements and after further review of the City's Financial Program, this project was eliminated to prioritize projects required to resolve deficiencies. This project will be completed later, likely beyond the planning horizon for this WSP.

- S-14 - Algona Well 1 Redevelopment: This project was eliminated until the Algona Well 1 Study is completed. A new capital project may be developed in the 10 to 20-year planning horizon pending the outcome of the study.

8.2.2 Active Projects

The following projects are currently underway for completion by the City and are referred to as "Active Projects" that have remaining costs to be spent in the near term:

- CP2021 - Well 4 Facility Improvements: This project was split from the Well 4 Pump Improvements project (S-22) identified in the 2015 WSP. This project includes upgrades to much of the mechanical systems at the facility.

- CP2043 - Well 4 Electrical Improvements: This project was split from the Well 4 Pump Improvements project (S-22) identified in the 2015 WSP to accommodate beneficial electrical improvements outside the original scope of the project. The well facility is over 40 years old and much of the electrical equipment is original. Upgrades to the electrical system will improve the overall efficiency of the facility.

- CP2219 - Reservoir 4 and 8 Seismic Rehabilitation: This project was split from Reservoir Seismic Rehabilitation (R-06) identified in the 2015 WSP. The City plans to install seismic control valves on outlet piping of the Lea Hill Reservoirs (4A & 4B) and Academy Reservoirs (8A & 8B). A seismic control valve isolates the reservoir to prevent catastrophic flows from the reservoir during a seismic pipe failure. This project will also address outstanding deficiencies identified in the 2022 Sanitary Survey, including vent modifications, overflow connection modifications and overflow screen repairs.

- CP2134 - Comprehensive Water System Plan Update: This project was split from identified in the 2015 WSP (G-08), which originally included updates for both 2024 and 2034. This project will be carried forward in the CIP with further WSP updates being required in 2034 and 2044.

- CP1603 - Coal Creek Springs Transmission Main Replacement: This project was identified in the 2015 WSP as project (D-11) will be completed in 2024. The project will replace the existing 24-inch diameter steel transmission main crossing the White River with a new transmission main suspended from a utility and pedestrian bridge to cross the White River.

- CP2204 - Coal Creek Springs Rehabilitation (Phase 1): The Coal Creek Springs Rehabilitation project aims to investigate the cause of low yield and identify potential upgrades to improve water production. The updates will be completed in Phase 2 of the project.

- CP2413 - Reservoir 2 Valves: This project was split from Reservoir Seismic Rehabilitation (R-06) identified in the 2015 WSP. This project will replace the existing 20-inch supply valve with a seismic control valve and replace the 12-inch drain valve at Reservoir 2. Both valves will be installed in a vault. This project was identified as a maintenance issue due to limited access to the valves. The addition of a seismic control valve will improve the resiliency of the distribution system. This project will address the outstanding deficiency identified in the 2022 Sanitary Survey by modifying the overflow connection.

- CP1914 - Cascade Water Alliance Water Purchase: This project was identified in the 2015 WSP as project (S-04) and finances System Development Charges for the right to purchase water from Tacoma Public Utilities (TPU) through the Second Supply Pipeline to meet future projected demand, based on agreements with Cascade Water Alliance. Council approved the agreements for permanent and reserve wholesale supply in September 2013, and a new agreement was executed in 2014. Budget reflects purchase of permanent supply; payments will continue through 2029.

- S-08 - Water Resources Protection Program (Wellhead Protection): This program provides annual funding for implementing strategies identified in the Wellhead Protection Plan. Although some tasks will be performed as part of the water operations budget, other tasks will require consultants with expertise in review and investigation of contaminant sites and other environmental databases, development of spill response plans, and leaking underground storage tanks. This program will continue through the 20-year planning horizon.

- R-03 - Reservoir Repair and Replacements: This is an annual program that provides budget for general reservoir maintenance and minor repairs. This program will continue through the 20-year planning horizon.

- R-05 - Reservoir Painting: This is a program that operates on a 10-year cycle to complete reservoir coatings. This program will continue through the 20-year planning horizon with the next anticipated painting project planned in 2025.

The following projects include distribution improvements identified in the 2015 WSP to be completed as part of either the Annual Distribution System Improvements Program (D-02), Water Repair and Replacement Program (D-09) or are in partnership with other City utilities and are funded by budget available in the Street Utility Improvements annual program (D-06). All three programs have been updated and will continue through the 20-year planning horizon. In total the following active projects will replace approximately 9,000 linear feet of water main in the City's system. The locations of all active distribution system improvement projects are identified in Figure 3-12 in Chapter 3.

- CP1619 - 104th Park Development (104th to 102nd Water Main Loop)
- CP2301 - 104th Avenue SE PRV Replacement
- CP2123 - C St SW Preservation
- CP2125 - D St SE and 23rd Street SE Storm Improvements
- CP2410 - 112th Pl SE Water Main Replacement
- CP1622 - Auburn Way South - Hemlock St SE to Poplar St SE
- CP2022 - Garden Avenue Realignment
- CP2210 - M Street NE Widening
- CP2116 - R Street SE Widening
- CP2308 - R St SE and 21st St SE Roundabout
- CP2315 - R St SE Preservation - 33rd St SE to 37th St SE
- CP2319 - Lea Hill Road/104th Ave SE Roundabout
- CP2404 - 12th St SE and Auburn Way South Water R&R
- CP2412 - 2025 Local Street Preservation
- 2026 Local Street Preservation

The following active projects were not identified in the 2015 WSP:

- CP2405 - Fulmer Treatment Facility VFD Replacements: The variable frequency drive (VFD) for pumps 1 and 2 at Fulmer Corrosion Control Treatment Facility (CCTF) were installed in 2002. They are at the end of their useful life and require replacement as repair parts are no longer available.

- CP2329 - Coal Creek Springs Flowmeter Replacement: The project will replace existing source meters on the Coal Creek Springs collectors to improve the accuracy and frequency of production readings.

- Algona Well 1 Study – Phase 1: The project will conduct a preliminary assessment of options to utilize the existing water right.

- Valley Service Area Reservoir No. 3 Siting Analysis: The project will conduct a siting analysis to identify and evaluate possible locations for the new reservoir.

- Braunwood Pump Station Assessment: The project will identify process mechanical upgrades necessary to continued operation. The project will also evaluate roofing replacement material options and costs.

- Coal Creek Springs Rehabilitation – Phase 1: The project will investigate the cause of reduced production from Coal Creek Springs and recommend improvements to increase production capacity.

8.2.3 Capital Improvement Projects

The following projects identified in the 2015 WSP have not been completed since the WSP was prepared, but have been revisited and are discussed in detail in the following sections for completion during this planning period. The timing of most projects has been adjusted based on the City's financial analysis and project prioritization updates.

- S-03 - Well 7 Back-Up Power: Delayed to 2032 since Well 7 has been offline due to high levels of Manganese. The timing of this project will be aligned with the completion of the Well 7 Treatment Phase 1 project (S-15) that will allow the Well to resume operation.
- S-06 - Well 5/5A Upgrades: Delayed from 2022 to 2026.
- S-07 - Well Inspection and Redevelopment Program: Delayed from 2015-2033 to 2026.
- S-09 - Coal Creek Springs Rehabilitation: Delayed from 2018 to 2027 based on awaiting results of ongoing investigations to identify the cause and possible solutions to improve production from Coal Creek Springs. The timing of this project may be adjusted pending results of the on-going investigation.
- S-11 - Wells 3A/3B Treatment: Delayed from 2035 to 2036.
- S-13 - Algona Well 1 Study: Delayed from 2015 to 2039.
- S-15 - Well 7 Treatment Phase 1: Delayed from 2022 to 2030 based on City financial analysis and updated project prioritization.
- S-16 - Well 7 Treatment Phase 2: Moved forward from 2035 to 2033.
- S-18 - Howard Road CCTF Expansion: Delayed from 2025 to 2032. The timing of this project must be aligned with the completion of the Coal Creek Springs Rehabilitation project, as its purpose is to provide increased treatment capacity to accommodate increased flows from Coal Creek Springs.
- S-20 - Well 2 Replacement: Moved forward from 2035 to 2030.
- S-21 - Coal Creek Springs Chlorination Building Replacement: Moved forward from 2035 to 2030.
- R-04 - Valley Service Area Reservoir No. 3: Delayed from 2025 to 2041.
- R-07 - Reservoir Capital Improvements: Delayed from 2025 to 2027 to avoid timing conflicts with other current projects at Reservoirs 4A, 4B, and 8A.
- R-07 - Braunwood Reservoir Improvements: Separated from "Reservoir Capital Improvements" project and delayed from 2025 to 2039.
- PS-04 - Intertie Booster Pump Station Improvements: Delayed from 2021 to 2024.
- PS-09 - Game Farm Park Pump Station Mechanical Upgrades: Replaces original project 'Game Farm Park Pump Station/Distribution System Improvements. Delayed from 2025 to 2034.
- PS-10 - Lea Hill Pump Station Replacement: Delayed from 2025 to 2027 to avoid conflicts with concurrent work in area being completed as part of a separate project.

- G-08 - Comprehensive Water System Plan Update: This project was split into two separate completion years for future updates (2034 and 2044).

Based on the information provided by the City, information included in the 2023 CFP, asset management program input, and results of the system capacity analysis provided in **Chapter 3**, the following new projects were identified that are included in the CIP and are discussed in further detail below:

- Rehabilitate & Clean Wells 2 and 6 (3-year Cycle).
- On-Site Chlorine Generation Systems (OSEC) at Wells 1 and 4.
- Academy PRV Project.
- Braunwood Pump Station Mechanical Upgrades.
- Water Trench Patches Program.
- West Hill Springs Transmission Main Replacement.
- Lea Hill 648 Zoning Adjustment.

8.2.3.1 Water Supply

The City's water supply strategy details both project sizing and timing. A summary of the 0 to 10-year and 10 to 20-year capital projects recommended for securing adequate supply to meet the system's future demands are presented in **Table 8-3**. Project IDs have been revised to reflect the updated prioritization and planned timing of projects presented in this WSP. Previous project IDs from the 2015 WSP as presented above will be discontinued for clarity purposes. Active projects identified above are not discussed in detail as they are already well defined and in progress.

8.2.3.1.1 Cascade Water Alliance Water Purchase (S-01)

Financing to purchase water from Tacoma Public Utilities (Tacoma) to meet water demands is based on an agreement with Cascade Water Alliance (Cascade), which had purchased water supply from Tacoma. The Council approved the agreement for permanent wholesale supply in September 2013. The agreement provides an additional 3.32 mgd of supply during the peak day and 1.5 mgd of average day supply. The City's permanent and reserve agreement requires System Development Charges (SDC) payments of $21,073,743 between 2017 and 2029. A total of $934,810 of payments will continue from 2023 through 2029. The SDC costs will decrease if less than the full reserve amount is purchased. The project ID was previously S-04 in the 2015 WSP.

8.2.3.1.2 Water Resources Protection Program (Wellhead Protection) (S-02)

Annual funding for implementing strategies identified in the Wellhead Protection Plan. Although some tasks will be performed as part of the water operations budget, other tasks will require consultants with expertise in review and investigation of contaminant sites and other environmental databases, development of spill response plans, and leaking underground storage tanks. The project ID was previously S-08 in the 2015 WSP.

8.2.3.1.3 Rehabilitate & Clean Wells 2 and 6 (3-year Cycle) (S-3)

Rehabilitation work completed in 2013-2014 indicated it would be beneficial to clean and rehabilitate both wells on a regular basis to improve production capacity and pumping efficiencies. Cleaning was completed in 2020 and again in late 2023/early 2024. This program was originally established as a 5-year cycle, however based on more recent evidence, more frequent cleaning is required. Cleaning and rehabilitation for Wells 2 and 6 will be performed over a 3-year cycle. This program was not identified in the 2015 WSP.

8.2.3.1.4 Well Inspection and Redevelopment Program (S-04)

The City allocates annual funding for investigations and redevelopment of supply wells and springs necessary to support production at maximum capacity for efficient utilization. This program is to be used for production wells and spring collectors, and is not intended to finance the replacement of pumps, motors, buildings, etc. The project ID was previously S-07 in the 2015 WSP.

8.2.3.1.5 On-Site Chlorine Generation Systems (OSEC) at Wells 1 and 4 (S-05)

The existing liquid chlorine (sodium hypochlorite) used at Wells 1 and 4 degrades during low winter demand periods when the volume used is much lower and product turnover is decreased. This results in more chemical consumption to achieve the same chlorine dose which is not cost effective. The hypochlorite systems will be replaced with on-site chlorine generation systems sized to meet peak summer demands while providing flexibility during winter months. This project was not identified in the 2015 WSP.

8.2.3.1.6 Fulmer CCTF Replace On-Site Chlorine Generation System (OSEC) (S-06)

The existing on-site chlorine generating equipment was installed in 2002. The generation cell was replaced in 2012. Sourcing parts for equipment repairs has become increasingly difficult due to the equipment age. An analysis performed in 2018 comparing chlorine alternatives indicated that on-site generation has the lowest overall cost. This project will replace the entire generation system. The chlorination system will be sized to accommodate future production from Well 7.

8.2.3.1.7 Well 5/5A Upgrades (S-07)

Well 5 needs significant improvements including a new building, a backup generator, chlorination, and a hydrologic investigation to evaluate observed decreased production. Due to the small size of the existing site, the acquisition of an adjacent parcel may be required. Additionally, the project will address the recommended Capital Improvements identified in the 2014 Facility Evaluation Study (CIP Project G-01), including a new pump at Well 5 and new pump and motor at Well 5A. Additional upgrades may be identified in the hydrologic investigation; therefore, the cost of this CIP item should be revisited upon completion of the study. This project will also include improvements to address outstanding deficiencies identified in the 2022 Sanitary Survey, including modifications to the pump waste line for Well 5 and addressing water accumulation in the vault at Well 5A. The project ID was previously S-06 in the 2015 WSP.

8.2.3.1.8 Coal Creek Springs Rehabilitation – Phase 2 (S-08)

Complete rehabilitation of the Coal Creek Springs collectors to improve production capacity resulting in greater utilization of the water right. Improvements are to be defined by the outcomes of the 2023/2024 hydrogeologic study currently being completed as Phase 1 (S-04). Additional upgrades may be identified in the hydrologic investigation; therefore, the cost of this CIP item should be revisited upon completion of the study.

8.2.3.1.9 Coal Creek Springs Chlorination Building Replacement (S-09)

Coal Creek Springs chlorination building was identified as requiring replacement in the 2013 Facility Evaluation Study. Additionally, the project will upgrade the source treatment from chlorine gas to a liquid sodium hypochlorite disinfection system. Sizing of the new equipment will be dependent upon capacity improvements completed as part of the Coal Creek Springs Rehabilitation Project. A new building will be constructed to house the equipment. The project ID was previously S-21 in the 2015 WSP.

8.2.3.1.10 Well 7 Treatment Phase 1 (S-10)

Well 7 is not operational due to high manganese levels. Manganese treatment is required to allow operation of this facility to be restored and to utilize the full water right for this well. Due to space limitations at the Well 7 site, the treatment facilities will be added at the Fulmer Field CCT Facility. The treatment facility will be installed in two phases. The first phase will provide 2.5 mgd of capacity. Additionally, phase 1 of the project will address the recommended improvements to the Fulmer Field CCT Facility identified in the 2013 Facility Evaluation Study, including a new pump and motor. The project ID was previously S-15 in the 2015 WSP.

8.2.3.1.11 Well 2 Replacement (S-11)

The Fulmer Well Field Improvement project found that Well 2 can continue to serve the City but would need to be replaced to resolve ongoing operational challenges. This project includes installation of a new large diameter well. It is assumed that the well will remain on its existing site, or other City-owned property. The project ID was previously S-20 in the 2015 WSP.

8.2.3.1.12 Howard Road CCTF Expansion (S-12)

The inflow to the Howard Road CCTF will increase with the completion of the Well 1 Improvements project in 2016 and planning production improvements for Coal Creek Springs Collector Improvements. The existing facility will be expanded to its full capacity to provide additional treatment capacity and redundant pump capacity to match increased flows. Additionally, the project will address the recommended improvements to Howard Road CCTF identified in the 2013 Facility Evaluation Study, including a new pump and motor. The expansion will include an additional aeration tower and a pump to match existing. The project ID was previously S-18 in the 2015 WSP.

8.2.3.1.13 Well 7 Back-up Power (S-13)

Well 7 is currently out of service, but the City has plans to bring the facility back online once manganese treatment is provided as part of the Well 7 Treatment Phase 1 Project. Without back-up power to its pumps, Well 7 is not considered a reliable source of supply for the Valley Service Area. The City has limited land available at the Well 7 site, therefore, backup power will be installed at the Fulmer Field CCT Facility. The project also includes installing underground electrical transmission capability between Well 7 and the Fulmer Field CCT Facility. The project ID was previously S-03 in the 2015 WSP.

8.2.3.1.14 Well 7 Treatment Phase 2 (S-14)

Well 7 Treatment Phase 2 will complete the manganese treatment facilities at the Fulmer Field CCT Facility to allow year-round use of Well 7. Phase 2 will add 2.5 mgd of treatment for a total capacity of 5.0 mgd. The project ID was previously S-16 in the 2015 WSP.

8.2.3.1.15 Wells 3A/3B Treatment (S-15)

Wells 3A and 3B are not operated due to high manganese levels. Manganese treatment is required to allow these wells to be used, which would add 4.03 mgd of instantaneous flow capacity to the City's supply capabilities. The project includes manganese treatment, a new well and treatment building, well pumps, and onsite backup-power. Additionally, a new sodium hypochlorite system for chlorination will be installed. The project ID was previously S-11 in the 2015 WSP.

Table 8-3 | Prioritized Water Supply Improvement Projects

Project Name	Project ID	Project Timing	Added Qi Capacity (mgd)	Estimated Cost 2024 USD	Brief Project Description
0 to 10-Year Planning Horizon					
Cascade Water Alliance Water Purchase	S-01	2024-2029	3.32	$5,608,860	The agreement provides an additional 3.32 mgd of supply during the peak day and 1.5 mgd of average day supply.
Water Resources Protection Program (Wellhead Protection)	S-02	2024-2044 (Annual)		$1,287,700	Annual funding for Wellhead Protection activities.
Rehabilitate & Clean Wells 2 and 6 (3-year Cycle)	S-03	2025-2044		$1,750,000	3-year cycle program to clean and rehab Wells 2 and 6.
Well Inspection and Redevelopment Program	S-04	2026-2027		$420,000	Annual funding allocation for investigations and redevelopment of wells and springs to maximize production capacity.
On-Site Chlorine Generation Systems (OSEC) at Wells 1 and 4	S-05	2026-2027		$275,000	Replace liquid hypochlorite systems with on-site generation systems.
Fulmer CCTF Replace On-Site Chlorine Generation System (OSEC)	S-06	2026-2027		$500,000	Replace aged on-site chlorine generation equipment.
Well 5/5A Upgrades	S-07	2026-2028		$2,715,000	New building, back-up generator, chlorination, and a hydrologic investigation to evaluate the reasons for decreased production.
Coal Creek Springs Rehabilitation – Phase 2	S-08	2027-2030	4.32	$5,337,000	Rehabilitation of the Coal Creek Springs collectors to improve production.
Coal Creek Springs Chlorination Building Replacement	S-09	2030-2031		$2,081,000	Replace chlorination system and building at Coal Creek Springs Facility with hypochlorite disinfection system.
Well 7 Treatment Phase 1	S-10	2030-2032	2.5	$10,097,000	Requires manganese treatment facilities
Well 2 Replacement	S-11	2030-2031	3.46	$1,960,000	Replace Well 2 to resolve ongoing operational challenges.
Howard Road CCTF Expansion	S-12	2032-2033		$1,450,000	Expand the facility to its full capacity (including an additional aeration tower and pumps).
Well 7 Back-Up Power	S-13	2032-2033		$2,075,000	Provide back-up power for this source.
Well 7 Treatment Phase 2	S-14	2033-2035	2.5	$8,054,000	Requires completion of manganese treatment facilities.
10 to 20-Year Planning Horizon					
Wells 3A/3B Treatment	S-15	2036-2038	4.03	$13,945,000	Provide manganese treatment for well operation
Algona Well 1 Study – Phase 2	S-16	2039		$250,000	Evaluate possible uses of water right.
Subtotal				**$57,805,560**	

8.2.3.1.16 Algona Well 1 Study – Phase 2 (S-16)

Algona Well 1 has been abandoned and all related facilities removed. This project will study possible options to utilize the existing water right. One option may be to redevelop the well on-site at its previous location. Another alternative may be to pursue an alternative well location or how to use the water right at another existing facility. The project does not include the development of design, permitting or construction of well infrastructure. The project ID was previously S-13 in the 2015 WSP.

8.2.3.2 Storage

Table 8-4 provides a summary of the planned reservoir projects. Project IDs have been revised to reflect the updated prioritization and planned timing of projects presented in this WSP. Previous project IDs from the 2015 WSP as presented above will be discontinued for clarity purposes. Active projects identified above are not discussed in detail as they are already well defined and in progress.

8.2.3.2.1 Reservoir Repair & Replacements (R-01)

The City has allocated an annual capital expenditure for general reservoir maintenance and minor improvements. Projects are identified by the City on an as-needed basis. The project ID was previously R-03 in the 2015 WSP.

8.2.3.2.2 Reservoir Painting (10-year Cycle) (R-02)

The City plans to paint the welded steel reservoirs to extend their useful life. This program finances the painting of two reservoirs every 10 years. The project ID was previously R-05 in the 2015 WSP.

8.2.3.2.3 Academy PRV Project (R-03)

A new PRV facility will be located to rezone a portion of the Valley 242 pressure zone to the Academy 350 pressure zone to resolve fire flow deficiencies in the area. This PRV facility will also allow storage transfer from the Academy Service Area where this is surplus storage to the Valley Service Area to resolve 2034 storage deficit projections, allowing for more system flexibility. The PRV facility location is assumed to be in a cul-de-sac where U St SE meets 28th St SE but will be confirmed during design. The PRV vault is assumed to house a 2-inch PRV for low flows (normal operation) and a 6-inch PRV for fire flows. This project was not identified in the 2015 WSP.

8.2.3.2.4 Reservoir Capital Improvements (R-04)

The 2013 Facility Evaluation Study identified improvements to reservoir facilities based on the condition and remaining useful life of the assets within the facilities. Improvements were identified at Reservoir 1, Reservoir 4A & 4B, and Reservoir 8A & 8B. The project ID was previously R-07 in the 2015 WSP.

8.2.3.2.5 Braunwood Reservoir Improvements (R-05)

The 2013 Facility Evaluation Study identified improvements to reservoir facilities based on the condition and remaining useful life of the assets within the facilities. Improvements were identified at the Braunwood Reservoir and were previously included in Reservoir Capital Improvements project (R-07) in the 2015 WSP.

8.2.3.2.6 Valley Service Area Reservoir No. 3 (R-06)

To meet future storage requirements in the Valley Service Area, it is recommended that a new, 2-MG storage reservoir. A siting study should be conducted to identify the preferred reservoir location and other details; it is assumed that the reservoir will be in the northeast portion of the Valley 242 pressure zone.

Property acquisition is expected to be required and an allowance of $1M is included in the project budget. The project ID was previously R-04 in the 2015 WSP. It was assumed that the new reservoir will be a prestressed concrete tank, however this should be confirmed during the siting study.

Table 8-4 | Storage Improvements Projects

Project Name	Project ID	Project Timing	Added Storage (MG)	Estimated Cost 2024 USD	Brief Project Description
0 to 10-Year Planning Horizon					
Reservoir Repair & Replacements	R-01	2024-2044 (Annual)		$1,392,000	Annual program for reservoir maintenance and minor improvements.
Reservoir Painting (10-year Cycle)	R-02	2025-2044		$3,500,000	Required for maintenance and reservoir longevity in both Academy and Lea Hill service areas.
Academy PRV Project	R-03	2027		$470,000	PRV for storage transfer and rezoning to meet fire flow demands.
Reservoir Capital Improvements	R-04	2027		$470,000	Improvements to Reservoir 1, Reservoir 4A&4B, Reservoir 8A&8B based on the condition and remaining useful life.
10 to 20-Year Planning Horizon					
Braunwood Reservoir Improvements	R-05	2039-2040		$250,000	Improvements based on condition and remaining useful life.
Valley Service Area Reservoir No. 3	R-06	2041-2044	2.0	$11,745,000	Required to meet future storage requirements in the Valley service area.
Subtotal				**$17,827,000**	

8.2.3.3 Pump Stations

Table 8-5 provides a summary of the planned pump station projects. Project IDs have been revised to reflect the updated prioritization and planned timing of projects presented in this WSP. Previous project IDs from the 2015 WSP as presented above will be discontinued for clarity purposes. Active projects identified above are not discussed in detail as they are already well defined and in progress.

8.2.3.3.1 Intertie Pump Station/Lea Hill BPS Improvements (PS-01)

The Lea Hill BPS serves the closed 648 Pressure Zone and does not have sufficient capacity to meet fire flow requirements under current or future demand projections. To meet fire flow requirements, an additional 2,500 gpm of firm capacity is required. The Lea Hill BPS and that Intertie Pump Station share a building. To increase capacity of the Lea Hill PS, the project will provide additional piping and modify the existing Intertie Pump Station/Lea Hill BPS building to utilize the existing Intertie Pump Station pumps to serve the Lea Hill 648 pressure zone. The project will also add pressure reducing valves and control valves at Lea Hill reservoirs, and system valves to provide efficient operation of the 132nd Ave Tacoma Intertie. On-site back-up power improvements for the Lea Hill BPS are also included to improve facility reliability.

In the 2015 WSP, this project also included distribution system improvements to rezone a portion of the Lea Hill Service Area; this work has been shifted to a separate project titled the Lea Hill 648 Zoning Adjustment project. This project ID was previously PS-04 in the 2015 WSP.

8.2.3.3.2 Lea Hill Pump Station Replacement (PS-02)

The Lea Hill Pump Station will be reconstructed to provide redundant pumped supply to the Lea Hill area. If the Green River Pump Station is out of service for maintenance, a redundant pump station would avoid the need to purchase more expensive regional surface water through the 132nd Intertie. The pump station needs to be relocated from its current location on the shoulder of Lea Hill Road at the base of a steep hill for safety and reliability considerations. Two separate active projects (Garden Avenue Realignment and Lea Hill Roundabout) will construct approximately 900 feet and 835 feet of 12-inch diameter transmission main respectively, that is required for the future pump station. The project ID was previously PS-10 in the 2015 WSP.

8.2.3.3.3 Braunwood Pump Station Mechanical Upgrades (PS-03)

The Braunwood Pump Station is an aging facility that serves the Braunwood Satellite System. The project will include minor mechanical or electrical improvements to rehabilitate the facility for continued use. This project ID was previously PS-09 in the 2015 WSP. This project was not identified in the 2015 WSP.

8.2.3.3.4 Game Farm Park Pump Station Mechanical Upgrades Project (PS-04)

The Game Farm Wilderness Park Pump Station is an aging facility that serves the Game Farm Wilderness and recreational area. The 2013 Facility Evaluation Study identified improvements to allow continued use of the station including pump replacement and building repairs. Additional minor mechanical or electrical improvements may be warranted to rehabilitate the facility for continued use. This project ID was previously PS-09 in the 2015 WSP.

Table 8-5 | Pump Station Improvement Projects

Project Name	Project ID	Project Timing	Added Firm/Reliable Capacity (gpm)	Estimated Cost 2024 USD	Brief Project Description
0 to 10-Year Planning Horizon					
Intertie Pump Station/Lea Hill BPS Improvements	PS-01	2024-2026	2,500 gpm	$2,325,000	Expand the fire flow capacity of the Lea Hill BPS by connecting to the Intertie PS pumps.
Lea Hill Pump Station Replacement	PS-02	2027-2029		$6,365,000	Decommission and replace the pump station at the end of its usable life.
10 to 20-Year Planning Horizon					
Braunwood Pump Station Mechanical Upgrades	PS-03	2034-2035		$250,000	Rehabilitate Pump Station to allow continued use.
Game Farm Park Pump Station Mechanical Upgrades	PS-04	2034-2035		$250,000	Rehabilitate Pump Station to allow continued use.
Subtotal				**$9,190,000**	

8.2.3.4 Distribution System

The City's water distribution system will require many improvements to address fire flow deficiencies identified by the system analysis presented in **Chapter 3**. Additionally, the City has undersized, and aging piping within the water system that needs to be replaced to reduce the risk of breaks and leaks. The identified distribution system improvements programs are described below and summarized in **Table 8-7**.

Project IDs have been revised to reflect the updated prioritization and planned timing of projects presented in this WSP. Previous project IDs from the 2015 WSP as presented above will be discontinued for clarity purposes. Active projects identified above are not discussed in detail as they are already well defined and in progress.

8.2.3.4.1 Annual Distribution System Improvements Program (D-01)

The Annual Distribution System Improvements Program is focused on capacity related improvements to the City's water distribution system as identified in **Figure 3-12** and **Table 3-33** of **Chapter 3**. These improvements address deficiencies during fire flow demand scenarios. A comprehensive list of the projects and their individual estimated costs are provided in **Appendix W**. The total of all project costs is distributed across the 20-year planning horizon and will be prioritized to address the areas with the greatest deficiency first. This project ID was previously D-02 in the 2015 WSP.

8.2.3.4.2 Street Utility Improvements (D-02)

The City Street Utility program provides an annual budget to perform water main improvements in coordination with the Street Preservation programs and general arterial street improvements. By replacing water infrastructure concurrent with other utility or street improvement projects, the City can reduce overall project costs. Identified projects are anticipated to occur annually throughout the planning period. This project ID was previously D-06 in the 2015 WSP.

8.2.3.4.3 Water Repair & Replacements (D-03)

Previous WSPs identified pipelines for the City's Water Repair & Replacement program focus on replacement of old cast iron pipes, pipes under 6-inches that serve fire hydrants, dead-end mains in non-residential areas, and decommissioned duplicate pipes. The budget for this project has been re-evaluated and is revised to focus on the replacement of undersized cast iron pipe. The budget was developed focusing specifically on 4-inch diameter cast iron pipe, however the City may also allocate this budget to replace other undersized cast iron pipe within the system. **Table 8-6** summarizes the basis of the program budget using the same unit cost assumptions and allowances established in **Section 8.1.3**. The City's pipeline water repair and replacement program will be accomplished through the combination of the Street Utility Improvements (D-02) and this program. Ideally, Water Repair and Replacement and Street Utility projects will be constructed on alternating years to maintain consistent levels of capital expenditures. This project ID was previously D-09 in the 2015 WSP.

Table 8-6 | Water Repair & Replacements Cost Estimate

Length (LF)	Existing Size (inch)	New Size (inch)	Unit Cost	Component Cost	Construction Cost	Project Cost
11,740	4	8	$490/LF	$5,752,500	$8,241,000	$11,950,000

8.2.3.4.4 Water Trench Patches Program (D-04)

This program provides annual funding for roadway restoration of trench patches from water main leak repairs and water service installation that are beyond the scope of work done by City maintenance staff. This project was not identified in the 2015 WSP.

8.2.3.4.5 West Hill Springs Transmission Main Replacement (D-05)

The 2020 pipeline assessment indicated the existing cast iron transmission main is in poor condition. The main has experienced two breaks in the past. The project will replace approximately 1,250 LF of 10-inch

diameter cast iron pipe with 12-inch diameter ductile iron pipe. The project includes preliminary geotechnical investigations prior to design and construction. This project was not identified in the 2015 WSP.

8.2.3.4.6 Lea Hill 648 Zoning Adjustment (D-06)

The system capacity analysis identified deficiencies in the upper portion of the Lea Hill 563 pressure zone where the highest service elevations of the zone are located. This project includes system piping and valving modifications to rezone a portion of the Lea Hill 563 pressure zone to the Lea Hill 648 pressure zone. GIS and site verification, as well as minimal system modeling are required to verify necessary modifications.

Table 8-7 | Distribution System Improvements Projects

Project Name	Project ID	Project Timing	Estimated Cost 2024 USD	Brief Project Description
0 to 20-Year Planning Horizon				
Annual Distribution System Improvements Program	D-01	2025-2044 (Annual)	$59,699,000	Pipe improvement projects required to address system capacity deficits.
Street Utility Improvements	D-02	2025-2044 (Annual)	$24,618,000	Water main improvements concurrent with street improvements.
Water Repair & Replacements	D-03	2025-2044 (Annual)	$11,950,000	Pipe improvements to replace aging and undersized pipes.
Water Trench Patches Program	D-04	2024-2044 (Annual)	$3,360,000	Annual program for restoration following water and service leaks.
West Hill Springs Transmission Main Replacement	D-05	2024, 2026-2027	$1,401,000	Transmission piping replacement.
Lea Hill 648 Zoning Adjustment	D-06	2027	$104,000	Pressure zone modifications to address fire flow capacity deficit.
Subtotal			**$101,132,000**	

8.2.3.5 General Utility Projects

The general water system projects and their estimated costs are provided in

Table 8-8. Project IDs have been revised to reflect the updated prioritization and planned timing of projects presented in this WSP. Previous project IDs from the 2015 WSP as presented above will be discontinued for clarity purposes.

8.2.3.5.1 Water System Plan Updates (G-01, G-02)

DOH requires Water System Plans to be updated every ten years. The City has allocated budget to complete Water System Plan Updates in 2034 and 2044. The project ID for both updates was previously G-08 in the 2015 WSP.

Table 8-8 | General Water System Projects

Project Name	Project ID	Project Timing	Estimated Cost 2024 USD	Brief Project Description
0 to 10-Year Planning Horizon				
Water System Plan Update - 2034	G-01	2033-2034	$750,000	Mandated by Washington Department of Health.
10 to 20-Year Planning Horizon				
Water System Plan Update - 2044	G-02	2043-2044	$750,000	Mandated by Washington Department of Health.
Subtotal			**$1,500,000**	

8.3 CIP Summary and Schedule

Table 8-9 summarizes the total CIP cost by project categories for the 20-year planning horizon. All costs shown are in 2024 dollars. Distribution system improvements comprise more than 50 percent of the allocated costs for the CIP.

Table 8-9 | Total CIP Cost by Project Category from 2024 through 2044

Category	Total CIP Cost Summary 2024 – 2044 (2024 USD)
Supply	$60,416,013
Storage	$21,579,621
Pump Stations	$9,230,000
Distribution	$121,858,681
General	$1,750,000
TOTAL	**$214,834,315**

The results of prioritizing the improvements were used to establish an implementation schedule that can be used by the City for preparing its 20-year CIP and 6-year CFP. The implementation schedule for the active projects and planned CIP projects is summarized in **Table 8-10**. More details are included in **Appendix W**. The City uses this information to develop rates and SDC charges.

The City will schedule the water main projects in the Annual Distribution Improvements Program and Water Repair and Replacements during the annual budget process. This provides the City with the flexibility to coordinate these projects with roadway or other projects within the same area.

Table 8-10 | Capital Improvements Program Costs and Phasing

CIP ID	Name	CAP/ Non-CAP	Total Estimated Cost 2024 USD	2024	10-Year										20-Year		
					2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035-38	2039-42	2043-44
Active Projects																	
CP1619	104th Park Development (104th to 102nd Water Main Loop)	Non-CAP	$350,000	$350,000													
CP2301	104th Avenue SE PRV Replacement	Non-CAP	$390,475	$390,475													
CP2123	C St SW Preservation	Non-CAP	$1,802,075	$901,038	$901,038												
CP1603	Coal Creek Springs Transmission Main Replacement	Non-CAP	$4,450,422	$4,450,422													
CP2125	D St SE and 23rd Street SE Storm Improvements	Non-CAP	$2,285,677	$2,285,677													
CP2021	Well 4 Facility Improvements	Non-CAP	$884,822	$884,822													
CP2403	Well 4 Electrical Improvements	Non-CAP	$1,050,000	$200,000	$850,000												
CP2410	112th Pl SE Water Main Replacement	Non-CAP	$2,100,000	$255,000	$1,845,000												
CP1622	Auburn Way South - Hemlock St SE to Poplar St SE	Non-CAP	$2,398,000		$2,398,000												
CP2022	Garden Avenue Realignment	Non-CAP	$699,797	$699,797													
CP2210	M Street NE Widening	Non-CAP	$357,000	$37,000		$320,000											
CP2116	R Street SE Widening	Non-CAP	$1,762,488		$100,000	$1,662,488											
CP2308	R St SE and 21st St SE Roundabout	Non-CAP	$544,897	$61,897	$483,000												
CP2315	R St SE Preservation - 33rd St SE to 37th St SE	Non-CAP	$301,850	$301,850													
CP2319	Lea Hill Road/104th Ave SE Roundabout	Non-CAP	$850,000	$100,000		$150,000	$600,000										
CP2405	Fulmer Treatment Facility VFD Replacements	Non-CAP	$175,000	$175,000													
CP2219	Reservoirs 4 and 8 Seismic Rehabilitation	Non-CAP	$1,433,871	$1,433,871													
CP2404	12th St SE and Auburn Way South Water R&R	Non-CAP	$636,000	$318,000	$318,000												
CP2412	2025 Local Street Preservation	Non-CAP	$725,000	$65,000	$660,000												
	2026 Local Street Preservation	Non-CAP	$1,073,000	$50,000	$150,000	$873,000											
CP2329	Coal Creek Springs Flowmeter Replacement	Non-CAP	$375,017	$375,017													
CP2134	Comprehensive Water System Plan Update - 2024	Non-CAP	$250,000	$250,000													
CP2209	Coal Creek Springs Rehabilitation - Phase 1	Non-CAP	$75,614	$75,614													
CP2413	Reservoir 2 Valves	Non-CAP	$2,268,750	$68,750	$2,200,000												
	Algona Well 1 Study – Phase 1	Non-CAP	$50,000	$50,000													
	Valley Service Area Reservoir No. 3 Siting Analysis	Non-CAP	$50,000	$50,000													
	Braunwood Pump Station Assessment	Non-CAP	$40,000	$40,000													
Supply																	
S-01	Cascade Water Alliance Water Purchase	CAP	$5,608,860	$934,810	$934,810	$934,810	$934,810	$934,810	$934,810								
S-02	Water Resources Protection Program (Wellhead Protection)	Non-CAP	$1,287,700	$87,700	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	$240,000	$240,000	$120,000
S-03	Rehabilitate & Clean Wells 2 and 6 (3-year Cycle)	Non-CAP	$1,750,000		$250,000			$250,000			$250,000			$250,000	$250,000	$250,000	$250,000
S-04	Well Inspection and Redevelopment Program	Non-CAP	$420,000			$210,000	$210,000										
S-05	On-Site Chlorine Generation Systems (OSEC) at Wells 1 and 4	Non-CAP	$275,000			$100,000	$175,000										

CIP ID	Name	CAP/ Non-CAP	Total Estimated Cost 2024 USD	2024	10-Year										20-Year		
					2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035-38	2039-42	2043-44
S-06	Fulmer CCTF Replace On-Site Chlorine Generation System (OSEC)	Non-CAP	$500,000			$150,000	$350,000										
S-07	Well 5/5A Upgrades	CAP	$2,715,000			$950,000	$265,000	$1,500,000									
S-08	Coal Creek Springs Rehabilitation – Phase 2	CAP	$5,337,000				$500,000	$1,000,000	$2,000,000	$1,837,000							
S-09	Coal Creek Springs Chlorination Building Replacement	Non-CAP	$2,081,000							$520,250	$1,560,750						
S-10	Well 7 Treatment Phase 1	CAP	$10,097,000							$1,500,000	$2,597,000	$6,000,000					
S-11	Well 2 Replacement	CAP	$1,960,000							$400,000	$1,560,000						
S-12	Howard Road CCTF Expansion	CAP	$1,450,000									$450,000	$1,000,000				
S-13	Well 7 Back-Up Power	Non-CAP	$2,075,000									$414,961	$1,660,039				
S-14	Well 7 Treatment Phase 2	CAP	$8,054,000										$1,654,000	$3,800,000	$2,600,000		
S-15	Wells 3A/3B Treatment	CAP	$13,945,000												$13,945,000		
S-16	Algona Well 1 Study – Phase 2	Non-CAP	$250,000													$250,000	
Storage																	
R-01	Reservoir Repair & Replacements	Non-CAP	$1,392,000	$192,000	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	$240,000	$240,000	$120,000
R-02	Reservoir Painting (10-year Cycle)	Non-CAP	$3,500,000		$250,000	$1,500,000									$1,750,000		
R-03	Academy PRV Project	CAP	$470,000				$470,000										
R-04	Reservoir Capital Improvements	Non-CAP	$470,000				$470,000										
R-05	Braunwood Reservoir Improvements	Non-CAP	$250,000													$250,000	
R-06	Valley Service Area Reservoir No. 3	CAP	$11,745,000													$1,500,000	$10,245,000
Pump Station																	
PS-01	Intertie Pump Station/Lea Hill BPS Improvements	Non-CAP	$2,325,000	$75,000	$250,000	$2,000,000											
PS-02	Lea Hill Pump Station Replacement	Non-CAP	$6,365,000				$765,000	$3,000,000	$2,600,000								
PS-03	Braunwood Pump Station Mechanical Upgrades	Non-CAP	$250,000											$70,000	$180,000		
PS-04	Game Farm Park Pump Station Mechanical Upgrades	Non-CAP	$250,000											$70,000	$180,000		
Distribution																	
D-01	Annual Distribution System Improvements Program	CAP	$59,699,000		$400,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$3,572,636	$14,290,546	$14,290,546	$7,145,273
D-02	Street Utility Improvements	Non-CAP	$24,618,000		$601,000	$617,000	$1,300,000	$1,300,000	$1,300,000	$1,300,000	$1,300,000	$1,300,000	$1,300,000	$1,300,000	$5,200,000	$5,200,000	$2,600,000
D-03	Water Repair & Replacements	Non-CAP	$11,950,000		$150,000	$450,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$650,000	$2,600,000	$2,600,000	$1,300,000
D-04	Water Trench Patches Program	Non-CAP	$3,360,000	$160,000	$160,000	$160,000	$160,000	$160,000	$160,000	$160,000	$160,000	$160,000	$160,000	$160,000	$640,000	$640,000	$320,000
D-05	West Hill Springs Transmission Main Replacement	Non-CAP	$1,401,000	$50,000		$200,000	$1,151,000										
D-06	Lea Hill 648 Zoning Adjustment	CAP	$104,000				$104,000										
General																	
G-01	Comprehensive Water System Plan Update - 2034	Non-CAP	$750,000										$375,000	$375,000			
G-01	Comprehensive Water System Plan Update - 2044	Non-CAP	$750,000														$750,000
Total Project Cost (March 2024 USD)			**$214,834,315**	**$15,368,740**	**$13,020,848**	**$12,897,298**	**$10,674,810**	**$11,364,810**	**$10,214,810**	**$8,937,250**	**$10,647,750**	**$11,544,961**	**$9,369,039**	**$10,367,636**	**$42,115,546**	**$25,460,546**	**$22,850,273**
Cost in Future USD with Inflation/Escalation				**$15,505,949**	**$13,438,366**	**$15,356,813**	**$13,346,021**	**$14,919,117**	**$14,079,931**	**$12,934,911**	**$16,181,050**	**$18,421,739**	**$15,697,211**	**$18,238,810**	**$84,303,230**	**$61,753,697**	**$64,192,441**

CHAPTER 9

Financial Program

9.1 Introduction

This chapter was prepared by FCS GROUP to provide a financial program that allows the City of Auburn (City) water utility to remain financially viable during the planning period. This financial viability analysis considers the historical financial condition, current and identified future financial and policy obligations, operation and maintenance (O&M) needs, and the financial impacts of the capital projects identified in this Water System Plan (WSP). Furthermore, this chapter provides a review of the water utility's current rate structure with respect to rate adequacy and customer affordability.

9.2 Past Financial Performance

This section includes a historical summary of financial performance as reported by the City, including fund resources and uses arising from cash transactions.

9.2.1 Comparative Financial Statements

The City legally owns and operates a water utility. Table 9-1 shows a summary of water fund resources and uses arising from cash transactions for the previous 6 years (2017 through 2022). 2023 financial statements were not available at the time the chapter was developed. Table 9-2 shows a summary of assets and liabilities, with the difference between the two reported as "net position." Increases and decreases in net position are useful indicators of the financial position of the City's utility. Noteworthy findings and trends for the historical performance and condition of the City's water utility are then discussed.

9.2.1.1 Findings and Trends

- The City's water charges for services increased from $14.8M in 2017 to $16.5M in 2022. The average annual increase was approximately 2.2 percent per year, with a total increase of 11.4 percent from 2017 to 2022. Charges for services increase each year, except for 2019 and 2020 where revenues fell by 1.5 percent and 1.4 percent respectively. Operating Expenditures increased by $1.7M across the six years with an average annual increase of 2.8 percent. Similar to observations made in revenues, expenditures dropped in 2020 but to a greater extent, decreasing by 2.0 percent. Despite total operating expenses slightly outpacing growth in operating revenues, operating income has been positive in all years observed. 2019 and 2020 had slightly less operating income than other years, observed at $2.7M, with the remainder of the years averaging $3.1M.

- The O&M coverage ratio (total operating revenues divided by total operating expenses) was 126.3 percent in 2017. With expenses slightly outpacing revenues this metric decreased and ended 2022 at 122.8 percent. A ratio of 100.0 percent or greater shows that operating revenue will successfully cover operating expenses, and the utility has remained above this ratio for all years observed.

Table 9-1 | Summary of Historical Fund Resources and Uses Arising From Cash Transactions

	2017	2018	2019	2020	2021	2022
OPERATING REVENUES						
Charges for Service	$ 14,781,310	$ 15,293,485	$ 15,057,517	$ 14,846,679	$ 15,879,799	$ 16,459,868
Other Operating Revenue	-	600	835	835	-	-
Total Operating Revenues	$ 14,781,310	$ 15,294,085	$ 15,058,352	$ 14,847,514	$ 15,879,799	$ 16,459,868
OPERATING EXPENSES						
Operations and Maintenance	$ 3,753,573	$ 3,692,419	$ 3,789,093	$ 3,727,553	$ 3,912,937	$ 3,840,391
Administration	4,672,569	4,702,259	4,727,971	4,615,503	5,221,782	6,028,393
Depreciation and Amortization	3,269,581	3,407,933	3,848,016	3,774,956	3,826,387	3,533,926
Other Operating Expenses	8,964	-	-	-	-	-
Total Operating Expenses	$ 11,704,687	$ 11,802,611	$ 12,365,080	$ 12,118,012	$ 12,961,106	$ 13,402,710
Operating Income (Loss)	$ 3,076,623	$ 3,491,474	$ 2,693,272	$ 2,729,502	$ 2,918,693	$ 3,057,158
NONOPERATING REVENUES (EXPENSES)						
Interest Revenue	$ 104,564	$ 178,271	$ 261,654	$ 49,808	$ 22,790	$ 278,430
Other Non-Operating Revenue	269,264	324,228	589,809	148,433	26,542	86,333
Gain (Loss) on Sale of Capital Assets	-	-	-	-	-	-
Interest Expense	(703,321)	(697,363)	(658,808)	(910,452)	(663,857)	(601,400)
Other Non-Operating Expense	-	-	-	(225,230)	-	(90,443)
Total Non-Operating Revenues (Expenses)	$ (329,493)	$ (194,864)	$ 192,655	$ (937,441)	$ (614,525)	$ (327,080)
Income (Loss) Before Contributions and Transfers	$ 2,747,130	$ 3,296,610	$ 2,885,927	$ 1,792,061	$ 2,304,168	$ 2,730,078
Capital Contributions	$ 1,176,756	$ 1,271,234	$ 3,246,853	$ 2,170,407	$ 5,382,110	$ 1,772,439
Transfers In	2,500,000	2,686,332	39,258	6,536,029	-	-
Transfers Out	(2,693,946)	(2,800,400)	(147,002)	(6,643,340)	(119,472)	(96,339)
Change in Net Position	$ 3,729,940	$ 4,453,776	$ 6,025,036	$ 3,855,157	$ 7,566,806	$ 4,406,178
Net Position, January 1	75,751,705	79,481,645	83,935,421	89,960,457	93,815,614	101,382,420
Net Position, December 31	$ 79,481,645	$ 83,935,421	$ 89,960,457	$ 93,815,614	$ 101,382,420	$ 105,788,598
O&M Coverage Ratio	126.3%	129.6%	121.8%	122.5%	122.5%	122.8%
Net Operating Income as a % of Operating Revenue	20.8%	22.8%	17.9%	18.4%	18.4%	18.6%
Debt Service Coverage Ratio	3.83	4.16	3.93	3.63	3.17	2.85

Table 9-2 | Summary of Historical Comparative Statements of Net Position

	2017	2018	2019	2020	2021	2022
CURRENT ASSETS						
Cash and Cash Equivalents	$ 5,765,412	$ 7,294,288	$ 9,568,609	$ 11,417,193	$ 14,719,905	$ 13,826,776
Investments	-	-	-	-	-	-
Restricted Cash:						
Bond Payments	1,690,316	1,687,994	1,672,123	2,334,270	2,246,000	2,183,144
Customer Deposits	43,892	31,541	40,062	64,792	91,672	104,070
Other (Reserve for Bonds and Rate Stabilization)	1,630,313	1,630,314	1,627,520	11,586,722	5,987,879	2,448,053
Customer Accounts	1,363,945	1,837,533	1,912,797	2,090,429	2,007,050	2,203,858
Other Receivables	-	-	-	-	-	-
Due From Other Governmental Units	17,968	14,338	-	-	10,000	-
Inventories	135,450	183,252	189,071	233,015	242,192	313,273
Total Current Assets	$ 10,647,296	$ 12,679,260	$ 15,010,182	$ 27,726,421	$ 25,304,698	$ 21,079,174
NONCURRENT ASSETS						
Net Pension Asset	$ -	$ -	$ -	$ -	$ 2,266,854	$ 920,143
Capital Assets Not Being Depreciated:						
Land	897,971	897,971	897,971	1,283,524	1,283,524	1,283,524
Intangible - Water Rights	5,449,186	5,701,772	5,954,358	6,889,163	7,823,968	8,758,773
Construction In Progress	8,374,328	620,533	3,488,784	4,443,772	6,918,228	6,283,865
Capital Assets:						
Buildings and Equipment	2,509,599	2,509,599	2,509,599	2,509,599	2,509,599	2,509,599
Improvements Other Than Buildings	131,463,582	142,480,531	145,175,810	151,038,789	159,207,726	167,888,532
Less Accumulated Depreciation	(54,538,817)	(57,946,751)	(61,794,767)	(65,569,723)	(69,396,109)	(72,930,035)
Total Noncurrent Assets Net of Accumulated Depreciation	$ 94,155,849	$ 94,263,655	$ 96,231,755	$ 100,595,124	$ 110,613,790	$ 114,714,401
TOTAL ASSETS	$ 104,803,145	$ 106,942,915	$ 111,241,937	$ 128,321,545	$ 135,918,488	$ 135,793,575
DEFFERED OUTFLOWS OF RESOURCES						
Deferred Outflow from Bond Refunding	$ -	$ -	$ -	$ 78,146	$ 78,146	$ 78,146
Deferred Outflow related to Pensions	312,206	274,590	296,941	334,033	309,166	866,866
Total Deferred Outflows of Resources	312,206	274,590	296,941	412,179	387,312	$ 945,012
CURRENT LIABILITIES						
Current Payables	$ 1,354,856	$ 831,153	$ 971,724	$ 1,015,566	$ 1,627,369	$ 700,718
Claims Payable	-	-	-	-	-	-
Loans Payable - Current	634,328	652,107	467,646	478,000	250,914	224,800
Employee Leave Benefits - Current	125,285	122,115	128,188	122,116	172,872	172,114
Leases Payable - Current	-	-	-	-	-	-
Revenue Bonds Payable - Current	871,737	902,092	935,347	1,215,345	1,268,753	1,327,964
Payable From Restricted Assets:						
Accrued Interest	828,486	794,779	754,158	1,126,592	1,065,376	998,923
Deposits	43,892	31,541	40,062	64,792	91,672	104,070
Other Liabilities Payable	600	-	-	-	-	-
Total Current Liabilities	$ 3,859,184	$ 3,333,787	$ 3,297,125	$ 4,022,411	$ 4,476,956	$ 3,528,589
NONCURRENT LIABILITIES						
Employee Leave Benefits	$ 37,836	$ 44,177	$ 34,069	$ 44,176	$ 74,823	$ 66,026
Loans Payable	3,689,390	3,123,514	2,697,219	2,359,332	2,108,418	1,883,620
Leases Payable	-	-	-	-	-	-
Revenue Bonds Payable	14,899,559	13,952,693	12,972,571	26,189,156	24,596,375	22,944,382
Net Pension Liability	2,775,633	2,245,967	1,937,559	1,917,936	1,216,710	1,478,887
Total Non Current Liabilities	$ 21,402,418	$ 19,366,351	$ 17,641,418	$ 30,510,600	$ 27,996,326	$ 26,372,915
TOTAL LIABILITIES	$ 25,261,602	$ 22,700,138	$ 20,938,543	$ 34,533,011	$ 32,473,282	$ 29,901,504
DEFERRED INFLOWS OF RESOURCES						
Deferred Inflow Related to Leases	$ -	$ -	$ -	$ -	$ -	$ -
Deferred Inflow Related to Pensions	372,104	581,946	639,878	385,099	2,450,098	1,048,485
Total Deferred Inflows of Resources	$ 372,104	$ 581,946	$ 639,878	$ 385,099	$ 2,450,098	$ 1,048,485
NET POSITION						
Net Investment in Capital Assets	$ 75,751,151	$ 77,321,243	$ 80,831,095	$ 72,687,561	$ 86,632,404	$ 87,779,897
Restricted For:						
Debt Service	801,827	835,535	873,362	10,460,130	658,575	3,265,869
Rate Stabilization	-	-	-	-	-	-
Pension Asset	-	-	-	-	-	920,143
Unrestricted	2,928,667	5,778,643	8,256,000	10,667,923	14,091,441	13,822,689
TOTAL NET POSITION	$ 79,481,645	$ 83,935,421	$ 89,960,457	$ 93,815,614	$ 101,382,420	$ 105,788,598
Current Ratio	2.8	3.8	4.6	6.9	5.7	6.0
Debt to Net Position Ratio	0.26	0.23	0.20	0.33	0.29	0.26
Debt to Noncurrent Capital Assets Ratio	0.22	0.21	0.19	0.31	0.26	0.24

- Net operating income as a percentage of operating revenue was 20.8 percent in 2017, decreasing to a low of 17.9 percent in 2019, before ending 2022 at 18.6 percent. Similar to the O&M coverage ratio, these trends show how successfully operating revenue actually covered operating expenses, with higher positive numbers being the best and negative numbers showing a need for improvement. In addition, these trends demonstrate the ability of the utility to invest in capital, whether through direct cash transfers or the issuance and servicing of debt.

- The debt service coverage ratio measures the amount of cash flow available to meet principal and interest payments. Typically, revenue bond debt service coverage requires a minimum factor of 1.25 during the life of the loans. This ratio is calculated by dividing cash or net operating income (operating revenues less operating expenses) by annual revenue bond debt service. The debt service coverage ratio for all outstanding revenue bond debt ended 2017 at 3.83, decreasing to 2.85 by 2022, as the City took on more debt liabilities. The fact that this ratio has sustained levels higher than the minimum target of 1.25 indicates a stable capacity for new debt and will likely result in favorable terms when entering the bond market.

9.2.1.2 Findings and Trends

- The current ratio is calculated by dividing unrestricted current assets by current liabilities and measures an entity's ability to pay short-term obligations. This ratio ranges from a low of 2.8 in 2017 to a high of 6.9 in 2020, ending at 6.0 in 2022. Anything above 2.0 for this liquidity ratio is good.

- The Debt to Net Position Ratio compares total debt to total net position, which is the difference between total assets and liabilities. This ratio ranged from a high of 0.33 or 33 percent in 2020 to a low of 0.20 or 20 percent in 2019. For utilities, a ratio of 40 to 60 percent helps to moderate rate impacts by spreading costs over a longer period of time. Based on these results, the City may consider utilizing debt service for future capital investments, especially if it benefits system expansion.

- The Debt to Noncurrent Capital Asset Ratio compares total debt to noncurrent capital assets, which are also known as property, plant and equipment. This ratio begins at 0.22 or 22 percent debt to 78 percent noncurrent assets in 2017. Noncurrent capital assets increase by $20.6 million throughout the six-year history while debt increased by $6.2 million, and the ratio increases to 24 percent by 2022. Similar to the debt to net position ratio, these results indicate the utility has ample borrowing capacity and may consider utilizing debt service for future capital investments, especially if it benefits system expansion. A ratio of 40 percent debt to 60 percent equity or below is a general industry target.

9.3 Financial Plan

The water utility is responsible for generating sufficient revenue to meet all of its costs. The primary source of funding is derived from ongoing monthly service charges, with additional revenue coming from late penalties and interest earnings. The City controls the level of user charges and, with City Council approval, can adjust user charges as needed to meet financial objectives.

The financial plan can only confirm financial feasibility if it considers the total system costs of providing water services, both operating and capital. To meet these objectives, the following elements have been completed.

1. **Capital Funding Plan.** Identifies the total capital improvement plan (CIP) obligations of the planning period. The plan defines a strategy for funding the CIP, including an analysis of available resources from rate revenues, existing reserves, connection charge revenues, debt financing, and any special resources that may be readily available (e.g., grants, developer contributions, etc.). The capital funding plan impacts the financial plan through the use of debt financing (resulting in annual debt service) and the assumed rate revenue made available for capital funding.

2. **Financial Forecast.** Identifies future annual non-capital costs associated with the operation, maintenance, and administration of the water system. Included in the financial plan is a reserve analysis that forecasts cash flow and fund balance activity, along with testing for satisfaction of actual or recommended minimum fund balance policies. The financial plan ultimately evaluates the sufficiency of utility revenues in meeting all obligations, including cash uses such as operating expenses, debt service, capital outlays, and reserve contributions, as well as any coverage requirements associated with long-term debt. The plan also identifies the future adjustments required to fully fund all utility obligations in the planning period.

9.3.1 Capital Funding Plan

To properly evaluate future capital funding needs, capital costs were escalated by 3.00 percent annually to the year of planned spending. The CIP developed for this WSP identifies $143.3M in escalated project costs over the 11-year planning horizon from 2024-2034. The 20-year period, through 2043, includes $262.6M in total escalated project costs.

A summary of the 11-year and 20-year CIPs are shown in **Table 9-3**. As shown, each year has varied capital cost obligations depending on construction schedules and infrastructure planning needs.

Table 9-3 | 11-Year and 20-Year CIPs

Year	Unescalated $	Escalated $
2024	$ 15,368,740	$ 15,368,740
2025	13,020,848	13,411,473
2026	12,897,298	13,682,743
2027	10,674,810	11,664,653
2028	11,364,810	12,791,194
2029	10,214,810	11,841,764
2030	8,937,250	10,671,544
2031	10,647,750	13,095,389
2032	11,544,961	14,624,811
2033	9,369,039	12,224,471
2034	10,367,636	13,933,236
11-Year Total	$ 124,407,951	$ 143,310,019
2035 - 2043	77,003,728	119,267,070
20-Year Total	$ 201,411,679	$ 262,577,089

Table 9-4 provides more detail for the 11-year CIP.

Table 9-4 | 11-Year CIP (Escalated $)

Project	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Active Projects (In Design or Construction)											
104th Park Development (104th to 102nd Water Main Loop)	$ 350,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
104th Avenue SE PRV Replacement	390,475										
C St SW Preservation	901,038	928,069									
Coal Creek Springs Transmission Main Replacement	4,450,422										
D St SE and 23rd Street SE Storm Improvements	2,285,677										
Well 4 Facility Improvements	884,822										
Well 4 Electrical Improvements	200,000	875,500									
112th Pl SE Water Main Replacement	255,000	1,900,350									
Auburn Way South - Hemlock St SE to Poplar St SE		2,469,940									
Garden Avenue Realignment	699,797										
M Street NE Widening	37,000		339,488								
R Street SE Widening		103,000	1,763,734								
R St SE and 21st St SE Roundabout	61,897	497,490									
R St SE Preservation - 33rd St SE to 37th St SE	301,850										
Lea Hill Road/104th Ave SE Roundabout	100,000		159,135	655,636							
Fulmer Treatment Facility VFD Replacements	175,000										
Reservoirs 4 and 8 Seismic Rehabilitation	1,433,871										
12th St SE and Auburn Way South Water R&R	318,000	327,540									
2025 Local Street Preservation	65,000	679,800									
2026 Local Street Preservation	50,000	154,500	926,166								
Coal Creek Springs Flowmeter Replacement	375,017										
Comprehensive Water System Plan Update - 2024	250,000										
Reservoir 2 Valves	68,750	2,266,000									
Supply											
Cascade Water Alliance Water Purchase	934,810	962,854	991,740	1,021,492	1,052,137	1,083,701					
Water Resources Protection Program	87,700	61,800	63,654	65,564	67,531	69,556	71,643	73,792	76,006	78,286	80,635
Rehabilitate & Clean Wells 2 and 6 (3-year Cycle)		257,500			281,377			307,468			335,979
Well Inspection and Redevelopment Program			222,789	229,473							
Coal Creek Springs Rehabilitation	75,614			546,364	1,125,509	2,318,548	2,193,474				
Coal Creek Springs Chlorination Building Replacement							621,206	1,919,526			
Howard Road CCTF Expansion									570,047	1,304,773	
On-Site Chlorine Generation Systems (OSEC) at Wells 1 and 4			106,090	191,227							
Fulmer CCTF Replace On-Site Chlorine Generation System (OSEC)			159,135	382,454							
Well 5/5A Upgrades			1,007,855	289,573	1,688,263						
Well 7 Treatment Phase 1							1,791,078	3,193,982	7,600,620		
Well 7 Back-Up Power									525,660	2,165,974	
Well 7 Treatment Phase 2										2,158,095	5,106,882
Well 2 Replacement							477,621	1,918,603			
Algona Well 1 Study	50,000										
Storage											
Reservoir Repair and Replacements	192,000	61,800	63,654	65,564	67,531	69,556	71,643	73,792	76,006	78,286	80,635
Reservoir Painting (10-year Cycle)		257,500	1,591,350								
Academy PRV Project				513,582							
Reservoir Capital Improvements				513,582							
Valley Service Area Reservoir No. 3	50,000										
Pump Stations											
Intertie Booster Pump Station Improvements	75,000	257,500	2,121,800								
Lea Hill Pump Station Replacement				835,936	3,376,526	3,014,112					
Braunwood Pump Station Mechanical Upgrades	40,000										94,074
Game Farm Park Pump Station Mechanical Upgrades											94,074
Distribution System											
Annual Distribution System Improvements Program		412,000	2,652,250	2,731,818	2,813,772	2,898,185	2,985,131	3,074,685	3,166,925	3,261,933	4,801,325
Street Utility Improvements		619,030	654,575	1,420,545	1,463,161	1,507,056	1,552,268	1,598,836	1,646,801	1,696,205	1,747,091
Water Repair & Replacements		154,500	477,405	655,636	675,305	695,564	716,431	737,924	760,062	782,864	873,546
Water Trench Patches Program	160,000	164,800	169,744	174,836	180,081	185,484	191,048	196,780	202,683	208,764	215,027
West Hill Springs Transmission Main Replacement	50,000		212,180	1,257,729							
Lea Hill 648 Zoning Adjustment				113,644							
General											
Comprehensive Water System Plan Update - 2034										489,290	503,969
	$15,368,740	$13,411,473	$13,682,743	$11,664,653	$12,791,194	$11,841,764	$10,671,544	$13,095,389	$14,624,811	$12,224,471	$13,933,236

9.4 Available Funding Assistance and Financing Resources

9.4.1 City Resources

Resources appropriate for funding capital needs include accumulated cash in the capital fund, rate revenues designated for capital spending purposes, developer contributions, and capital-related charges such as system development charges. The first two resources will be discussed in the **Fiscal Policies** section of the **Financial Forecast**. Capital-related charges are discussed below.

9.4.1.1 System Development Charges

A connection charge such as the City's system development charge (SDC) refers to a one-time charge imposed on new customers as a condition of connecting to the water system. The purpose of the SDC is two-fold: 1) to promote equity between new and existing customers; and 2) to provide a source of revenue to fund capital projects necessary for meeting growth. This revenue can only be used to fund utility capital projects or to pay debt service incurred to finance those projects. In the absence of a connection charge, growth-related capital costs would be borne in large part by existing customers. In 2024, the City charged all new customers an SDC of $9,553 per meter capacity equivalent (MCE). MCEs are defined by the American Water Works Association and represent the maximum safe operating flow capacity in gallons per minute, relative to the base meter size.

9.4.1.2 Local Facilities Charges

While a connection charge is the manner in which new customers pay their share of system investment costs, local facilities charge funding is used to pay the costs of local facilities that connect each property to the system's infrastructure. Local facilities funding is often overlooked in rate forecasting because it is funded upfront by either connecting customers and developers, or through an assessment to properties, but never from rates.

A number of mechanisms can be considered toward funding local facilities. One of the following scenarios typically occurs: (a) the utility charges a connection fee based on the cost of the local facilities (under the same authority as the facilities assessment fee); (b) a developer funds an extension of the system to its development and turns those facilities over to the utility (contributed capital); or (c) a local assessment is set up called a Utility Local Improvement District (ULID/LID) or a Local Utility District (LUD), which collects tax revenue from benefited properties.

A local facilities charge (LFC) is a variation of the connection charge. It is a city-imposed charge to recover the cost related to service extension to local properties. Often called a front-footage charge and imposed on the basis of footage of the main "fronting" a particular property, it is usually implemented as a reimbursement mechanism to a city for the cost of a local facility that directly serves a property. It is a form of a connection charge and thus can accumulate up to 10 years of interest. It typically applies in instances when no developer-installed facilities are needed through developer extension due to the prior existence of available mains already serving the developing property.

The developer extension is a requirement that a developer install on-site and sometimes off-site improvements as a condition of extending service. These are in addition to the connection charge required and must be built to City standards. Part of the agreement between the City and the developer planning to extend service might include a latecomer agreement (also called payback agreements), resulting in a latecomer charge to new connections for the developer extension.

Latecomer charges are a variation of developer extensions, whereby new customers connecting to a developer-installed improvement make a payment to the City based on their share of the developer's cost. The City passes this charge on to the developer who installed the facilities. As part of the developer extension process, this defines the allocation of costs and records latecomer obligations on the title of affected properties. No interest is allowed, and the reimbursement agreement cannot exceed 20 years in duration.

ULID/LID is another mechanism for funding infrastructure that assesses benefited properties based on the special benefit received by the construction of specific facilities. Most often used for local facilities, some

ULIDs also recover related general facilities costs. Substantial legal and procedural requirements can make this a relatively expensive process, and there are mechanisms by which a ULID can be rejected.

9.4.2 Outside Resources

This section outlines various grant, loan, and bond opportunities available to the City through federal and state agencies to fund the CIP identified in the WSP.

9.4.2.1 Grants and Low-Cost Loans

Historically, federal and state grant programs were available to local utilities for capital funding assistance. However, these assistance programs have been mostly eliminated, substantially reduced in scope and amount, or replaced by loan programs. Remaining grant programs are generally lightly funded and heavily subscribed. Nonetheless, the benefit of low-interest loans makes the effort of applying worthwhile.

The State of Washington's Department of Commerce maintains a document currently entitled "*Funding Programs for Drinking Water and Wastewater Projects; Updated 3-5-2024*", which contains details on government programs, eligibility requirements, and contact information, should the City wish to inquire about program offerings and eligibility requirements.

9.4.2.2 Bond Financing

General Obligation Bonds – General obligation (G.O.) bonds are bonds secured by the full faith and credit of the issuing agency, committing all available tax and revenue resources to debt repayment. With this high level of commitment, G.O. bonds have relatively low interest rates and few financial restrictions. However, the authority to issue G.O. bonds is restricted in terms of the amount and use of the funds, as defined by the Washington constitution and statute. Specifically, the amount of debt that can be issued is linked to assessed valuation.

Revised Code of Washington (RCW) 39.36.020 states:

> (2)(a)(ii) Counties, cities, and towns are limited to an indebtedness amount not exceeding one and one half percent of the value of the taxable property in such counties, cities, or towns without the assent of three-fifths of the voters therein voting at an election held for that purpose.
>
> (b) In cases requiring such assent counties, cities, towns, and public hospital districts are limited to a total indebtedness of two and one-half percent of the value of the taxable property therein.

While bonding capacity can limit the availability of G.O. bonds for utility purposes, these can sometimes play a valuable role in project financing. A utility rate savings may be realized through two avenues: the lower interest rate and related bond costs, and the extension of repayment obligation to all tax-paying properties (not just developed properties) through the authorization of an ad valorem property tax levy.

Revenue Bonds – Revenue bonds are commonly used to fund utility capital improvements. The debt is secured by the revenues of the issuing utility. With this limited commitment, revenue bonds typically bear higher interest rates than G.O. bonds and require security conditions related to the maintenance of dedicated reserves (a bond reserve) and financial performance (added bond debt service coverage). The City agrees to satisfy these requirements by resolution as a condition of bond sale.

Revenue bonds can be issued in Washington without a public vote. There is no bonding limit, except perhaps the practical limit of the utility's ability to generate sufficient revenue to repay the debt and provide coverage. In some cases, poor credit might make issuing revenue bonds problematic.

9.4.3 Capital Financing Strategy

An ideal capital financing strategy would include the use of grants and low-cost loans when debt issuance is required. However, these resources are very limited and competitive in nature and do not provide a reliable source of funding for planning purposes. It is recommended that the City pursue these funding avenues but assume revenue bond financing to meet the needs which can't be met by available cash resources. The capital financing strategy developed to fund the CIP identified in this WSP assumes the following funding resources:

- Accumulated cash reserves,
- Transfers of excess cash (over minimum balance targets) from the Operating Fund,
- System development charge revenue,
- Interest earned on Capital Fund balances,
- Grant proceeds, and
- Revenue bond financing.

The cash resources described above are anticipated to fund 58.1 percent of the 11-year CIP and 56.4 percent of the 20-year CIP. The remaining funding is assumed to be from new debt obligations of $69.1M in the next 11-year planning period and an additional $45.3M between 2034-2043. **Table 9-5** presents the 11-year and 20-year capital financing strategy.

Table 9-5 | 11-Year and 20-Year Capital Financing Strategy

Year	Capital Expenditures Escalated	System Development Charge Revenue	Grant Funding	Revenue Bond Proceeds	Cash / Reserve Funding	Total Financial Resources
2024	$ 15,368,740	$ 325,000	$ 2,717,531		$ 12,326,209	$ 15,368,740
2025	13,411,473	452,813		12,958,660	-	13,411,473
2026	13,682,743	468,497		3,541,340	9,672,907	13,682,743
2027	11,664,653	484,723		11,179,930	-	11,664,653
2028	12,791,194	501,511		6,320,070	5,969,613	12,791,194
2029	11,841,764	518,881		10,400,000	922,883	11,841,764
2030	10,671,544	536,853		-	10,134,691	10,671,544
2031	13,095,389	555,446		12,539,943	-	13,095,389
2032	14,624,811	574,684		2,260,057	11,790,070	14,624,811
2033	12,224,471	594,589		9,900,000	1,729,882	12,224,471
2034	13,933,236	615,182			13,318,054	13,933,236
Subtotal	$ 143,310,019	$ 5,628,179	$ 2,717,531	$ 69,100,000	$ 65,864,309	$ 143,310,019
2035 - 2043	119,267,070	6,589,599		45,300,000	67,377,472	119,267,070
Total	$ 262,577,089	$ 12,217,778	$ 2,717,531	$ 114,400,000	$ 133,241,780	$ 262,577,089

9.5 Financial Forecast

The financial forecast, or revenue requirement analysis, forecasts the amount of annual revenue that needs to be generated by user rates. The analysis incorporates operating revenues, O&M expenses, debt service payments, rate-funded capital needs, and any other identified revenues or expenses related to operations. The objective of the financial forecast is to evaluate the sufficiency of the current level of rates. In addition

to annual operating costs, the revenue needs also include debt covenant requirements and specific fiscal policies and financial goals of the City.

For this analysis, two revenue sufficiency tests have been developed to reflect the financial goals and constraints of the City: cash needs must be met; and debt coverage requirements must be realized. In order to operate successfully with respect to these goals, both tests of revenue sufficiency must be met.

Cash Test – The cash flow test identifies all known cash requirements for the City in each year of the planning period. Typically, these include O&M expenses, debt service payments, rate-funded system reinvestment funding or directly funded capital outlays, and any additions to specified reserve balances. The total annual cash needs of the City are then compared to projected cash revenues using the current rate structure. Any projected revenue shortfalls are identified, and the rate increases necessary to make up the shortfalls are established.

Coverage Test – The coverage test is based on a commitment made by the City when issuing revenue bonds and some other forms of long-term debt. For the purposes of this analysis, revenue bond debt is assumed for any needed debt issuance. As a security condition of issuance, the City would be required per covenant to agree that the revenue bond debt would have a higher priority for payment (a senior lien) compared to most other expenditures; the only outlays with a higher lien are O&M expenses. Debt service coverage is expressed as a multiplier of the annual revenue bond debt service payment. For example, a 1.00 coverage factor would imply that no additional cushion is required. A 1.25 coverage factor means revenue must be sufficient to pay O&M expenses, annual revenue bond debt service payments, and an additional 25.0 percent of annual revenue bond debt service payments. The excess cash flow derived from the added coverage, if any, can be used for any purpose, including funding capital projects. Targeting a higher coverage factor can help the City achieve a better credit rating and provide lower interest rates for future debt issues.

9.5.1 Current Financial Structure

The City maintains a fund structure and implements financial policies that target management of a financially viable and fiscally responsible water system.

9.5.1.1 Fiscal Policies

A summary of the key financial policies employed by the City, as well as those recommended and incorporated in the financial program, are discussed below.

Operating Reserve – Operating reserves are designed to provide a liquidity cushion to ensure that adequate cash working capital will be maintained to deal with significant cash balance fluctuations, such as seasonal fluctuations in billings and receipts, unanticipated cash expenses, or lower than expected revenue collections. Like other types of reserves, operating reserves also serve another purpose: they help smooth rate increases over time. Target funding levels for an operating reserve are generally expressed as a certain number of days of O&M expenses, with the minimum requirement varying with the expected revenue volatility. Industry practice for utility operating reserves ranges from 30 days (8.0 percent) to 120 days (33.0 percent) of O&M expenses, with the lower end more appropriate for utilities with stable revenue streams and the higher end more appropriate for utilities with significant seasonal or consumption-based fluctuations. The City's current goal is to maintain a minimum balance in the Operating Fund equal to 90 days of O&M expenses for working capital.

Capital Reserve – A capital contingency reserve is an amount of cash set aside in case of an emergency should a piece of equipment or a portion of the utility's infrastructure fail unexpectedly. The reserve also could be used for other unanticipated capital needs, including capital project cost overruns. Industry practices range from maintaining a balance equal to 1.0 to 2.0 percent of fixed assets, an amount equal to a 5-year rolling average of CIP costs, or an amount determined sufficient to fund equipment failure (other than catastrophic failure). The final target level should balance industry practices with the risk level of the City.

This financial plan targets a minimum balance in the water utility capital fund equal to 1.0 percent of fixed assets.

System Reinvestment – System reinvestment funding promotes system integrity through ongoing repair and replacement of system infrastructure. Ideally, a detailed asset management plan would guide the level of rate funded system reinvestment, however, in absence of this level of effort, annual depreciation expense is commonly used as a measure of the decline in asset value associated with routine use of the system. Particularly for utilities that do not already have an explicit system reinvestment policy in place, implementing a funding level based on full depreciation expense could significantly impact rates. An alternative benchmark is annual depreciation expense net of debt principal payments on outstanding debt. This approach recognizes that customers are still paying for certain assets through the debt component of their rate and intends to avoid simultaneously charging customers for an asset and its future replacement. The specific benchmark used to set system reinvestment funding targets is a matter of policy that must balance various objectives, including managing rate impacts, keeping long-term costs down, and promoting "generational equity" (i.e., not excessively burdening current customers with paying for facilities that will serve a larger group of customers in the future).

The City is currently phasing in system reinvestment funding, aiming to reach 100 percent of annual depreciation levels by 2030. With this phase-in strategy in place, the City is forecast to fund an average of $4.1 million in capital costs annually through dedicated rate revenues within the 11-year forecast period.

Debt Management – It is prudent to consider policies related to debt management as part of a broader utility financial policy structure. Debt management policies should be evaluated and formalized, including the level of acceptable outstanding debt, debt repayment, bond coverage, and total debt coverage targets. The City has three outstanding water revenue bonds, a Public Works Trust fund loan, and two other low interest loans. This forecast meets or exceeds the required revenue bond debt service coverage of 1.25.

9.5.1.2 Financial Forecast

The financial forecast is primarily based upon the City's budget through 2024 and takes into consideration other key factors and assumptions needed to develop a complete portrait of the City's annual water utility financial obligations. The following is a list of the key revenue and expense factors and assumptions used to develop the financial forecast.

- Growth – Rate revenue is escalated utilizing a 0.45 percent growth rate developed based on actual historical trends at the City.

- Revenue – The City has two general revenue sources: 1) water service charges (rate revenue); and 2) miscellaneous (non-rate) revenue. In the event of a forecasted annual shortfall, rate revenue can be increased to meet the annual revenue requirement. For the purpose of this financial forecast, rate revenues are forecasted to increase with customer growth. Non-rate revenues are

held constant throughout the forecast period, with the exception of interest earnings which are calculated based on projected balances and assumed investment rates.

- System Development Charge Revenue – the existing system development charges are applied to the projected new connections to forecast revenue. Connection charges are forecast to generate an average of $512,000 annually from 2024-2034. This equates to an average of 46 new MCEs per year. Connection charge revenue is directed towards annual capital needs.

- Expenses – O&M expense projections are based on the City's budget through 2024 with general cost inflation increases of 3.0 percent, labor cost inflation of 5.0 percent for 2025 and 2026, decreasing to 3.0 percent thereafter and benefit cost inflation increases of 12.50 percent for 2025 and 2026, decreasing to 5.5 percent per year thereafter. Budget figures were used for taxes in 2024. Future taxes are calculated based on forecasted revenues and prevailing tax rates.

    - Facilities GO Bond - In order to construct a new facility for Maintenance and Operations for the City, the water utility will fund part of a General Obligation Bond totaling approximately $39.1 million. Beginning in 2025, the water utility's proportionate share of the bond is forecasted at $333,000 annually for the remainder of the twenty-year forecast.

- Existing Debt – The water utility has six (6) outstanding debt issues: three (3) revenue bonds, one (1) Public Works Trust Fund (PWTF) loan and two (2) Drinking Water State Revolving Fund (DWSRF) loans. Total annual existing debt service obligations begin 2024 at $2.7 million, decreasing to $1.1 million by 2034 as four (4) of the six (6) loans are fully repaid.

- Future Debt – The capital financial strategy developed for this WSP forecasts the need for $69.1M in new debt proceeds in five (5) separate instances throughout the eleven-year forecast. The analysis performed assumes all new debt is through revenue bond financing. Annual new debt service obligations are forecasted to begin in 2025 at $1.5 million increasing to $6.1 million by 2034.

- Transfers to Capital - Operating fund balance above the minimum requirement is assumed to be available to fund capital projects and projected to be transferred to the Capital Fund each year, if needed. In total, the utility is forecast to fund $17.9 million in capital projects from excess operating fund cash within the 11-year forecast period.

Although the financial plan is completed through 2043, the rate strategy focuses on the shorter-term planning period of 2024 through 2034. It is recommended that the City revisit the proposed rates every 3 to 4 years to ensure that the rate projections developed remain adequate. Any significant changes should be incorporated into the financial plan and future rates should be adjusted as needed.

Table 9-6, following, summarizes the annual revenue requirements based on the forecast of revenues, expenditures, fund balances, and fiscal policies.

Table 9-6 | 11-Year Financial Forecast

Revenue Requirement	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Revenues											
Rate Revenues Under Existing Rates	$ 18,398,987	$ 18,480,409	$ 18,562,210	$ 18,644,392	$ 18,726,956	$ 18,809,906	$ 18,893,241	$ 18,976,964	$ 19,061,078	$ 19,145,583	$ 19,230,482
Non-Rate Revenues	711,618	995,023	921,087	742,167	760,542	763,594	775,863	779,012	795,263	798,519	810,558
Total Revenues	$ 19,110,605	$ 19,475,432	$ 19,483,297	$ 19,386,559	$ 19,487,499	$ 19,573,500	$ 19,669,104	$ 19,755,976	$ 19,856,341	$ 19,944,102	$ 20,041,040
Expenses											
Cash Operating Expenses	$ 14,490,240	$ 15,195,624	$ 15,775,495	$ 16,147,464	$ 16,560,290	$ 16,986,418	$ 17,429,740	$ 17,888,499	$ 18,366,342	$ 18,860,547	$ 19,374,767
Existing Debt Service	2,674,248	2,671,361	2,665,106	2,615,447	2,611,734	2,601,528	2,598,336	1,759,410	1,759,292	1,090,490	1,089,760
New Debt Service	-	1,455,336	1,455,336	2,998,874	2,998,874	3,916,177	3,916,177	5,221,569	5,221,569	6,094,771	6,094,771
Rate Funded System Reinvestment	1,738,857	1,037,921	2,016,114	1,877,607	3,393,539	4,213,598	5,626,454	5,888,362	6,180,858	6,425,348	6,704,012
Total Expenses	$ 18,903,345	$ 20,360,242	$ 21,912,050	$ 23,639,392	$ 25,564,438	$ 27,717,721	$ 29,570,707	$ 30,757,840	$ 31,528,062	$ 32,471,155	$ 33,263,310
Total Surplus (Deficiency)	$ 207,259	$ (884,810)	$ (2,428,754)	$ (4,252,833)	$ (6,076,939)	$ (8,144,221)	$ (9,901,603)	$ (11,001,863)	$ (11,671,720)	$ (12,527,053)	$ (13,222,271)
Annual Rate Adjustment	0.00%	7.50%	9.50%	9.50%	9.50%	9.50%	9.50%	3.00%	3.00%	3.00%	3.00%
Cumulative Annual Rate Adjustment	0.00%	7.50%	17.71%	28.90%	41.14%	54.55%	69.23%	74.31%	79.54%	84.92%	90.47%
Rate Revenues After Rate Increase	$ 18,398,987	$ 19,866,440	$ 21,850,041	$ 24,031,724	$ 26,431,269	$ 29,070,437	$ 31,973,157	$ 33,078,288	$ 34,221,651	$ 35,404,570	$ 36,628,414
Additional Taxes from Rate Increase	-	229,097	543,446	890,472	1,273,446	1,695,963	2,161,979	2,330,808	2,505,891	2,687,448	2,875,704
Net Cash Flow After Rate Increase	$ 207,259	$ 272,124	$ 315,632	$ 244,027	$ 353,928	$ 420,347	$ 1,016,334	$ 768,653	$ 982,962	$ 1,044,486	$ 1,299,958
Coverage After Rate Increases	3.00	2.10	2.40	1.91	2.24	2.19	2.52	2.41	2.50	2.43	2.51

The financial forecast indicates that at existing rate levels the utility will become deficient in 2025 as growth in expenses outpaces growth in revenues and the utility takes on additional debt obligations to fund capital infrastructure investment. The City has adopted a 7.50 percent increase for 2025, to resolve the remaining projected deficiency, rates will need to increase by 9.50 percent annually from 2026 through 2030, before decreasing to 3.00 percent annually through 2034.

9.5.1.3 City Funds and Reserves

Table 9-7 shows a summary of the projected Operating Fund and Capital Fund ending balances through 2034 based on the rate forecasts presented above. The Operating Fund is maintained above 90 days of O&M expenses. The Capital Fund balance meets or exceeds the minimum target of 1 percent of fixed assets in most years of the study timeframe with the exception of 2026, 2028 and 2030 where balances fall below target. Fund balances are rebuilt and meet or exceed target balances by the end of the eleven-year timeframe.

Table 9-7 | Ending Cash Balance Summary

Ending Fund Balances	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Operating Fund	$ 8,988,743	$ 9,260,867	$ 3,943,874	$ 4,036,866	$ 4,140,073	$ 4,246,604	$ 4,357,435	$ 4,472,125	$ 4,591,586	$ 4,715,137	$ 4,843,692
Capital Fund	2,019,201	6,659,039	1,226,711	9,587,690	1,038,144	4,653,056	1,096,853	9,910,203	3,003,538	8,649,973	3,293,834
Total	$ 11,007,944	$ 15,919,905	$ 5,170,585	$ 13,624,556	$ 5,178,217	$ 8,899,660	$ 5,454,288	$ 14,382,328	$ 7,595,123	$ 13,365,110	$ 8,137,526

9.6 Current and Projected Rates

9.6.1 Current Rates

The existing water rates are composed of a fixed monthly charge that varies by meter size and a variable consumption charge per hundred cubic feet (CCF) for all water usage. While fixed charges are consistent across customer classes for all meter sizes except one inch, usage charges are different for each customer class. Consumption for the single family class is divided into three escalating pricing tiers that are applied year-round. This type of inclining tier structure is designed to discourage discretionary usage of water and encourage conservation. All other customers are charged a uniform rate for all consumption used. Table 9-8 shows the existing City of Auburn water system rate schedule.

Table 9-8 | Existing Schedule of Rates

Description	2024 Existing
Monthly Fixed Charges (All Classes)	
3/4"	$ 21.08
1" - Single Family	21.08
1" - All Other Classes	23.66
1 1/2"	25.76
2"	29.69
3"	57.11
4"	71.66
6"	91.57
8"	118.30
10"	167.97
Volume Charges per CCF	
Single Family	
0-7 CCF	$ 4.18
7-15 CCF	5.11
Greater Than 15 CCF	5.81
Multi-Family	$ 5.00
Commercial	5.27
Manufacturing / Industrial	5.15
Schools	5.61
Municipal	5.19
Irrigation	6.94

9.6.2 Projected Rates

The financial forecast discussed above indicates the need for annual rate adjustments to satisfy all forecasted financial obligations. The City has adopted a 7.50 percent increase for 2025, with annual 9.50 percent increases forecasted from 2026 through 2030, and 3.00 percent increases from 2031 to 2034. Table 9-9 shows the projected rates with increases applied uniformly to the water fixed and volume components for all classes. A more detailed rate study that will analyze the projected increases beyond the current adopted rates will be conducted in 2025.

Table 9-9 | Proposed Schedule of Rates

Description	Existing	Proposed									
	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Monthly Fixed Charges (All Classes)											
3/4"	$ 21.08	$ 22.66	$ 24.81	$ 27.17	$ 29.75	$ 32.58	$ 35.68	$ 36.75	$ 37.85	$ 38.99	$ 40.16
1" - Single Family	21.08	22.66	24.81	27.17	29.75	32.58	35.68	36.75	37.85	38.99	40.16
1" - All Other Classes	23.66	25.43	27.85	30.50	33.40	36.57	40.04	41.24	42.48	43.75	45.06
1 1/2"	25.76	27.69	30.32	33.20	36.35	39.80	43.58	44.89	46.24	47.63	49.06
2"	29.69	31.92	34.95	38.27	41.91	45.89	50.25	51.76	53.31	54.91	56.56
3"	57.11	61.39	67.22	73.61	80.60	88.26	96.64	99.54	102.53	105.61	108.78
4"	71.66	77.03	84.35	92.36	101.13	110.74	121.26	124.90	128.65	132.51	136.49
6"	91.57	98.44	107.79	118.03	129.24	141.52	154.96	159.61	164.40	169.33	174.41
8"	118.30	127.17	139.25	152.48	166.97	182.83	200.20	206.21	212.40	218.77	225.33
10"	167.97	180.57	197.72	216.50	237.07	259.59	284.25	292.78	301.56	310.61	319.93
Volume Charges per CCF											
Single Family											
0-7 CCF	$ 4.18	$ 4.49	$ 4.92	$ 5.39	$ 5.90	$ 6.46	$ 7.07	$ 7.28	$ 7.50	$ 7.73	$ 7.96
7-15 CCF	5.11	5.49	6.01	6.58	7.21	7.89	8.64	8.90	9.17	9.45	9.73
Greater Than 15 CCF	5.81	6.25	6.84	7.49	8.20	8.98	9.83	10.12	10.42	10.73	11.05
Multi-Family	$ 5.00	$ 5.38	$ 5.89	$ 6.45	$ 7.06	$ 7.73	$ 8.46	$ 8.71	$ 8.97	$ 9.24	$ 9.52
Commercial	5.27	5.67	6.21	6.80	7.45	8.16	8.94	9.21	9.49	9.77	10.06
Manufacturing / Industrial	5.15	5.54	6.07	6.65	7.28	7.97	8.73	8.99	9.26	9.54	9.83
Schools	5.61	6.03	6.60	7.23	7.92	8.67	9.49	9.77	10.06	10.36	10.67
Municipal	5.19	5.58	6.11	6.69	7.33	8.03	8.79	9.05	9.32	9.60	9.89
Irrigation	6.94	7.46	8.17	8.95	9.80	10.73	11.75	12.10	12.46	12.83	13.21

9.6.3 Conservation Based Rates

In 2003 the Washington State Legislature passed the Municipal Water Supply Efficiency Requirements Act. The Water Use Efficiency rules went into effect on January 22, 2007 and typically apply to Water System Plans that each jurisdiction is required to develop every six to ten years. The Revised Code of Washington (RCW) outlines the rules of this act, under RCW 70.119.180. In section 4(B), the RCW states that jurisdictions must perform an "evaluation of the feasibility of adopting and implementing water delivery rate structures that encourage water conservation." The City of Auburn currently charges their single family residential customers based on an inclining block rate structure to incentivize water use conservation, therefore no additional evaluation was performed.

9.7 Affordability

The Washington State Department of Health and the Department of Commerce Public Works Board use an affordability index to prioritize low-cost loan awards depending on whether rates exceed 2.5 percent of the median household income for the service area. The average median household income for the City was $87,406 between 2018 and 2022, expressed in 2022 dollars, according to the U.S. Census Bureau. The 2022 value is escalated based on the actual rate of inflation in 2023 of 4.31 percent and the 3.00 percent inflation rate used in the financial forecast to project the median household income in future years. Table 9-10

presents the City's monthly water bill, projected to 2034 and tested against the 2.5 precent monthly affordability threshold.

Table 9-10 | Community Affordability Test

Year	Inflation	Median HH Income	2.5% Monthly Threshold	Projected Monthly Bill	% of Median HH Income
2022		$ 87,406			
2023	4.31%	91,173			
2024	3.00%	93,908	$ 195.64	$ 50.34	0.64%
2025	3.00%	96,726	201.51	54.09	0.67%
2026	3.00%	99,627	207.56	59.25	0.71%
2027	3.00%	102,616	213.78	64.90	0.76%
2028	3.00%	105,695	220.20	71.05	0.81%
2029	3.00%	108,866	226.80	77.80	0.86%
2030	3.00%	112,132	233.61	85.17	0.91%
2031	3.00%	115,495	240.62	87.71	0.91%
2032	3.00%	118,960	247.83	90.35	0.91%
2033	3.00%	122,529	255.27	93.10	0.91%
2034	3.00%	126,205	262.93	95.88	0.91%

Applying the 2.5 percent monthly affordability test, the City's rates are forecasted to remain within the indicated affordability range through 2034.

9.8 Conclusion

The results of this analysis indicate that at existing rate levels the utility will be deficient beginning in 2025. To keep pace with expenses and prepare for new debt obligations needed to fund system infrastructure needs, the City has adopted a 7.50 percent rate increase in 2025. Forecasting into the future a 9.5 percent annual rate increase will be required from 2026 through 2030, followed by 3.00 percent increases through 2034. It is recommended that the City regularly review and update the key underlying assumptions that compose the multi-year financial plan to ensure that adequate revenues are collected to meet the City's total financial obligations.

POLICIES AND CRITERIA

INTRODUCTION

The City of Auburn (City) manages the water utility in accordance with established water- system policies that govern various facets of utility operations. City policies are established by the City in order to provide a vision or mission of the water utility and to provide a framework for the design, operation, and ongoing wellbeing of the City's water utility.

The policies included in this Water Comprehensive Plan are developed specifically for the City's multi-source municipal water system and seek to provide consistent treatment to all utility customers and to provide documentation to current water-system customers as well as those considering service from the City. It should be noted that what is included in these policies is limited to those things related to the water system and its design, maintenance, and operation. There are other policies and criteria that pertain to the water utility the City has in place regarding land use, development, and financial components, which are not directly addressed in this plan, that could still have an impact on the needs of the water system. These policies and criteria may include factors such as zoning regulations, building codes, infrastructure requirements, and financing options. These additional factors will be considered when planning for the water system, to meet the needs of the community in a sustainable and effective matter.

The City's Water Comprehensive Plan is based upon the following mission statement for the water utility:

"The City will provide for the efficient, environmentally sound and safe management of the existing and future water system within Auburn's service area."

The City's Water utility policies are grouped within goal statements that are headlined under the following categories:

- Business Practices
- Service Area
- Operations and Maintenance
- Financial
- Planning
- Environmental Stewardship
- Design and Construction

1.0 BUSINESS PRACTICES

Goal 1: To employ recognized best business practices resulting in creating a sustainable, efficient, and cost-effective operation of the water utility.

Policy 1.1 Element of City Comprehensive Plan

Incorporate the Water Comprehensive Plan as an Element of the City's Comprehensive Plan.

Policy 1.2 Water Service By Others

Water Service supplied by outside purveyors within Auburn City limits are required to obtain a franchise with the City and are required to conform to all federal, state, and local laws and regulations. [ACC 20.02.040 and 20.04]

Policy 1.3 Asset Improvements

The City will develop and implement system improvements, infrastructure renewal (repair, rehabilitation, or replacement), and operations and maintenance programs for the water system according to asset management principles that address levels of service, address the triple bottom line (economic, social, and environmental benefits and costs), minimize asset life cycle costs, and incorporate risk management into decision-making.

Policy 1.4 Connections to Water System

Any connection to the public water system requires obtaining an approved utility permit for service and said connection shall be made in accordance with City of Auburn Engineering Design and Construction Standards. [ACC 13.06.050, 13.06.090 and 13.06.100]

Policy 1.5 Asset Database

The City will maintain an asset database to be used in prioritizing asset maintenance and repair and replacement activities. The database includes asset age and material information, and will be validated and updated through inspections, records review, and other available information.

Policy 1.6 Condition Assessments of Assets

The City will perform condition assessments of assets through development and implementation of an inspection schedule for all assets.

Policy 1.7 Design Life of Assets

The City will assign industry standard design life for all assets. The actual physical assessment will be compared to the theoretical design life to determine the optimal economic life. The City will attempt to repair or replace system assets before they exceed their economic life.

Policy 1.8 Maintenance Activities for Asset Management

The City will conduct maintenance activities at a level that is consistent with optimizing system reliability, asset economic life, and system performance. The City will develop schedules for maintenance of all water system assets.

Policy 1.9 Addressing Water Quality Complaints

The City will monitor the frequency, location, and details of all water quality complaints. At a minimum, the City will respond, research the cause of, and propose control methods once an issue is verified and documented.

Policy 1.10 Security of Assets

Adequate measures will be taken to ensure system security. At a minimum, the City will maintain security at water facilities using the Supervisory Control and Data Acquisition system for intrusion alerts.

Policy 1.11 Public Health Protection

The City will conduct regular inspections of its water system and any non-public water supply systems connected to it, in collaboration with the Washington State Department of Health.

To protect the municipally owned water supply from contamination, the City will establish and publish rules and regulations as needed. The City will take all necessary measures to enforce the regulations to prevent any risks to public health associated with water supply contamination. [ACC 13.12.080]

Policy 1.12 Cross-Connection Prohibited

Installing or maintaining a cross connection which will endanger the water quality of the municipal water system is strictly prohibited and shall be abated immediately or water service may be discontinued. [ACC 13.12.040]

Policy 1.13 Cross-Connection Control

To obtain water service to a property, the City may require any customer to install a pressure reducing valve, backflow prevention assembly, or pressure relief valve or similar devices at any location where the City determines there is a need to protect the municipal water system. [ACC 13.12.070]

Policy 1.14 All Meters

All water meters owned by the City shall not be removed except by the City. Lost, broken, or damaged water meters shall be replaced or repaired by or under the direction of the City. [ACC 13.06.330]

Policy 1.15 Fire Hydrant Use

Fire hydrant use is a permitted activity unless that use is conducted by authorized City or Fire Authority employees. [ACC 13.06.415 & 13.12.035]

Policy 1.16 Delinquent Accounts

The City has established procedures for disconnecting water service to delinquent accounts for non-payment. [ACC 13.06.290]

Policy 1.17 Leak Adjustment

The City has established procedures for property owners to request a limited leak adjustment of the water bill for water that leaked from the service line between the City water meter and the point where the line enters the building.

2.0 SERVICE AREA

Goal 2: Ensure sustainable provision of retail water services through the development and implementation of policies that define the duty to serve and conditions of service, while adhering to best management practices to meet the needs of the community.

Policy 2.1 Wholesale Water

The City will plan to provide water service to wholesale customers with firm contracts. As supply

permits, the City may provide water to wholesale customers without firm contracts unilaterally or as part of a capital improvement partnership agreement.

Policy 2.2 Government Consistency

The City's Water Comprehensive Plan will be consistent with local, county, and state land use authorities.

Policy 2.3 Duty to Serve

The City commits to providing reliable water service to all customers within its Retail Water Service Area (RWSA) in compliance with Washington Administrative Code (WAC) 246-290-106. The City also ensures adherence to King County Codes 13.24.138 and 13.24.140 where applicable for areas outside city limits in unincorporated King County. Revisions to the City's RWSA shall be made only by written agreement and in accordance with local, county and state regulations.

Policy 2.4 Conditions of Service

For areas within the Retail Water Service Area, the City will provide water service to new customers, conditioned on the agreement that any infrastructure improvements provided by the developer/development is in compliance with City water system standards.

In addition, the City requires that residents within the City's Potential Annexation Areas will receive water services from the City, to the extent practical. The City will work with existing water purveyors within the City limits and within the City's Potential Annexation Areas in order to provide fair and equitable water service. New customers within the City's Potential Annexation Areas are to sign an Annexation Agreement before a Water Availability Certificate is issued.

Policy 2.5 Satellite Systems Assistance

The City recognizes there may be instances where satellite system water providers require assistance with providing water service. In these cases, the City may consider providing assistance on a case-by-case basis. The assistance could take a variety of forms, such as offering technical support and/or access to City infrastructure to help with the provision of water service. Ultimately, the decision to provide assistance will be based on the specific needs and circumstances of the water provider and will be made on a case-by-case basis after careful consideration.

Policy 2.6 Satellite System Connecting to City Service

The City will not assume ownership of any satellite water system unless it meets all current City standards. The responsibility and all costs to bring a satellite system up to City standards and any infrastructure necessary to connect the satellite system to the City's water system network, shall be the system owner(s). [ACC 13.06.150]

Policy 2.7 Water Supply Management and Planning

The City will promote effective water supply management and planning consistent with the "South King County Coordinated Water System Plan," as well as regional water supply and conservation goals.

Policy 2.8 Concurrency of Improvements for Service

Provision of water service, including supply, in the City's Retail Water Service Area is conditioned on concurrency with development and the necessary water facilities, including water right permit(s) and certificate(s), are available and adequate to serve the development at the time it is ready for occupancy and use, as required by the Water Comprehensive Plan. Water service may not always be immediately available for a new development. The property developer must provide the required water system facilities before the City can provide water service, if the facilities do not already exist, or are not under construction or under a binding development agreement.

3.0 OPERATIONS AND MAINTENANCE

Goal 3: Employ operations and maintenance best management practices, which includes a commitment to training and certification opportunities for its employees.

Policy 3.1 System Monitoring and Operation

The City will monitor the water system through the use of computerized control system and adjust operations as necessary for efficient water system operation.

Policy 3.2 Regular Inspection of Facilities

The City will conduct routine inspections and maintenance on its water facilities including wells, springs and booster pump stations, in accordance with the frequency outlined in the operation and maintenance section of the Water Comprehensive Plan.

Policy 3.3 Meter Reading

Water service meters shall be read regularly to document customers' water usage for billing purposes.

Policy 3.4 Customer Service

The City is committed to resolving customer complaints. All complaints are documented and reviewed and tended to by the appropriate staff member for investigation and resolution.

Policy 3.5 Pressure Reducing Valve Program

To maximize system operational efficiency, conserve resources and provide consistent water service to customers of the water system, the City will adjust all water pressure reducing valves to the proper setting based on the frequency outlined in the operation and maintenance chapter of the Comprehensive Water Plan.

Policy 3.6 Employee Certification

The City will pay for annual certification, provide time and tuition for certification training courses, and time for certification exams. In addition, the City will provide its staff opportunities for obtaining the continuing education required to maintain certification.

Policy 3.7 ADU Metering

Property owners with accessory dwelling units (ADUs) on a single-family property may choose to supply the ADU from a master meter serving both units or separate meter installed to serve the ADU at owner's expense. Water usage of each ADU will be billed to the property owner based on

readings from the master meter or individual meter serving the ADU, whichever is applicable.

4.0 FINANCIAL

Goal 4: Manage the water utility in a professional manner in compliance with applicable laws, regulations, and City financial policies, which requires ongoing monitoring of revenues and expenses in order to make prudent business decisions and report to City officials, as needed, regarding the status of utility operations.

Policy 4.1 Source Meters

All sources will be metered to measure the amount of water produced and calibrated annually to ensure an accurate accounting of water produced.

Policy 4.2 Fiscal Stewardship

All money due to the City for water service of any kind or for penalties relating to the municipally owned water system of the City shall be paid to the water fund. The water fund will not be commingled with any other fund or funds of the City. [ACC 13.06.030]

Policy 4.3 Rates and Charges

The City Council establishes rates and charges for water service to be paid by a customer receiving water service from the city. While the City reserves the right to discontinue service without notice, it is committed to maintaining water service during times of extreme weather conditions, when the National Weather Service issues heat-related warnings or advisories for Auburn, Washington, to ensure public safety. The City is not liable for damages resulting from service interruptions. [ACC 13.06.0657]

Policy 4.4 Self-Sufficient Funding

The City maintains the water utility fund as a self-supporting enterprise fund. Water utility revenues come primarily from customer charges and are dependent upon established rates. The Revised Code of Washington requires that utility funds be used only for stated utility purposes. Although General Fund revenues can be used to fund water utility programs, the City has a general policy of not doing so. The City budgeting process should include a balanced and controlled annual water utility budget. This requires careful preparation of expense and revenue projections that may be reviewed by City management, the general public, and the City Council before approval of any rate increases.

Policy 4.5 Capital Improvement Program Level

Funding for the Capital Improvement Program (CIP) identified in the budget will be maintained at a level sufficient to assure system integrity. To the extent that the annual level of the CIP investment can be managed by scheduling and scoping of projects, the funding will be provided at a uniform level to avoid significant fluctuations and to reduce impacts on the operating budget and related rate increases. The City will maintain a reasonable level of reserves in the CIP fund in order to manage cash flow variation caused by the nature of the cost and timing of projects. Utility sold revenue bonds, Utility Local Improvement Districts, State Public Works Trust Fund loans, any available grants, system development charges and developer contributions will be considered for funding the future CIP projects.

Policy 4.6 System Development Charges

A water utility systems development charge is imposed upon all lands inside the boundary of the City and all lands outside the boundary of the City, which utilize water facilities. The utility systems development charge as set forth in the City fee schedule will be computed to consider the future and/or current value of the utility system's fixed assets, excluding contributions by developers, and outstanding bonded indebtedness, and will also consider an appropriate service unit. [ACC 13.41.030]

Policy 4.7 Development Charge Cost Recovery

The City shall continue to recognize the overall system impacts of new development upon the City water system through the collection and appropriate use of system development charges or similar fees. [ACC 13.41.020]

Policy 4.8 Payback Agreement

Payback agreements for public street and utility system improvements may be approved by the City Council. The City engineer may execute the agreements once the City Council has granted approval. [ACC 13.25.050]

Policy 4.9 Water Rate Levels

Water rates will be set at a level sufficient to cover the on-going expenses of the water utility, including operations, maintenance, repair, replacement, and capital improvements, as well as the general business expenses. Additionally, rates shall account for the depreciation of assets to ensure that the utility has adequate funds to maintain its infrastructure and facilities. Furthermore, the rates shall enable the water utility to maintain sufficient reserves.

Policy 4.10 Water Rate Structure

The water-rate structure will be set by customer class based on costs to serve each customer class. The water-rate structure shall support water conservation and wise use of water resources objectives as required by State law.

Policy 4.11 Water Rate Equity

The water-rate structure will allocate costs between the different customer classes. Rates will be established on a "Cost of Service" basis so that each customer class pays its prorated share of the total costs needed to operate and maintain the water utility. All projected future costs will be allocated to each customer class by using established criteria that reflect the benefit that each customer class receives from the service. A Cost of Service and Rate Study will be performed periodically to ensure ongoing equity between customer classes.

Policy 4.12 Frequency of Water Rate Adjustments

Water rates will be evaluated as part of the water utility budgeting process to ensure that budgeted expenses, including the impact of increasing water-supply regulations, are reflected in current rates.

Policy 4.13 Financial Reserve Levels

The City shall maintain water utility cash balances to serve as a contingency reserve fund. The

fund should maintain a balance of $1,000,000 to cover working capital needs and emergency contingencies and cash flow fluctuations.

Policy 4.14 Charges for Services Outside the City Limits

The City may include a rate adjustment for water service outside the City limits.

Policy 4.15 Low-Income Assistance Program

The Utility Rate Exemption Program currently provides water rate assistance for specific low-income senior customers or for specific low-income totally or permanently disabled customers. [ACC 13.24.010]

5.0 PLANNING

Goal 5: Employ best management practices related to water supply planning and capital facility planning activities, which includes conditions for service extensions, fire system responsibility, oversizing, and service pressures and flow.

Policy 5.1 Service Extension

The City will consider extending water system services to areas within its existing RWSA, consistent with adopted annexation policies, and subject to the recovery of costs and the availability of sufficient financial and staffing resources. Property owners will be responsible for an equitable share of extension costs upon connection to the system.

Water system extensions must comply with current City codes and engineering design and construction standards. Connection to existing systems not meeting City water system standards must be upgraded at property owner's expense before service is provided.

To serve new developments, water system extensions must be built prior to or simultaneously with development, according to the size and configuration identified by the Comprehensive Water Plan. The City may participate in financing through System Development Charges credits, Local Improvements Districts (LID), and/or payback agreements, as allowed by law, to support such improvements.

All persons or LIDs desiring to extend City water mains in the City must extend across the full width of the property being served to accommodate future extensions. [ACC 13.08.020]

Policy 5.2 Facility Extension Agreement

The City requires a Facility Extension Agreement to be executed for all public water system extensions constructed by development.

Policy 5.3 System-Wide Reliability

The City shall invest the resources necessary to construct, maintain, and renew water-system infrastructure and equipment to ensure that customers are provided consistent, reliable service in accordance with WAC 246-290-420 Reliability and Emergency Response. Wherever possible, the City should anticipate system interruptions and design and operate the system to minimize the impact of such interruptions to customers.

Policy 5.4 Emergency Preparedness

The City shall update, as needed, a citywide Emergency Response Plan, complying with applicable RCW and WAC requirements, that will include the water system operations. The water system portion of the plan should ensure that adequate provisions are in place to provide for an organized response to the most likely kinds of emergencies that might endanger the health and safety of the public or the operation of the municipal water system.

Policy 5.5 Capital Facilities Plan

The City is required by the Washington State Growth Management Act to adopt a Capital Facilities Plan. The plan will include capital projects and capital project programs for the water utility for a six-year period. Identified projects and programs will be financially constrained and broken down into capacity and non-capacity projects and programs. The City will match revenue sources to capital projects based on sound fiscal policies.

Policy 5.6 Emergency Interties

The City should support emergency interties with adjacent water systems where there is a benefit to both water systems. Interties increase reliability of the City-wide water system during emergencies and other unusual operating circumstances.

Policy 5.7 Water Supply Interties

The City should consider water-supply interties on a case-by-case basis. Water supply interties should provide benefits to both water service providers and should not compromise the City's ability to serve its existing customers or its future water supply needs.

Policy 5.8 Water Supply Planning

The City's objective is to ensure a continuous, safe water supply to meet firm customer demands. Provision of water service must be consistent with the goals, objectives, and policies of the City of Auburn Comprehensive Water Plan. Effects of past water conservation will be considered when projecting future water needs. Future water demands will be estimated using existing water usage patterns and projected future populations developed by the City's comprehensive Plan and consistent with the Puget Sound Regional Council data.

Policy 5.9 Oversizing

When determined to be necessary by the City to install water lines larger than are required to serve adjacent properties, the City may enter into an agreement to compensate the developer for the difference in cost of the oversizing. [ACC 13.08.040]

Policy 5.10 Service Pressure

The City should provide potable water to customers in sufficient quantity to meet maximum day demands at a pressure that meets or exceeds all minimum applicable regulations, except during emergency conditions. Property owners may install private booster pumps to achieve higher pressures under supervision of the City and in accordance with WAC 246-290-230 Distribution Systems.

Policy 5.11 Water for Irrigation

Water used for irrigation by non-single-family residential customers shall be provided through an irrigation meter. Deduct meters shall not be used to supply water for irrigation. [ACC 13.06.230]

Policy 5.12 Water Meters

Water meters shall be placed on every domestic and irrigation service line. [ACC 13.06.320]

6.0 ENVIRONMENTAL STEWARDSHIP

Goal 6: Employ best management practices related to water environmental stewardship and the Water utility's dedication to develop and implement facilities and programs that will protect the environment, including water conservation, demand management and water shortage response.

Policy 6.1 Conservation Promotion

The City will promote water conservation and the efficient use of water resources to help ensure a sustainable water supply.

Policy 6.2 Water Shortage or Emergency Response

In the event of a current or threatened water-supply shortage, the Mayor may declare a water shortage or emergency and issue water use restrictions or conservation measures as necessary and consistent with the Water Shortage Response plan. The Public Works Department is responsible for implementing these measures and making reasonable attempts to notify affected customers. [ACC 13.14]

Policy 6.3 Water Quality Responsibility

The City shall provide water to all water-system customers that meet all state and federal water quality standards. The City shall take the actions necessary to ensure that all water quality standards are met to the point of delivery (meter). The customer is responsible for maintaining water quality from the meter to the actual point of use.

Policy 6.4 Water Resource Protection

The City shall maintain a Water Resource Protection Program that incorporates best management practices and adaptive management concepts, to protect the City's groundwater supplies from degradation.

The Comprehensive Water Plan shall provide for the evaluation of existing and potential future groundwater sources with regard to threats to the quantity and quality of such sources. The Plan shall ensure that strategies are established for the protection of groundwater sources that are used or likely to be used for public water supplies.

Policy 6.5 Sustainable Development

The City strives to be a sustainable community: meeting the needs of the present while preserving the ability of future generations to meet their own needs.

Policy 6.6 Springs Protection

Protection of the City's Coal Creek Springs and West Hill Spring watersheds, wells, and other

sources shall be a high priority in the designation of appropriate land uses in the vicinity of these areas and facilities.

Policy 6.7 Aquifer Recharge Area

The City shall consider the impacts of new development within aquifer recharge areas of potable water sources as part of its environmental review process and require any appropriate mitigation measures. [ACC 16.10.120.E]

Policy 6.8 Water Use Efficiency Goals

The City will continue implementation of its existing Water Use Efficiency Program. The City will target a 1 percent reduction in equivalent residential unit value for each year until reaching a planning Equivalent Residential Unit (ERU) value of 172 gpd/ERU. The goal of the City is to reduce peaking factors that occur during the high usage periods to maximize existing water supply sources. The city's goal shall be in compliance and consistent with all applicable local, state, and federal laws and regulations within the Retail Water Service Area.

Policy 6.9 Non-Revenue Water

The City will strive to maintain levels of water leakage for its distribution system at less than 10 percent.

Policy 6.10 Leak Detection

The City is committed to a tight, non-leaking water distribution system. Each year the City will check approximately one-quarter of the water distribution system for leakage.

Policy 6.11 Reclaimed Water

The City will explore opportunities and evaluate options for wastewater reuse and rainwater reclamation on a case by case basis. These can serve as cost-effective and environmentally beneficial sources of water thereby increasing the security and reliability of the drinking water supply.

Policy 6.12 Aquifer Storage and Recovery

The City shall consider the use of aquifer storage and recovery as a conservation and demand management tool to make best use of City water resources.

7.0 DESIGN AND CONSTRUCTION

Goal 7: Employ best management practices related to the design and construction of water facilities.

Policy 7.1 Service Ownership / Responsibility

The City shall own and maintain the service line between the main and the meter, the meter and setter, the meter box, and tail piece. The property owner shall own and maintain the service line from the tail piece to the point of service including pressure-reducing valves, pumps, or cross-connection assemblies beyond the meter. [ACC 13.06.027]

For unmetered connections (fire sprinklers), City ownership ceases at the fitting on the water line.

Where on-site fire hydrants are required, the City shall own the mains and hydrants located within established easements, unless the on-site mains and hydrants are located behind a master meter and designated as private.

Policy 7.2 Source of Supply

The City shall have sufficient system-wide supply facilities (including both permanent and emergency interties) to meet the Maximum Day Demand with the largest active water supply source out of service. Since power continuity is a concern, auxiliary power, such as an installed or portable generator of sufficient capacity to power the well or spring pumps should be provided.

Policy 7.3 Pump Stations

A minimum of two pumps or a complete spare pump will be provided for each distribution system pump station to provide flexibility and system redundancy. Where multiple pumps are provided, the pumps will be sized so that the station can meet Maximum Day Demand flow conditions with the largest pump out-of-service. If the area is not served by gravity by a reservoir, booster pumps (along with any supply available) will be sized to provide peak hour demand and fire demand for the service area should the largest pump be out-of- service. Since power continuity is a concern, auxiliary power, such as an installed or portable generator of sufficient capacity to power the station with any single pump out of service should be provided.

Policy 7.4 Storage Reservoirs

Reservoir redundancy is not a requirement for service areas where the Maximum Day Demand and fire demand can be met by supply or pumping.

Policy 7.5 Distribution System

The City will plan for and develop a dependable distribution network with pipeline redundancy for redirecting water to affected customers during pipeline failures and establishing multiple connections between service zones at various locations. While the aim is to create a looped water distribution system for reliability and fire flow, there may be cases where looping is not feasible, necessitating off-site improvements in developing areas. Larger water mains may be required for major distribution lines or areas with higher fire flow needs. Additionally, subdividing service area zones into smaller pressure zones aligned with topographic elevations guarantees consistent pressure in each zone.

Whenever a street is to be substantially reconstructed or a new street built, the City shall determine whether water facilities in the street right a way shall be constructed or brought up to the size and configuration indicated by the Water Plan and Comprehensive Plan.

Policy 7.6 Fire Flow Requirements

The City has established two distinct and independent parts to the municipal water-system fire flow requirements within the City Retail Water Service Area. The first is a fire flow requirement established by the Fire Authority as a building-specific fire flow based on building use and materials of construction. The second is a multi-source municipal water system level of service criterion. The City shall require that both parts of the fire flow requirements be met as a condition of development and as a condition of any extension of the City water system.

New development, redevelopment, or change in use or occupancy (as defined by Auburn City Code) shall meet the full fire flow requirements as established by this policy. Change of occupancy is not intended to include change of tenants or proprietors. The applicant shall be responsible for installing all necessary facilities needed to serve the property and for complying with the City's development, and design and construction standards to meet these requirements.

Fire flow requirements for existing structures and uses or occupancies are those that were required at the time of construction, as determined by the Fire Authority and the City's water utility (since 1995). Such existing structures shall not be required to upgrade the municipal water-system infrastructure to meet current fire flow and development standards. Similarly, the City shall not be obligated to upgrade the existing water- system infrastructure to meet current fire-flow criteria and standards. The City should consider the benefits of improved fire flows when analyzing the need, design, and merits of municipal water-system improvements.

Policy 7.7 Fire-Flow Improvements

As resources become available, the City shall make the City's municipal water-system improvements to meet the current fire flow criteria. Such system improvements may include replacing undersized water mains and pumping stations or correcting fire hydrant deficiencies of spacing and standardization where current standards are not met. When prioritizing and scheduling system improvements, the City capital facilities planning procedures should consider the severity of deficiencies. The City should seek opportunities to make improvements in conjunction with other City projects to achieve economic efficiency.

Policy 7.8 Fire-Flow Quantity

The quantity of water available for firefighting establishes an important level of service for a water system. The fire flow requirements shall be based on the minimum City fire flow requirements specified in the current City of Auburn Engineering Design Standards. Additional fire flow may be required per the International Fire Code.

Where the City determines higher fire flows are required than the minimums, the higher flow will be the criterion used to determine the required system improvements. Fire flows are to be provided during Maximum Day Demand at the pressure requirements discussed in the paragraphs on Distribution System.

Policy 7.9 Reservoir Sizing

The City reservoir storage components shall be sized to meet WAC 246-290-235 and Department of Health recommendations and requirements.

Policy 7.10 Individual Service Area Water Supply Requirements

The City will provide sufficient water supply capacity to meet Maximum Day Demand for each of the four service areas (Valley service area, Academy service area, Lea Hill service area and the Lakeland Hills service area) and any sub systems within these service areas utilizing a combination of reliable sources, reliable pump stations and reservoirs in accordance with system reliability criteria.

Policy 7.11 System Pressure

The City of Auburn has established a criterion for minimum pressure within the water distribution system of 30 psi for all new facilities during Peak Hour Demand.

The distribution system shall be capable of providing the required fire flow under Maximum Day Demand conditions. During these conditions, a minimum pressure of 20 psi is allowed at any point within the distribution system when firefighting storage and equalizing storage are depleted (WAC 246-290-230 Distribution Systems). The maximum target pressure within the water distribution system is 80 psi.

Policy 7.12 Elements of Required Storage

The City storage reservoir volume requirements are comprised of three separate categories: Equalizing Storage (when necessary), Fire Fighting Storage, and Emergency Storage. In addition, reservoirs may include a "dead storage" volume that is not useful because of the water system configuration.

Auburn will provide sufficient storage volume so that each storage component is provided separately, recognizing that a fire could occur during an emergency (supply or pump station out-of-service). As a result, nesting of storage (using the same storage for both emergency and firefighting) is not acceptable and the City requires these volumes to be stacked. Evaluation of the required reservoir volume must be done by analyzing each reservoir independently to ensure that adequate storage is provided to meet the needs of customers within the reservoir service area. Storage within a zone of higher elevation can be used to meet the storage requirements of lower zones served by the reservoir.

CITY OF AUBURN WASHINGTON
MAYOR NANCY BACKUS
25 WEST MAIN STREET, AUBURN, WA 98001
253-931-3000
AUBURNWA.GOV

DETERMINATION OF NON-SIGNIFICANCE (DNS)
City of Auburn Comprehensive Water Plan Update
SEP24-0015

The City of Auburn is issuing a Determination of Non-Significance (DNS) for the following described project. The permit applications and listed studies may be reviewed at the Auburn Department of Community Development at One E Main St., 2nd Floor, Customer Service Center, Auburn, WA 98001 and by visiting www.auburnwa.gov/landuse.

Proposal: The proposed non-project action includes adoption of the Comprehensive Water System Plan as an element of the city's Comprehensive Plan. The City of Auburn's Water System Plan (WSP) has been developed in accordance with Chapter 426-290 of the Washington Administrative Code (WAC), as presented in Washington State Department of Health (DOH) regulations for Group A Public Water Systems. This WSP supersedes the City of Auburn's 2015 WSP, approved on May 11, 2016, and the 2021 Limited WSP Update approved by DOH on December 16, 2021. The purposed of this WSP is to develop a long-term strategy for the City's Retail Water Service Area. Updated every ten years per DOH, the WSP evaluates the existing system and its ability to meet the anticipated requirements for water source, treatment, transmission, storge and distribution over the 20-year planning period.

Location: City-wide

Notice of Application:
Not applicable
Application Complete:
October 2, 2024
Permit Application:
September 6, 2024

File Nos.
SEP24-0015

Property Owner:
City of Auburn
25 W Main St.
Auburn WA, 98001

Applicant:
City of Auburn
Senait Gebreeyesus
25 W Main St.
Auburn WA, 98001

Studies/Plans Submitted with Application:
SEPA Environmental Checklist, prepared by City of Auburn, dated August 15, 2024
Draft Water System Plan, prepared by Consor, dated August 2024

Other Permits, Plans, and Approvals Needed:
Not Applicable.

Statement of Consistency and List of Applicable Development Regulations: This proposal is subject to and shall be consistent with the Auburn City Code, Comprehensive Plan, and Public Works Design and Construction Standards.

Lead Agency: City of Auburn. The lead agency for this proposal has determined that it does not have probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030(2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public on request.

SEPA Environmental Review: This DNS is issued under WAC 197-11-340(2); the lead agency will not act on this proposal for 14 days from the date below.

Public Comment Period: This may be your only opportunity to comment on the environmental impact of the proposal. All persons may comment on this application. Comments must be in writing and submitted by **5:00 p.m. on October 22, 2024** to the mailing address of 25 W Main St., Auburn, WA, 98001 or emailed to the contact below. Any person wishing to become a party of record, shall include in their comments that they wish to receive notice of and participate in any hearings, if relevant, and request a copy of decisions once made. *The responsible official will reconsider the DNS based on timely comments and may retain, modify, or, if significant adverse impacts are likely, withdraw the DNS.* ***If the DNS is retained, it will be final after the expiration of the comment deadline.***

Any person aggrieved of the City's determination may file an appeal with the Auburn City Clerk at 25 West Main Street, Auburn, WA 98001-4998 within 14 days of the close of the comment period, or by 5:00 p.m. on September 9, 2024.

For questions regarding this project, please contact Dinah Reed, Senior Planner, at planning@auburnwa.gov or 253-931-3092.

Public Hearing: N/A

RESPONSIBLE SEPA OFFICIAL:
Alexandria D. Teague, Planning Services Manager

ADDRESS:
25 West Main St., Auburn, WA 98001
253-931-3090

DATE ISSUED: October 8, 2024 SIGNATURE: Alexandria D. Teague

Note: This determination does not constitute approval of the proposal. Approval of the proposal can only be made by the legislative or administrative body vested with that authority. The proposal is required to meet all applicable regulations.

SEPA[1] Environmental Checklist

Purpose of checklist

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization, or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

Instructions for applicants

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. **You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown.** You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to **all parts of your proposal**, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for lead agencies

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B, plus the Supplemental Sheet for Nonproject Actions (Part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in "Part B: Environmental Elements" that do not contribute meaningfully to the analysis of the proposal.

[1] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/Checklist-guidance

A.Background

Find help answering background questions[2]

1. **Name of proposed project, if applicable:**

   City of Auburn, 2024 Comprehensive Water Plan

2. **Name of applicant:**

   City of Auburn, Public Works Department, Water Division

3. **Address and phone number of applicant and contact person:**

   Public Works Department

   25 West Main Street

   Auburn, WA 98001

   253-931-3010

   Senait Gebreeyesus, Water Utility Engineer

   253-804-5061

4. **Date checklist prepared:**

   August 15, 2024

5. **Agency requesting checklist:**

   City of Auburn

6. **Proposed timing of schedule (including phasing, if applicable):**

   The Comprehensive Water Plan is slated for adoption by December 2024. It outlines both short-term projects intended to be initiated over the next decade (2025-2034) and long-term projects forecasted for the following two decades (2035-2044). The exact locations of these projects are detailed within the proposed Comprehensive Water Plan.

7. **Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.**

   There are no current plans for further expansions or additional activities related to this proposal. This plan serves as a comprehensive outline for the City's capital improvement initiatives over the next ten years, with a vision extending to twenty years. Any projects that are not exempt from SEPA will undergo a detailed project-level review. The proposed locations of these projects are presented within the Comprehensive Water Plan.

8. **List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.**

[2] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-A-Background

The specific environmental documentation related to this proposal will be developed as individual projects are brought forward for implementation. Each project will undergo an environmental checklist and threshold determination based on its scope and impact.

9. **Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.**

   Currently, there are no known pending applications for government approvals directly affecting the properties covered by this proposal. However, there may be ongoing applications related to improvements within the water system, such as developer extensions and plat developments within the water service area.

10. **List any government approvals or permits that will be needed for your proposal, if known.**

    The Comprehensive Water Plan requires approval from City of Auburn and the Washington State Department of Health.

11. **Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)**

    The proposal involves adopting a new Comprehensive Water Plan to replace the City of Auburn's existing plan from 2015 and its limited update in 2021. This updated plan reflects the changes within the City's water system, identifies necessary system modifications, and details capital improvement projects designed to meet future water demands, system maintenance, and improvement activities. The maintenance of an up-to-date plan is crucial for compliance with Washington State Department of Health regulations and the Washington Growth Management Act. The plan encompasses the entire water service area, including most of the City limits, covering approximately 30 square miles.

12. **Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.**

    The Comprehensive Water Plan applies to the City of Auburn's water service area, which includes most of the area within the City limits. Auburn is located between Seattle and Tacoma in both King County and Pierce County, Washington, spanning approximately 30 square miles.

B.Environmental Elements

1. Earth

Find help answering earth questions[3]

a. General description of the site:

Circle or highlight one: Flat, rolling, hilly, steep slopes, mountainous, other:

The project area features a varied terrain, including both flat regions and steep slopes.

b. What is the steepest slope on the site (approximate percent slope)?

The steepest slopes within the planning area can reach gradients as high as 100%. Notable steep slope areas are located east and north of the Green River on Lea Hill, south of the White River on Lakeland Hills, and along the West Valley Highway toward West Hill.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them, and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

The soils in the region predominantly consist of glacial and interglacial deposits in the uplands, with modern alluvium, undifferentiated deltaic deposits, and Osceola Mudflow in the valley. Soil textures range from gravelly, sandy loam to gravelly loam.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

There is potential for unstable soils on steep slopes in the identified areas. Geologic hazard zones, including those prone to volcanic activity, seismic events, landslides, and erosion, are mapped within the City's Comprehensive Plan and sensitive areas maps.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

This plan does not directly involve any filling, excavation, or grading activities. However, water system construction projects identified in the plan will likely require these activities, with specific details to be determined during individual project reviews.

f. Could erosion occur because of clearing, construction, or use? If so, generally describe.

While this non-project action does not directly cause erosion, individual projects will be reviewed for potential erosion impacts and corresponding mitigation measures.

[3] https://ecology.wa.gov/regulations-permits/sepa/environmental-review/sepa-guidance/sepa-checklist-guidance/sepa-checklist-section-b-environmental-elements/environmental-elements-earth

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Water system projects typically do not create significant impervious surfaces, as most infrastructure is installed beneath existing roadways or in easements where structures are restricted, or within an existing building. Specific projects will be subject to environmental review before implementation.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any.

Although this non-project action does not involve direct earth disturbances, individual projects will include erosion and sedimentation control measures, with best management practices applied in areas prone to erosion.

2. Air

Find help answering air questions[4]

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

This non-project action does not generate air emissions. However, specific construction projects will be evaluated for air quality impacts during their environmental review, and appropriate mitigation measures will be applied.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No off-site sources of emissions are expected to affect this proposal. However, individual projects will be assessed for air quality impacts during their environmental review.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Although this plan itself does not involve direct air emissions, standard emission controls will be implemented during the construction of projects recommended by this plan.

[4] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-Air

3. Water

Find help answering water questions[5]

a. Surface:

Find help answering surface water questions[6]

1. **Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.**

   The service area contains several significant water bodies, including the Green River and White River, as well as streams like Mill Creek and various drainage ways leading to these rivers. The area also includes numerous wetlands.

2. **Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.**

   This non-project action does not involve direct work near water bodies. However, the Comprehensive Water Plan recommends various water system improvements, including well rehabilitation and upgrades, which may occur near these water bodies. Such projects will undergo environmental review in compliance with the City's Shoreline Master Program.

3. **Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.**

   This plan itself does not involve the placement or removal of material in or near surface waters. However, future projects may involve such activities, which will be subject to environmental review.

4. **Will the proposal require surface water withdrawals or diversions? Give a general description, purpose, and approximate quantities if known.**

   The plan does not propose surface water withdrawals. The City's water supply primarily relies on a system of groundwater wells detailed in the comprehensive plan.

5. **Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**

   While this plan does not involve direct action within floodplains, portions of the City's water service area are within or adjacent to floodplain areas. Individual projects will identify floodplain boundaries during their environmental review.

[5] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-3-Water
[6] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-3-Water/Environmental-elements-Surface-water

6. **Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.**

   This plan does not propose any discharges of waste materials into surface waters.

b. Ground:

Find help answering ground water questions[7]

1. **Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give a general description, purpose, and approximate quantities if known.**

   The adoption of the Comprehensive Water Plan does not entail direct groundwater withdrawals. The City's existing groundwater wells and their associated water rights are thoroughly documented in the plan.

2. **Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (domestic sewage; industrial, containing the following chemicals…; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.**

   No waste material will be discharged into the ground as a result of this plan.

c. Water Runoff (including stormwater):

1. **Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.**

   The adoption of this plan will not generate stormwater runoff. However, individual projects will be assessed for their potential to generate runoff during their environmental review.

2. **Could waste materials enter ground or surface waters? If so, generally describe.**

   This non-project action does not introduce the risk of waste materials entering ground or surface waters.

3. **Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.**

   The adoption of this plan will not affect drainage patterns. However, individual projects will be reviewed for such impacts.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

[7] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-3-Water/Environmental-elements-Groundwater

While the plan itself does not directly impact water resources, specific projects will include measures to control erosion, manage runoff, and mitigate drainage impacts as necessary, based on their environmental review.

4. Plants

Find help answering plants questions

a. Check the types of vegetation found on the site:

☐ **deciduous tree: alder, maple, aspen, other**

☐ **evergreen tree: fir, cedar, pine, other**

☐ **shrubs**

☐ **grass**

☐ **pasture**

☐ **crop or grain**

☐ **orchards, vineyards, or other permanent crops.**

☐ **wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other**

☐ **water plants: water lily, eelgrass, milfoil, other**

☐ **other types of vegetation**

This item does not apply to the current non-project action. The Plan area encompasses a diverse range of vegetation types. The presence and treatment of specific plant types will be addressed as part of individual construction projects within the Plan.

b. What kind and amount of vegetation will be removed or altered?

This inquiry is not applicable to the non-project action being undertaken. The adoption of the Comprehensive Water Plan itself will not result in any direct environmental changes, including the alteration of vegetation. However, specific projects and programs that stem from the Plan may involve the removal or modification of vegetation. The precise impacts of such actions are currently indeterminate. Each project will undergo environmental review to evaluate potential impacts and appropriate mitigation measures before execution.

c. List threatened and endangered species known to be on or near the site.

This question does not pertain to the current non-project action. Any threatened or endangered species in proximity to the proposed projects under this Plan will be identified during the environmental review process for each individual project.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any.

This item does not apply to the non-project action. Landscaping, the use of native plants, or other measures to preserve or enhance vegetation will be considered on a project-specific basis during environmental reviews before project implementation.

e. List all noxious weeds and invasive species known to be on or near the site.

This query is not applicable to this non-project action. Any noxious weeds or invasive species present in or near the recommended projects under this Plan will be identified during the environmental review process for each respective project.

5. Animals

Find help answering animal questions[8]

a. List any birds and other animals that have been observed on or near the site or are known to be on or near the site.

Examples include:

- **Birds: hawk, heron, eagle, songbirds, other:**
- **Mammals: deer, bear, elk, beaver, other:**
- **Fish: bass, salmon, trout, herring, shellfish, other:**

This question does not apply to the current non-project action, as the adoption of the Comprehensive Water Plan does not involve a specific site. A variety of species, such as those mentioned, may inhabit the Plan area. Specific projects will undergo environmental review to identify any species present before they are carried out.

b. List any threatened and endangered species known to be on or near the site.

According to the City of Auburn Comprehensive Plan, the water service area is home to species such as the Great Blue Heron and Bald Eagles. Additionally, Chinook Salmon, classified as endangered by the National Marine Fisheries Service, and Bull Trout, listed as endangered by the US Fish and Wildlife Service, are known to inhabit the area. Chinook Salmon are present in Mill Creek and the Green and White Rivers, while Bull Trout may be found in the Green and White Rivers.

c. Is the site part of a migration route? If so, explain.

This question does not pertain to the current non-project action. The adoption of the Comprehensive Water Plan does not involve any specific site. Migration routes of any threatened or endangered species in proximity to the recommended projects will be identified during the environmental review process for each individual project.

d. Proposed measures to preserve or enhance wildlife, if any.

This item does not apply to the current non-project action. The adoption of the Comprehensive Water Plan itself will not directly impact any listed species or their habitats. However, proposed improvement projects under the Plan may potentially affect listed species, though the specific impacts are not currently known. Environmental reviews for each project will assess potential impacts and propose

[8] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-5-Animals

appropriate mitigation measures and best management practices before project implementation.

e. List any invasive animal species known to be on or near the site.

This question does not apply to the current non-project action. Any invasive animal species in or near the proposed projects under this Plan will be identified during the environmental review process for each individual project.

6. Energy and natural resources

Find help answering energy and natural resource questions[9]

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

This question does not apply to the current non-project action. The adoption of the Comprehensive Water Plan itself will not necessitate the use of energy. Specific projects will undergo individual reviews to determine their energy and natural resource needs.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

There will be no impact on the potential use of solar energy by adjacent properties.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any.

This question does not apply to the current non-project action. The adoption of the Comprehensive Water Plan itself will not directly result in energy conservation or control measures. However, certain programs and projects under the Plan may include energy-saving features. The exact conservation benefits of these measures are not yet known and will be evaluated on a case-by-case basis for each project.

7. Environmental health

Health Find help with answering environmental health questions[10]

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur because of this proposal? If so, describe.

This item is not applicable to the current non-project action. The adoption of the Comprehensive Water Plan itself will not lead to environmental health hazards, such as exposure to toxic chemicals or the risk of fire and explosion. However, specific programs and projects within the Plan may pose such risks. The potential impacts of these actions are currently unknown. Each project will be subject to environmental review to assess potential risks and determine appropriate mitigation measures before implementation.

[9] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-6-Energy-natural-resou
[10] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-7-Environmental-health

1. **Describe any known or possible contamination at the site from present or past uses.**

   This item does not apply to the current non-project action. Specific projects will undergo individual environmental reviews before they are implemented to identify any potential site contamination.

2. **Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.**

   This question does not pertain to the current non-project action. Specific projects will be subject to environmental review to identify any existing hazardous chemicals or conditions that could impact project development or design.

3. **Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.**

   This item is not applicable to the current non-project action. Specific projects will be reviewed to determine if any toxic or hazardous chemicals might be used, stored, or produced during construction or operation.

4. **Describe special emergency services that might be required.**

   This item does not apply to the current non-project action. Specific projects will undergo environmental review to determine if any special emergency services might be required.

5. **Proposed measures to reduce or control environmental health hazards, if any.**

   This query does not apply to the current non-project action. Any measures to reduce or control environmental health hazards will be evaluated and proposed during the environmental review process for each specific project.

b. Noise

1. **What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?**

   This question does not apply to the current non-project action. Any noise affects will be evaluated as part of the individual projects.

2. **What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site)?**

   This item does not apply to the current non-project action. The adoption of the Comprehensive Water Plan itself will not generate noise. However, specific programs and projects under the Plan may produce noise, though the potential impacts are currently unknown. Each project will undergo environmental review to evaluate potential noise impacts and determine appropriate mitigation measures before implementation.

3. **Proposed measures to reduce or control noise impacts, if any:**

This inquiry does not apply to the current non-project action. Noise reduction measures will be considered and proposed during the environmental review process for each specific project.

8. Land and shoreline use

Find help answering land and shoreline use questions[11]

a. **What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.**

   The water service area includes a mix of land uses, primarily residential, with other uses such as industrial, commercial, manufacturing, public, and park spaces also present.

b. **Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses because of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?**

   The adoption of the Comprehensive Water Plan itself will not impact any remaining agricultural or forest land. Future projects under the Plan will be subject to environmental review to assess potential impacts and determine appropriate mitigation measures.

   1. **Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how?**

      No, the proposal will not impact surrounding working farm or forest land or their normal business operations.

c. **Describe any structures on the site.**

   The water service area features various types of structures, including residential, commercial, institutional, manufacturing, and industrial buildings.

d. **Will any structures be demolished? If so, what?**

   This question does not apply to the current non-project action. Any structures proposed for demolition will be identified during the environmental review process for each specific project.

e. **What is the current zoning classification of the site?**

   The water service area encompasses various zoning districts within Auburn and unincorporated King and Pierce Counties. These districts include single-family and multi-

[11] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-8-Land-shoreline-use

family residential, light and heavy commercial, light and heavy industrial, public, and open spaces.

f. What is the current comprehensive plan designation of the site?

The water service area contains multiple Comprehensive Plan designations. The City of Auburn oversees the majority of this service area. Projects recommended by the Plan will be required to comply with the City's Shoreline program if they fall within the shoreline management area.

g. If applicable, what is the current shoreline master program designation of the site?

The City's shoreline designations include natural, shoreline residential, and urban conservancy. Projects recommended by the Plan will need to adhere to the City's Shoreline Master Program requirements.

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

Yes, the water service area includes lands classified as critical areas, such as wetlands, geologic hazard areas, aquifer recharge zones, habitat areas, groundwater protection areas, and frequently flooded areas.

i. Approximately how many people would reside or work in the completed project?

The water service area's population was estimated to be 63,450 in 2022, with projections indicating an increase to 85,519 by 2034 and 97,328 by 2035. The employment in the water service area was estimated to be 48,419 in 2021, with forecasts showing an increase to 59,205 in 2034 and 68,944 in 2044.

j. Approximately how many people would the completed project displace?

This question does not apply to the current non-project action. The adoption of the Comprehensive Water Plan will not displace any people. The Plan's programs and projects are not intended to cause displacement.

k. Proposed measures to avoid or reduce displacement impacts, if any.

This inquiry does not pertain to the current non-project action.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any.

The Comprehensive Water Plan has been developed in alignment with all relevant local, county, and state regulations. This includes the City Comprehensive Plan created under the Growth Management Act policies, the South King County Coordinated Water System Plan, and the Pierce County Comprehensive Plan.

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:

The Comprehensive Water Plan is fully compliant with existing local, county, and state regulations, including the City Comprehensive Plan, the South King County Coordinated Water System Plan, and the Pierce County Comprehensive Plan.

9. Housing

Find help answering housing questions[12]

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

This query is not applicable to this non-project action. The adoption of the Comprehensive Water Plan does not involve the provision of housing units. The Plan is focused on water-related infrastructure and does not encompass housing development or residential unit allocation.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

This question is not applicable to this non-project action. The adoption of the Comprehensive Water Plan will not lead to the removal of any housing units. The Plan's scope is confined to water infrastructure and does not include the elimination or alteration of housing.

c. Proposed measures to reduce or control housing impacts, if any:

As this is a non-project action centered on water infrastructure, there are no housing impacts anticipated, and thus, no mitigation measures are proposed.

10. Aesthetics

Find help answering aesthetics questions[13]

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

This question does not pertain to this non-project action. The adoption of the Comprehensive Water Plan will not result in the construction of any structures. Any future projects involving structures will determine the specifics, including height and materials, during their design phases.

b. What views in the immediate vicinity would be altered or obstructed?

This query is not applicable to this non-project action. The adoption of the Comprehensive Water Plan does not involve the construction of any structures that could obstruct or alter views in the vicinity.

c. Proposed measures to reduce or control aesthetic impacts, if any:

Future projects stemming from the Plan will undergo individual environmental reviews, where potential aesthetic impacts and appropriate mitigation measures will be assessed and implemented before construction begins.

[12] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-9-Housing
[13] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-10-Aesthetics

11. Light and glare

Find help answering light and glare questions[14]

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

This question does not pertain to this non-project action. The adoption of the Comprehensive Water Plan will not result in the construction of any structures. Any future projects involving structures will determine the specifics, including height and materials, during their design phases.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

This query is not applicable to this non-project action. The adoption of the Comprehensive Water Plan does not involve the construction of any structures that could obstruct or alter views in the vicinity.

c. What existing off-site sources of light or glare may affect your proposal?

Future projects stemming from the Plan will undergo individual environmental reviews, where potential aesthetic impacts and appropriate mitigation measures will be assessed and implemented before construction begins.

d. Proposed measures to reduce or control light and glare impacts, if any:

This query is not applicable to this non-project action.

12. Recreation

Find help answering recreation questions

a. What designated and informal recreational opportunities are in the immediate vicinity?

The service area includes a variety of parks and recreational spaces. Additionally, there are rivers and streams within the water service area that offer recreational activities, and a golf course is also located nearby.

b. Would the proposed project displace any existing recreational uses? If so, describe.

This question does not apply to this non-project action. The adoption of the Comprehensive Water Plan will not displace any existing recreational uses.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

Any specific projects resulting from the Plan will undergo environmental reviews where potential impacts on recreational activities will be evaluated, and corresponding mitigation measures will be developed before implementation.

[14] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-11-Light-glare

13. Historic and cultural preservation

Find help answering historic and cultural preservation questions[15]

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers? If so, specifically describe.

The water service area covers parts of the City of Auburn and Unincorporated King County. Numerous sites within these areas are listed on preservation registers and will be addressed through individual environmental reviews as specific construction projects are proposed.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

This query is not applicable to this non-project action. Individual projects will be subject to environmental reviews that will assess the presence and importance of such features before implementation.

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

This question does not pertain to this non-project action. Specific projects will be reviewed through environmental assessments, which may include consultations with tribal entities, the Department of Archaeology and Historic Preservation, and the use of tools like archaeological surveys and historic maps.

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

This non-project action does not require specific mitigation measures. However, individual projects will be reviewed, and necessary steps will be taken to protect cultural and historic resources as per applicable laws and guidelines.

[15] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-13-Historic-cultural-p

14. Transportation

Find help with answering transportation questions[16]

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

The service area is intersected by several streets and highways, including State Highways 18 and 167, Auburn Way North, Auburn Way South (SR 164), West Valley Highway, and 15th Street Northwest.

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

The City of Auburn is currently served by Sound Transit, King County Metro, and Pierce Transit. Any areas within the City that are not served by public transit will be considered as individual construction projects are proposed.

c. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle, or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

This non-project action does not necessitate the construction of new roads or the improvement of existing transportation facilities.

d. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

This question does not apply to this non-project action. The adoption of the Comprehensive Water Plan will not involve the use of water, rail, or air transportation. However, some projects may occur near these transportation facilities and will be reviewed accordingly.

e. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?

This question does not apply to this non-project action as the adoption of the Comprehensive Water Plan will not generate vehicular trips.

f. Will the proposal interfere with, affect, or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

This query is not applicable to this non-project action. The adoption of the Comprehensive Water Plan will not affect the transportation of agricultural or forest products. Any relevant projects will be reviewed for potential impacts during their environmental assessments.

[16] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-B-Environmental-elements/Environmental-elements-14-Transportation

g. Proposed measures to reduce or control transportation impacts, if any:

As this is a non-project action, no specific transportation impact mitigation measures are required.

15. Public services

Find help answering public service questions[17]

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

This non-project action will not result in an increased demand for public services such as fire protection, police services, public transit, healthcare, or educational facilities.

b. Proposed measures to reduce or control direct impacts on public services, if any.

Since the adoption of the Comprehensive Water Plan does not impact public services, no mitigation measures are proposed.

16. Utilities

Find help answering utilities questions[18]

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other:

The service area is equipped with a variety of utilities, including electricity, natural gas, water, refuse service, telephone, and sanitary sewer.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

The Comprehensive Water Plan recommends necessary repairs, replacements, improvements, and extensions to water system facilities to meet service level criteria established by local, county, and state regulations. These facilities include wells, springs, reservoirs, pump stations, pressure reducing stations, water mains, and related appurtenances. Each project will undergo an individual environmental review process. Water services will be provided by the City of Auburn's water division.

C.Signature

Find help about who should sign[19]

[17] https://ecology.wa.gov/regulations-permits/sepa/environmental-review/sepa-guidance/sepa-checklist-guidance/sepa-checklist-section-b-environmental-elements/environmental-elements-15-public-services
[18] https://ecology.wa.gov/regulations-permits/sepa/environmental-review/sepa-guidance/sepa-checklist-guidance/sepa-checklist-section-b-environmental-elements/environmental-elements-16-utilities
[19] https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-guidance/SEPA-checklist-guidance/SEPA-Checklist-Section-C-Signature

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

8/28/2024

X

Signed by: Senait Gebreeyesus

Type name of signee: Senait Gebreeyesus

Position and agency/organization: Water Utility Engineer, City of Auburn

Date submitted: **August 15, 2024**

D.Supplemental sheet for nonproject actions

Find help for the nonproject actions worksheet[20]
Do not use this section for project actions.

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. **How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?**

   The adoption of the Comprehensive Water Plan is a non-project action and does not inherently increase discharges to water or air, nor does it contribute to noise production. However, the construction activities recommended in the Plan could result in temporary increases in exhaust emissions from construction equipment and dust from exposed soils. These impacts will be evaluated through environmental reviews before any project begins.

   - **Proposed measures to avoid or reduce such increases are:**

     No specific mitigation measures are proposed at this stage. The potential for discharges and emissions will be minimized by adhering to best management practices and ensuring that all designs and construction activities comply with local, state, and federal regulations. Each project will be reviewed individually by the appropriate agencies to assess and address environmental impacts.

[20] https://ecology.wa.gov/regulations-permits/sepa/environmental-review/sepa-guidance/sepa-checklist-guidance/sepa-checklist-section-d-non-project-actions

2. **How would the proposal be likely to affect plants, animals, fish, or marine life?**

   The adoption of the Plan itself does not affect flora or fauna. It is anticipated that none of the proposed projects within the Plan will negatively impact fish or wildlife.

   - **Proposed measures to protect or conserve plants, animals, fish, or marine life are:**

     No specific conservation measures are proposed at this stage. Individual projects will undergo thorough reviews to ensure the protection of plants, animals, fish, and marine life, and appropriate agencies will be consulted as needed.

3. **How would the proposal be likely to deplete energy or natural resources?**

   The Comprehensive Water Plan is focused on maintaining and improving existing water infrastructure, which is not expected to have a significant impact on energy or natural resource depletion. However, individual projects will be evaluated to determine their specific impacts on these resources.

   - **Proposed measures to protect or conserve energy and natural resources are:**

     The Plan emphasizes maximizing gravity flow wherever possible to conserve energy. It also includes a water use efficiency program that aims to achieve significant water resource savings over time. Additionally, the Plan proposes improvements to pump stations to enhance efficiency, although the exact conservation benefits are currently unquantifiable. Each project will be individually assessed for energy and resource conservation by the relevant agencies.

4. **How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection, such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?**

   The proposed action, which involves adopting the Comprehensive Water Plan, is not expected to directly impact environmentally sensitive areas, such as parks, wilderness areas, wild and scenic rivers, threatened or endangered species habitats, historic or cultural sites, wetlands, floodplains, or prime farmlands. However, since the Plan outlines future programs and projects that could be near these sensitive areas, the exact nature of potential impacts remains undetermined at this stage. Any projects that could affect sensitive areas will be required to adhere to City policies and regulations designed to protect these resources.

   - **Proposed measures to protect such resources or to avoid or reduce impacts are:**

     The Plan does not inherently expand the authority of any entity—be it an individual, company, or agency—to initiate developments that might negatively impact sensitive areas. Each proposed project will undergo individual review and will need to obtain approval from the appropriate agencies before moving forward. Compliance with all relevant local, state, and federal regulations will be mandatory to ensure the protection of these sensitive environments.

5. **How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?**

The adoption of the Comprehensive Water Plan does not facilitate or promote land or shoreline uses that would be incompatible with existing land-use plans. Any specific projects arising from the Plan will be individually assessed through environmental reviews before they are implemented.

- **Proposed measures to avoid or reduce shoreline and land use impacts are:**

  Each project proposed under the Plan will be evaluated on its own merits, with oversight from the appropriate agencies to ensure that it aligns with existing land-use regulations. Adherence to applicable local, state, and federal guidelines will be enforced to prevent any negative impacts on land and shoreline use.

6. **How would the proposal be likely to increase demands on transportation or public services and utilities?**

   The adoption of the Comprehensive Water Plan itself will not directly lead to an increase in demand for transportation, public services, or utilities. In fact, the Plan is designed to address the City's water utility needs in response to anticipated population growth.

   - **Proposed measures to reduce or respond to such demand(s) are:**

     The Comprehensive Water Plan includes a range of projects and programs aimed at meeting the City's growing demand for water services. By planning for future needs, the Plan helps ensure that the City's infrastructure can accommodate growth without placing undue strain on existing transportation networks or public services.

7. **Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.**

   The 2024 Comprehensive Water Plan aligns with current legal frameworks designed to protect the environment, ensuring that all proposed projects and actions will be in full compliance with these regulations.

PLANNING & PUBLIC WORKS

9850 64th Street West
University Place, Washington 98467-1078

PierceCountyWa.gov/PPW

Josh Diekmann - Director

July 14, 2025
U-116688

Consor
C/O Adam Schuyler
600 University Street, Suite #300
Seattle, WA 98101

Email: adam.schuyler@consoreng.com

Subject: **City of Auburn Water System Plan – DOH ID# 03350V**

Dear Mr. Schuyler,

Thank you for the time and effort you put toward the Coordinated Water System Plan (CWSP) process. Pierce County reviewed the plan and responses to comments from October 2024 to June 2025 and find that all submittals are consistent with the County's Comprehensive Plan and CWSP.

If you have any questions, please contact me at lori.roosendaal@piercecountywa.gov or (253) 798 – 7167.

Sincerely,

Lori Roosendaal

Lori Roosendaal
Senior Planner

LR:ds
CORS\\U-116688

enc: Signed Local Government Consistency Form

cc: Senait Gebreeyesus, City of Auburn, SGebreeyesus@auburnwa.gov
Ryan Vondrak, City of Auburn, rvondrak@auburnwa.gov
Ciara Murphy, Consor Engineering, ciara.murphy@consoreng.com
Michelle Harris, TPCHD, MHarris@tpchd.org
Ken Rice, Pierce County DEM, Fire Marshal, ken.rice@piercecountywa.gov
Todd Kilpatrick, Pierce County DEM, todd.kilpatrick@piercecountywa.gov
Carol Stuckey, PE, WA Dept. of Health, carol.stuckey@doh.wa.gov
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Crystal Nuño, WA Dept. of Health, crystal.nuno@doh.wa.gov

Local Government Consistency Determination Form

331-568 • 8/10/2023

Water System Name: City of Auburn PWS ID: 03350V

Planning/Engineering Document Title: Water System Plan Plan Date: May 2025

Local Government with Jurisdiction Conducting Review: Pierce County

Before the Department of Health (DOH) approves a planning or engineering submittal under Section 100 or Section 110, the local government must review the documentation the municipal water supplier provides to prove the submittal is consistent with **local comprehensive plans, land use plans and development regulations** (WAC 246-290-108). Submittals under Section 105 require a local consistency determination if the municipal water supplier requests a water right place-of-use expansion. The review must address the elements identified below as they relate to water service.

By signing this form, the local government reviewer confirms the document under review is consistent with applicable local plans and regulations. If the local government reviewer identifies an inconsistency, the reviewer should include the citation from the applicable comprehensive plan or development regulation and explain how to resolve the inconsistency, or confirm that the inconsistency is not applicable by marking N/A. See more instructions on page 2.

Local Government Consistency Statement	For Use by Water System: Identify page(s) in submittal	For Use by Local Government: Yes or Not Applicable
a) The water system service area is consistent with the adopted land use and zoning within the service area.	2-19 to 2-21	Yes
b) The growth projection used to forecast water demand is consistent with the adopted city or county's population growth projections. If a different growth projection is used, provide an explanation of the alternative growth projection and methodology.	2-23 to 2-33	Yes
c) For cities and towns that provide water service: All water service area policies of the city or town described in the plan conform to all relevant utility service extension ordinances.	2-6	Yes
d) Service area policies for new service connections conform to the adopted local plans and adopted development regulations of all cities and counties with jurisdiction over the service area.	1-21	NA
e) Other relevant elements related to water supply are addressed in the water system plan, if applicable. This may include Coordinated Water System Plans, Regional Wastewater Plans, Reclaimed Water Plans, Groundwater Management Area Plans, and the Capital Facilities Element of local comprehensive plans.	5-1 to 5-4	Yes

I certify that the above statements are true to the best of my knowledge and that these specific elements are consistent with adopted local plans and development regulations.

Lori Roosendaal

Signature

7/14/2025

Date

Lori Roosendaal, Senior Planner Pierce County

Printed Name, Title, & Jurisdiction

Local Government Consistency Determination Form

331-568 • 8/10/2023

Water System Name: City of Auburn PWS ID: 03350V

Planning/Engineering Document Title: Water System Plan Plan Date: August 2024

Local Government with Jurisdiction Conducting Review: Derbyshire Scenic Acres Water Association

Before the Department of Health (DOH) approves a planning or engineering submittal under Section 100 or Section 110, the local government must review the documentation the municipal water supplier provides to prove the submittal is consistent with **local comprehensive plans, land use plans and development regulations** (WAC 246-290-108). Submittals under Section 105 require a local consistency determination if the municipal water supplier requests a water right place-of-use expansion. The review must address the elements identified below as they relate to water service.

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Local Government Consistency Statement	For Use by Water System Identify page(s) in submittal	For Use by Local Government Yes or Not Applicable
a) The water system service area is consistent with the adopted land use and zoning within the service area.	2-19 to 2-21	Yes
b) The growth projection used to forecast water demand is consistent with the adopted city or county's population growth projections. If a different growth projection is used, provide an explanation of the alternative growth projection and methodology.	2-23 to 2-33	Yes
c) For cities and towns that provide water service: All water service area policies of the city or town described in the plan conform to all relevant utility service extension ordinances.	2-6	Yes
d) Service area policies for new service connections conform to the adopted local plans and adopted development regulations of all cities and counties with jurisdiction over the service area.	1-21	Yes
e) Other relevant elements related to water supply are addressed in the water system plan, if applicable. This may include Coordinated Water System Plans, Regional Wastewater Plans, Reclaimed Water Plans, Groundwater Management Area Plans, and the Capital Facilities Element of local comprehensive plans.	5-1 to 5-4	Yes

I certify that the above statements are true to the best of my knowledge and that these specific elements are consistent with adopted local plans and development regulations.

Jeffrey D Morgan

Signature

08/21/2024

Date

President Derbyshire Scenicn Acres Water Association

Printed Name, Title, & Jurisdiction

Local Government Consistency Determination Form

331-568 • 8/10/2023

Water System Name: City of Auburn PWS ID: 03350V

Planning/Engineering Document Title: Water System Plan Plan Date: August 2024

Local Government with Jurisdiction Conducting Review: City of Sumner

Before the Department of Health (DOH) approves a planning or engineering submittal under Section 100 or Section 110, the local government must review the documentation the municipal water supplier provides to prove the submittal is consistent with **local comprehensive plans, land use plans and development regulations** (WAC 246-290-108). Submittals under Section 105 require a local consistency determination if the municipal water supplier requests a water right place-of-use expansion. The review must address the elements identified below as they relate to water service.

By signing this form, the local government reviewer confirms the document under review is consistent with applicable local plans and regulations. If the local government reviewer identifies an inconsistency, the reviewer should include the citation from the applicable comprehensive plan or development regulation and explain how to resolve the inconsistency, or confirm that the inconsistency is not applicable by marking N/A. See more instructions on page 2.

Local Government Consistency Statement	For Use by Water System: Identify page(s) in submittal	For Use by Local Government: Yes or Not Applicable
a) The water system service area is consistent with the adopted land use and zoning within the service area.	2-19 to 2-21	Yes
b) The growth projection used to forecast water demand is consistent with the adopted city or county's population growth projections. If a different growth projection is used, provide an explanation of the alternative growth projection and methodology.	2-23 to 2-33	Yes
c) For cities and towns that provide water service: All water service area policies of the city or town described in the plan conform to all relevant utility service extension ordinances.	2-6	Yes
d) Service area policies for new service connections conform to the adopted local plans and adopted development regulations of all cities and counties with jurisdiction over the service area.	1-21	Yes
e) Other relevant elements related to water supply are addressed in the water system plan, if applicable. This may include Coordinated Water System Plans, Regional Wastewater Plans, Reclaimed Water Plans, Groundwater Management Area Plans, and the Capital Facilities Element of local comprehensive plans.	5-1 to 5-4	Yes

I certify that the above statements are true to the best of my knowledge and that these specific elements are consistent with adopted local plans and development regulations.

Signature

9/11/2024
Date

Andrew Leach, Associate City Engineer, City of Sumner
Printed Name, Title, & Jurisdiction

Local Government Consistency Determination Form

331-568 • 8/10/2023

Water System Name: City of Auburn PWS ID: 03350V

Planning/Engineering Document Title: Water System Plan Plan Date: August 2024

Local Government with Jurisdiction Conducting Review: Lake Meridian Water District

Before the Department of Health (DOH) approves a planning or engineering submittal under Section 100 or Section 110, the local government must review the documentation the municipal water supplier provides to prove the submittal is consistent with **local comprehensive plans, land use plans and development regulations** (WAC 246-290-108). Submittals under Section 105 require a local consistency determination if the municipal water supplier requests a water right place-of-use expansion. The review must address the elements identified below as they relate to water service.

By signing this form, the local government reviewer confirms the document under review is consistent with applicable local plans and regulations. If the local government reviewer identifies an inconsistency, the reviewer should include the citation from the applicable comprehensive plan or development regulation and explain how to resolve the inconsistency, or confirm that the inconsistency is not applicable by marking N/A. See more instructions on page 2.

Local Government Consistency Statement	For Use by Water System Identify page(s) in submittal	For Use by Local Government Yes or Not Applicable
a) The water system service area is consistent with the adopted land use and zoning within the service area.	2-19 to 2-21	yes
b) The growth projection used to forecast water demand is consistent with the adopted city or county's population growth projections. If a different growth projection is used, provide an explanation of the alternative growth projection and methodology.	2-23 to 2-33	yes
c) For cities and towns that provide water service: All water service area policies of the city or town described in the plan conform to all relevant utility service extension ordinances.	2-6	na
d) Service area policies for new service connections conform to the adopted local plans and adopted development regulations of all cities and counties with jurisdiction over the service area.	1-21	yes
e) Other relevant elements related to water supply are addressed in the water system plan, if applicable. This may include Coordinated Water System Plans, Regional Wastewater Plans, Reclaimed Water Plans, Groundwater Management Area Plans, and the Capital Facilities Element of local comprehensive plans.	5-1 to 5-4	yes

I certify that the above statements are true to the best of my knowledge and that these specific elements are consistent with adopted local plans and development regulations.

Signature

10/9/2024
Date

Brent Lewis
Printed Name, Title, & Jurisdiction

Local Government Consistency Determination Form

331-568 • 8/10/2023

Water System Name: City of Auburn PWS ID: 03350V

Planning/Engineering Document Title: Water System Plan Plan Date: August 2024

Local Government with Jurisdiction Conducting Review: Highline Water District

Before the Department of Health (DOH) approves a planning or engineering submittal under Section 100 or Section 110, the local government must review the documentation the municipal water supplier provides to prove the submittal is consistent with **local comprehensive plans, land use plans and development regulations** (WAC 246-290-108). Submittals under Section 105 require a local consistency determination if the municipal water supplier requests a water right place-of-use expansion. The review must address the elements identified below as they relate to water service.

By signing this form, the local government reviewer confirms the document under review is consistent with applicable local plans and regulations. If the local government reviewer identifies an inconsistency, the reviewer should include the citation from the applicable comprehensive plan or development regulation and explain how to resolve the inconsistency, or confirm that the inconsistency is not applicable by marking N/A. See more instructions on page 2.

Local Government Consistency Statement	For Use by Water System: Identify page(s) in submittal	For Use by Local Government: Yes or Not Applicable
a) The water system service area is consistent with the adopted land use and zoning within the service area.	2-19 to 2-21	NA
b) The growth projection used to forecast water demand is consistent with the adopted city or county's population growth projections. If a different growth projection is used, provide an explanation of the alternative growth projection and methodology.	2-23 to 2-33	NA
c) For cities and towns that provide water service: All water service area policies of the city or town described in the plan conform to all relevant utility service extension ordinances.	2-6	NA
d) Service area policies for new service connections conform to the adopted local plans and adopted development regulations of all cities and counties with jurisdiction over the service area.	1-21	NA
e) Other relevant elements related to water supply are addressed in the water system plan, if applicable. This may include Coordinated Water System Plans, Regional Wastewater Plans, Reclaimed Water Plans, Groundwater Management Area Plans, and the Capital Facilities Element of local comprehensive plans.	5-1 to 5-4	NA

I certify that the above statements are true to the best of my knowledge and that these specific elements are consistent with adopted local plans and development regulations.

Signature

10/09/2024
Date

Jeremy S. DelMar, General Manager, Highline Water District
Printed Name, Title, & Jurisdiction

Local Government Consistency Determination Form

331-568 • 8/10/2023

Water System Name: City of Auburn PWS ID: 03350V

Planning/Engineering Document Title: Water System Plan Plan Date: August 2024

Local Government with Jurisdiction Conducting Review: Covington Water District

Before the Department of Health (DOH) approves a planning or engineering submittal under Section 100 or Section 110, the local government must review the documentation the municipal water supplier provides to prove the submittal is consistent with **local comprehensive plans, land use plans and development regulations** (WAC 246-290-108). Submittals under Section 105 require a local consistency determination if the municipal water supplier requests a water right place-of-use expansion. The review must address the elements identified below as they relate to water service.

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Local Government Consistency Statement	For Use by Water System Identify page(s) in submittal	For Use by Local Government Yes or Not Applicable
a) The water system service area is consistent with the adopted land use and zoning within the service area.	2-19 to 2-21	na
b) The growth projection used to forecast water demand is consistent with the adopted city or county's population growth projections. If a different growth projection is used, provide an explanation of the alternative growth projection and methodology.	2-23 to 2-33	na
c) For cities and towns that provide water service: All water service area policies of the city or town described in the plan conform to all relevant utility service extension ordinances.	2-6	na
d) Service area policies for new service connections conform to the adopted local plans and adopted development regulations of all cities and counties with jurisdiction over the service area.	1-21	na
e) Other relevant elements related to water supply are addressed in the water system plan, if applicable. This may include Coordinated Water System Plans, Regional Wastewater Plans, Reclaimed Water Plans, Groundwater Management Area Plans, and the Capital Facilities Element of local comprehensive plans.	5-1 to 5-4	Yes

I certify that the above statements are true to the best of my knowledge and that these specific elements
are consistent with adopted local plans and development regulations.

Thomas Keown
Signature

10/9/2024
Date

Thomas Keown, PE
Printed Name, Title, & Jurisdiction

Signature Certificate

Reference number: QLJNP-JWACY-HEWLE-LXXZD

Signer	Timestamp	Signature
Tom Keown Email: thomas.keown@covingtonwater.com		
Sent:	11 Oct 2024 14:54:05 UTC	
Viewed:	11 Oct 2024 15:25:33 UTC	
Signed:	11 Oct 2024 15:25:43 UTC	
Recipient Verification:		IP address: 73.221.31.45
✔Email verified	11 Oct 2024 15:25:33 UTC	Location: Tacoma, United States

Document completed by all parties on:
11 Oct 2024 15:25:43 UTC

Signed with PandaDoc

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Local Government Consistency Determination Form

331-568 • 8/10/2023

Water System Name: City of Auburn PWS ID: 03350V

Planning/Engineering Document Title: Water System Plan Plan Date: August 2024

Local Government with Jurisdiction Conducting Review: Tacoma Water

Before the Department of Health (DOH) approves a planning or engineering submittal under Section 100 or Section 110, the local government must review the documentation the municipal water supplier provides to prove the submittal is consistent with **local comprehensive plans, land use plans and development regulations** (WAC 246-290-108). Submittals under Section 105 require a local consistency determination if the municipal water supplier requests a water right place-of-use expansion. The review must address the elements identified below as they relate to water service.

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Local Government Consistency Statement	For Use by Water System: Identify page(s) in submittal	For Use by Local Government: Yes or Not Applicable
a) The water system service area is consistent with the adopted land use and zoning within the service area.	2-19 to 2-21	Not Applicable
b) The growth projection used to forecast water demand is consistent with the adopted city or county's population growth projections. If a different growth projection is used, provide an explanation of the alternative growth projection and methodology.	2-23 to 2-33	Not Applicable
c) For cities and towns that provide water service: All water service area policies of the city or town described in the plan conform to all relevant utility service extension ordinances.	2-6	Not Applicable
d) Service area policies for new service connections conform to the adopted local plans and adopted development regulations of all cities and counties with jurisdiction over the service area.	1-21	Not Applicable
e) Other relevant elements related to water supply are addressed in the water system plan, if applicable. This may include Coordinated Water System Plans, Regional Wastewater Plans, Reclaimed Water Plans, Groundwater Management Area Plans, and the Capital Facilities Element of local comprehensive plans.	5-1 to 5-4	Yes

I certify that the above statements are true to the best of my knowledge and that these specific elements are consistent with adopted local plans and development regulations.

Signed by: Daniel Reisinger
Signature 1B69C1AF78469...

10/18/2024
Enter date
Date

Daniel Reisinger, Planning & Engineering, Tacoma Water
Printed Name, Title, & Jurisdiction

Local Government Consistency Determination Form

331-568 • 8/10/2023

Water System Name: City of Auburn PWS ID: 03350V

Planning/Engineering Document Title: Water System Plan Plan Date: August 2024

Local Government with Jurisdiction Conducting Review: City of Auburn

Before the Department of Health (DOH) approves a planning or engineering submittal under Section 100 or Section 110, the local government must review the documentation the municipal water supplier provides to prove the submittal is consistent with **local comprehensive plans, land use plans and development regulations** (WAC 246-290-108). Submittals under Section 105 require a local consistency determination if the municipal water supplier requests a water right place-of-use expansion. The review must address the elements identified below as they relate to water service.

By signing this form, the local government reviewer confirms the document under review is consistent with applicable local plans and regulations. If the local government reviewer identifies an inconsistency, the reviewer should include the citation from the applicable comprehensive plan or development regulation and explain how to resolve the inconsistency, or confirm that the inconsistency is not applicable by marking N/A. See more instructions on page 2.

Local Government Consistency Statement	For Use by Water System: Identify page(s) in submittal	For Use by Local Government: Yes or Not Applicable
a) The water system service area is consistent with the adopted land use and zoning within the service area.	2-19 to 2-21	Yes
b) The growth projection used to forecast water demand is consistent with the adopted city or county's population growth projections. If a different growth projection is used, provide an explanation of the alternative growth projection and methodology.	2-23 to 2-33	Yes
c) For cities and towns that provide water service: All water service area policies of the city or town described in the plan conform to all relevant utility service extension ordinances.	2-6	Yes
d) Service area policies for new service connections conform to the adopted local plans and adopted development regulations of all cities and counties with jurisdiction over the service area.	1-21	Yes
e) Other relevant elements related to water supply are addressed in the water system plan, if applicable. This may include Coordinated Water System Plans, Regional Wastewater Plans, Reclaimed Water Plans, Groundwater Management Area Plans, and the Capital Facilities Element of local comprehensive plans.	5-1 to 5-4	Yes

I certify that the above statements are true to the best of my knowledge and that these specific elements are consistent with adopted local plans and development regulations.

Signature

12/05/2024
Date

Alexandria Teague, Planning Services Manager, City of Auburn
Printed Name, Title, & Jurisdiction

Consistency Review Guidance
For Use by Local Governments and Municipal Water Suppliers

This checklist may be used to meet the requirements of WAC 246-290-108. When using an alternative format, it must describe all the elements; 1a), b), c), d), and e), when they apply.

For **water system plans (WSP)**, a consistency review is required for the municipal water supplier's service area. Municipal water suppliers may exclude wholesale areas from the consistency review provided the water system receiving the wholesale water complies with the requirements for a consistency review when developing a water system plan for any new connection within their service area.

For **small water system management programs**, a consistency review is only required for areas where a municipal water supplier wants to expand its water right's place-of-use. If no water right place-of-use expansion is requested, a consistency review is not required.

For **engineering documents,** a consistency review is required for areas where a municipal water supplier wants to expand its water right's place-of-use (water system plan amendment is required). For noncommunity water systems, a consistency review is required when requesting a place-of-use expansion. All engineering documents must be submitted with a service area map (WAC 246-290-110(4)(b)(ii)).

A) Documenting Consistency: The planning or engineering document must include the following when applicable.

a) A copy of the adopted land use/zoning map corresponding to the service area. The uses provided in the WSP should be consistent with the adopted land use/zoning map. Include any other portions of comprehensive plans or development regulations that relate to water supply planning.

b) A copy of the growth projections that correspond to the service area. If the local population growth projections are not used, explain in detail why the chosen projections more accurately describe the expected growth rate. Explain how it is consistent with the adopted land use.

c) Include water service area policies and show that they are consistent with the utility service extension ordinances within the city or town boundaries. (This applies to cities and towns only.)

d) All **service area policies** for how you will provide new water service to new customers.

e) **Other relevant elements** the Department of Health determines are related to water supply planning. See Local Government Consistency—Other Relevant Elements, Policy B.07

B) Documenting an Inconsistency: Please document the inconsistency, include the citation from the comprehensive plan or development regulation, and explain how to resolve the inconsistency.

C) Documenting a Lack of Local Review for Consistency: Where the local government with jurisdiction did ***not*** provide a consistency review, document efforts made, and the amount of time provided to the local government for review. Please include name of contact, date, and efforts made (letters, phone calls, and emails). To self-certify, please contact the DOH Planner.

Washington State Department of HEALTH

To request this document in another format, call 1-800-525-0127. Deaf or hard of hearing customers, please call 711 (Washington Relay) or email civil.rights@doh.wa.gov.

January 31, 2025

Krista Chavez, Regional Planner
Brietta Carter, P.E., Regional Engineer
NW Drinking Water Regional Operations
Washington Department of Health
PO Box 47800
Attn: 47822
Olympia, WA 98504-7800

RE: 2025 Water System Plan
City of Auburn, ID# 03350

Dear Krista Chavez and Brietta Carter:

For the record, the City respectfully disagrees with the Department of Ecology's characterization of Groundwater Certificate G1-25173C as a "non-municipal" water right. In 1990, the City of Auburn entered a contract and adopted a resolution providing for the City to own and operate a satellite water system serving the Braunwood Estates development (Water System ID 03336E). The City has continuously beneficially used Certificate G1-25173C to supply water to Braunwood Estates since that time.

"Municipal water supply purposes" includes beneficial use of water "for governmental or governmental proprietary purposes by a city, town, public utility district, county, sewer district, or water district" under RCW 90.03.015(4)(b). There is no question that the City's residential water service to the Braunwood neighborhood is a governmental or governmental proprietary purpose. Certificate G1-25173C therefore meets the definition of a water right for "municipal water supply purposes" under RCW 90.03.015(4)(b).

Contrary to the 2003 Municipal Water Law, Ecology contends that residential domestic water service by a city under RCW 90.03.015(4)(b) can be "municipal" only where it also meets the connection or population thresholds for the "residential purposes" category addressed in RCW 90.03.015(4)(a) (an alternate category that extends "municipal" status to private developers, water companies, and other water suppliers that are not cities, towns, PUDs, counties, sewer districts, or water districts).

Ecology's interpretation is incorrect. Nothing in the statutory language restricts the "governmental or governmental proprietary purposes" category of municipal water use by a city. If the Legislature had intended to impose the subsection (4)(a) residential connection/population thresholds on cities, towns, PUDs, counties, sewer districts, and water districts, subsection (4)(b) would read "for any other governmental or governmental proprietary purposes . . .". Ecology's interpretation incorrectly disregards the statutory language. Ecology's reliance on Policy 2030 is misplaced because Policy 2030 is not a correct statement of the law.

The Legislature also included in the 2003 Municipal Water Law a mechanism for Ecology to change its records to correctly identify as municipal "water rights that are for municipal water supply purposes, as defined in RCW 90.03.015" without requiring approval of a change in purpose of use. RCW 90.03.560 requires Ecology to amend its water right

documents and related records when requested by a municipal water supplier. To be clear, the City is not required to request Ecology "conformance" of its water right records and elects not to do so at this time. Certificate G1-25173C is presently a right for municipal water supply purposes as defined in RCW 90.03.015, and no action by Ecology is necessary to change its status.

Therefore, Ecology's assertion that "Auburn first needs to transfer the right through a change application, requesting a change in purpose of use from 'group domestic supply' to 'municipal'" is incorrect. Here as well, Ecology's Policy 2030 ignores the statutory language in RCW 90.03.560, which "authorizes a water right or portion of a water right held or acquired by a municipal water supplier that is for municipal water supply purposes as defined in RCW 90.03.015 to be identified as being a water right for municipal water supply purposes." Ecology's interpretation incorrectly focuses on the status of the entity that originally obtained the water right, rather than on the present beneficial use of a water right held or acquired by a municipal water supplier.

In 2003, when the Legislature enacted RCW 90.03.560, the City of Auburn held Certificate G1-25173C and had been beneficially using it for years for a governmental or governmental proprietary purpose: to operate a satellite water system serving Braunwood Estates. This is precisely the type of water use the Legislature intended to identify as municipal under RCW 90.03.560 and the broad "governmental or governmental proprietary purposes" category in RCW 90.03.015(4). Indeed, had Ecology correctly identified the water right holder in 1993, Ecology most likely would have issued Certificate G1-25173C to the City of Auburn for municipal water supply purposes.

With the caveat that the City of Auburn considers Certificate G1-25173C a water right for municipal water supply purposes, disagreeing with Ecology's position, and is in fact put to beneficial use under Certificate G1-25173C, the City is editing the footnotes in the Water Rights Self-Assessment and in the summary of Existing Water Rights table (Table 3-18) in the Water System Plan to state that Ecology considers Braunwood Estates to be a standalone non-municipal supply.

If you have any questions, please contact me directly by phone at 253-804-5061 or via email at sgebreeyesus@auburnwa.gov .

Sincerely,

Senait Gebreeyesus
Water Utility Engineer
Public Works Department

SG/rd

Enclosures
2024 City of Auburn Water System Plan Comment Letter (Department of Ecology)

Cc: Ryan Vondrak, P.E., Utilities Engineering Manager
File: WTR 8.0
Electronic Distribution

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Northwest Region Office
PO Box 330316, Shoreline, WA 98133-9716 • 206-594-0000

October 18, 2024

City of Auburn
c/o Senait Gebreeyesus, PE
25 W Main St
Auburn, WA 98001

Email: sgebreeyesus@auburnwa.gov

RE: City of Auburn (Water System ID 03350V)
2024 Water System Plan Comment Letter (DOH Submittal # 24-0809)

Dear Senait Gebreeyesus:

Thank you for the opportunity to review the City of Auburn Water System Plan (WSP), dated August 2024, and received on August 26, 2024. Consistent with the Memorandum of Understanding between the Department of Health (DOH) and Department of Ecology (Ecology), regarding joint review and approval of WSPs, this letter is being sent to your office with Ecology's comments. Specific elements of the WSP review included the Water Rights Self-Assessment as well as additional water rights documentation, including Ecology's water right files and previous City of Auburn WSPs and project reports, as applicable.

Ecology identified two issues during review of the WSP and supplemental documentation.

The two issues identified are listed below and discussed in the Advisory Comments. Please address the following items prior to finalizing the WSP.

1. Reliance on a non-municipal supply water right, and
2. Reliance on a Water Right Claim

Advisory Comments

Reliance on a Non-Municipal Supply Water Right

City of Auburn relies on water right certificate G1-25173C for a small part of its capacity and future demand. Please be advised that under Ecology's interpretation of the municipal water code (Ecology Policy 2030), water rights issued to non-municipal water systems do not automatically become municipal supply water rights when a municipal water supplier

incorporates a smaller system. G1-25173C was issued for a small domestic water system to serve up to 13 homes and at present serves 12 connections. The water system remains a standalone non-municipal water system, and its water right is limited to the quantities perfected for the purpose and place of use for which it was issued, which may not equal the 20 gpm and 6.5 ac-ft/yr for which the certificate was issued. For G1-25137C to be recognized as a municipal supply water right, Auburn first needs to transfer the right through a change application, requesting a change in purpose of use from "group domestic supply" to "municipal" (and any other changes that may be needed). During investigation of the change, Ecology will perform a tentative determination of extent and validity of the water right to determine the rate and quantity that may be transferred. This could potentially be the rate and quantity that have been put to beneficial use (RCW 90.03.380).

Reliance on Water Right Claim

City of Auburn partially relies on claim S1-049354CL (625 gpm and 1,010 ac-ft/yr) for current source capacity as well as future demand. Please be advised that a claim is not necessarily a water right, but is an assertion that a water right was created pre-code (1917 for surface water and 1945 for groundwater). Ecology does not have authority to validate claims. A validation of your claim can only be done during a general adjudication conducted in superior court, pursuant to RCW 90.03.110-245.

In the event of a general adjudication, the accounting of actual water rights will be performed. Ecology recommends that, for your own knowledge and planning, City of Auburn perform a thorough analysis of the claim, the date of first putting water to beneficial use, system infrastructure modifications, and beneficial use through time.

General Information

Water Right Summary

In preparing this comment letter, Ecology reviewed specific elements of City of Auburn's WSP, including the Water Right Self-Assessment (Appendix I), as well as additional water rights documentation.

Please see Table 1 below for a comprehensive list of City of Auburn water rights and their respective relationships and limitations as understood by Ecology. Please note that the water rights summarized here AGREE with the City of Auburn Water Right Self-Assessment (Appendix I), in Section 3.4.1 and table 3-18 of the WSP, dated August 2024.

Table 1. Existing Water Rights (City Auburn, WA; DOH Project #24-0809)

Water Right	Priority Date	Source Name	Instantaneous Rate (gpm)		Annual Quantity (ac-ft/yr)	
			Additive	Non-Additive	Additive	Non-Additive
S1-*01304C (SWC857)	4/22/1925	Coal Creek Springs	6,732.45 (15 cfs)		9,410	
G1-*04731C (GWC3560)	11/12/1957	Well 1, 6, & 7	2,200		1,120	
G1-00277C	5/11/1995	Well 1, 6, & 7	2,400		1,360	2,480
G1-23629C	7/8/1980	Well 3A, 3B, 6, & 7	2,800		3,600	
G1-20391C	12/29/1972	Well 4, 6, & 7	2,800		3,600	
G1-23633C	6/23/1980	Well 5, 5A, 5B, & 5C	1,000		720	
G1-25518	10/10/1989	Well 5A	167		0	187
G1-22769C	12/10/1976	Algona Well	500		175	
G1-25173C[1]	*1/14/1988*	*Braunwood Well*	*20*		*6.5*	
S1-049354CL[2]		*West Hill Springs*	*625*		*1,010*	
		TOTALS:	19,244.45		21,001.5	

gpm = Gallons per Minute; cfs = Cubic Feet per Second; ac-ft/yr = Acre-feet per Year

The total instantaneous rate and annual quantity under all rights listed in Table 1 are limited to 19,244 gpm and 21,001.5 ac-ft/yr, respectively. When rounded these quantities agree with the quantities reported in the 2024 WSP and WRSA. However, the actual quantities available under a non-municipal supply water (G1-25173C) and a claim to a vested right (S1-049354CL) may not be available to the full quantities as described in Table 1 (see discussion on pages 1 and 2).

Future Demand

The City of Auburn WSP presents use and production data between 2015 and 2022. The WSP estimates the Average Daily Demand (ADD) per Equivalent Residential Unit (ERU) based on the consumption of water used by Single-Family Residential (SFR) connections. The ADD value for

[1] G1-25173C is a non-municipal water right issued to serve a 13-connection water system.
[2] S1-049354CL is a claim filed under RCW 90.14.061 whose quantities can only be validated through a general adjudication (RCW 90.14.081).

future planning is reported as 183 gpd/ERU which is based on the 75th percentile of the distribution of use per SFR for the period of 2015 to 2022. The number of ERUs is presented as 33,881 for 2022, which includes SFR as well as Multi-Family Residential, Commercial, Industrial, Schools, Municipal, and Wholesale connections.

Water consumption per the WRSA (Appendix I) at ten years (16,850 gpm; 15,642 ac-ft/yr) and twenty years (18,660 gpm; 16,964 ac-ft/yr) are within the quantities within the water rights portfolio (Table 1).

Based on the information provided in the WRSA (Appendix I), and in WSP, dated August 2024, capacity DOES NOT appear to be an issue.

Service Area

RCW 90.03.386(2) requires that water systems be in compliance with the terms of their WSP and that any alteration of the place of use not be inconsistent with any comprehensive plans or development regulations. An evaluation of any such change should be undertaken if a future expansion of the City of Auburn service area is planned.

Please contact me with any questions you may have at (425) 577-0173 or Doug.Wood@ecy.wa.gov.

Sincerely,

Douglas H. Wood

Douglas H. Wood, M.Sc., LHG
Hydrogeologist and Permitting Specialist
Water Resources Program
Northwest Region Office

ecc: Krista Chavez, PE, Department of Health

CITY OF AUBURN WASHINGTON

City Council Study Session Muni Services SFA
April 10, 2023 - 5:30 PM
City Hall Council Chambers
AGENDA

Watch the meeting video

Meeting videos are not available until 72 hours after the meeting has concluded.

I. CALL TO ORDER

II. PUBLIC PARTICIPATION

A. Public Participation

The City Council Meeting was held in person and virtually.

B. Roll Call

Councilmembers present: Deputy Mayor James Jeyaraj, Bob Baggett, Kate Baldwin, Larry Brown, Cheryl Rakes, and Yolanda Trout-Manuel. Councilmember Robyn Mulenga was excused.

Department directors and staff members present include: Senior City Staff Attorney Harry Boesche, Assistant Chief of Police Samuel Betz, Director of Innovation and Technology David Travis, Director of Finance Jamie Thomas, Director of Community Development Jeff Tate, Assistant Director of Engineering Services Jacob Sweeting, Senior Traffic Engineer James Webb, Assistant Traffic Engineer Kenneth Clark, Senior Transportation Planner Cecile Malik, Economic Development Coordinator Abid Rahmani, Utility Engineering Manager Ryan Vondrak, Senior Planner Josh Steiner, Sewer Utility Engineer Robert Elwell, Water Utility Engineer Senait Gebreeyesus, Storm Drainage Engineer Tim Carlaw, Business Systems Analyst Chrissy Malave, and Deputy City Clerk Hannah Scholl.

III. AGENDA MODIFICATIONS

There were no modifications to the agenda.

IV. ANNOUNCEMENTS, REPORTS, AND PRESENTATIONS

A. Auburn Valley Humane Society General Shelter Update (Thomas) (15 Minutes)

Director Thomas introduced Phil Morgan, President of the Auburn Valley Humane Society (AVHS), who provided Council with an overview of the history of AVHS, the AVHS Thrift Store, and the merge with NW Spay &

Neuter Center, statistics over the last 10 years, special programs, fundraising events, pet licensing, services offered, and proposed fee increases.

Council discussed public stray intake statistics, number of Veterinarians and their compensation, breed restrictions, volunteer services, after hour emergency care, and revenue increases. Council thanked Phil for all his hard work over the years.

V. AGENDA ITEMS FOR COUNCIL DISCUSSION

A. Ordinance No. 6900 (Thomas) (20 Minutes)

An Ordinance amending Ordinance No. 6879, the 2023-2024 Biennial Operating Budget Ordinance, and Ordinance No. 6888, the 2023-2024 Biennial Capital Budget, authorizing amendment to the City of Auburn 2023-2024 Budget as set forth in Schedule "A" and Schedule "B"

Director Thomas provided Council with an overview of the 2023 Budget Amendment No. 1 including types of adjustments, summary of changes for the General Fund, General Fund impact, APRA projects budget, summary of changes for all other remaining funds; Hotel/Motel Tax, Parks Construction Fund, Mitigation Fee Fund, and the Capital Improvement Fund.

Council discussed the ARPA Funds, and the Broken Window Program.

Councilmember Baldwin requested to explore and discuss what it would look like to potentially add the Broken Window Repair Assistance Program as a line item in the Budget with an earmark of $100,000.00. Consensus was asked for and received.

B. Resolution No. 5701 (Thomas) (15 Minutes)

A Resolution reviewing a schedule of prices for services provided by the Auburn Valley Humane Society to ensure competitive service prices

Director Thomas provided Council with an overview of Resolution No. 5701.

Council discussed the proposed fees.

C. 2024 Comprehensive Plan Update (Tate) (60 Minutes)

A presentation by City staff as an introduction to the Periodic Comprehensive Plan update due in 2024, including anticipated program milestones

Planner Steiner provided Council with an overview of the 2024 Comprehensive Plan Framework and updates including the Community Development Elements, the purpose and scope, planning policies, state and regional requirements, and policy updates.

Council discussed the Planned Unit Development (PUD) requirements, the

Business Improvement Area (BIA) and Downtown Auburn Cooperative (DAC), demographics, historic preservation element, and the climate change element.

Coordinator Abid Rahmani provided Council with an overview of the Economic Development Element including the goals and objectives, challenges, policies and actions.

Council discussed unoccupied commercial spaces and policies.

Assistant Director Sweeting and Planner Malik provided Council with the Capital Facilities Element including the 2023-2028 Capital Facilities Plan, anticipated policy and framework. They also discussed the Transportation Element including the role within the Comprehensive Plan, required components, new approaches, and policy.

Manager Vondrak and Engineers Elwell, Carlaw, and Gebreeyesus provided Council with an overview of the Public Works Utilities Elements including general and private utilities, water, sanitary sewer, and storm drainage, considerations and policies.

Council discussed capacity planning, clean water, recycling, and illegal dumping.

Director Faber provided Council with an overview of the Parks, Recreation, and Open Space Element including anticipated policy and framework, and the timeline.

Council discussed number of park spaces and acres, and the Auburn Arts and Culture Center opening timeframe.

D. Transportation Advisory Board 2022 Annual Report (Gaub) (10 Minutes)

Planner Malik introduced Peter Di Turi, Board Chair of the Transportation Advisory Board (TAB), they provided Council with an overview of the TAB 2022 Annual Report including roles of staff and Board members, focus areas, and the 2023 workplan.

Council discussed the Sounder Train Schedule, and Light Rail opportunities for Auburn.

E. 2022 State of Our Streets (SOS) Report (Gaub) (20 Minutes)

Engineers Webb and Clark provided Council with an overview of the 2022 State of Our Streets including definitions, Pavement Condition Index, Summary of the 2022 Street Conditions, Local Street Program Fund, Arterial/Collector Program Fund, projects completed in 2022, future projects, and next steps.

Council discussed current and future projects.

VI. ADJOURNMENT

There being no further business to come before the Council, the meeting was adjourned at 8:46 p.m.

APPROVED this 1st day of May, 2023.

JAMES JEYARAJ, DEPUTY MAYOR Hannah Scholl, Deputy City Clerk

Agendas and minutes are available to the public at the City Clerk's Office, on the City website (http://www.auburnwa.gov), and via e-mail. Complete agenda packets are available for review at the City Clerk's Office.

AGENDA BILL APPROVAL FORM

Agenda Subject:
2024 Comprehensive Plan Update (Tate) (60 Minutes)

Date:
April 4, 2023

Department:
Community Development

Attachments:
• 2024 Comprehensive Plan City Council Study Session Presentation

Budget Impact:
Current Budget: $0
Proposed Revision: $0
Revised Budget: $0

Administrative Recommendation:

Background for Motion:

Background Summary:

The Growth Management Act requires that each city and county in Washington state conduct a periodic update of its comprehensive plan and development regulations per, RCW 36.70A.130 every eight (8) years. The City's previous plan was substantially revised in December 2015, and Community Development is beginning the process of leading the periodic Comprehensive Plan update, which is currently due in December 2024.

The City's Comprehensive Plan must be consistent with recently adopted regional documents such as Puget Sound Regional Council Vision 2050, King County Urban Growth Capacity Report, King and Pierce County Countywide Planning Policies. In addition, the Plan must address any state, regional, and county requirements adopted since the previous periodic plan that has not yet been addressed during the yearly annual comprehensive plan amendment process. This includes a requirement that the city provide adequate land use capacity and the supporting infrastructure to accommodate household and employment growth targets contained in the Countywide Planning Policies.

The Comprehensive Plan is a citywide effort involving coordination and information sharing across all departments and divisions updating the Comprehensive Plan Element chapters. The final Comprehensive Plan document package is required to demonstrate that policies, analysis, and text are consistent with one another, and will be verified by the authorities responsible for certifying the comprehensive plan, including Puget Sound Regional Council, Department of Commerce, and King County. Staff tasked with updating their respective Comprehensive Plan Element chapters are providing an overview of anticipated updates and project timelines.

Reviewed by Council Committees:

Councilmember: Brown

Staff: Tate

Item Number:

CITY DEPARTMENTS

2024 COMPREHENSIVE PLAN FRAMEWORK AND UPDATES

JOSH STEINER, AICP, SENIOR PLANNER

CITY COUNCIL STUDY SESSION
APRIL 10, 2023

Department of Community Development
Planning • Building • Development Engineering • Permit Center
Economic Development • Community Services • Code Enforcement

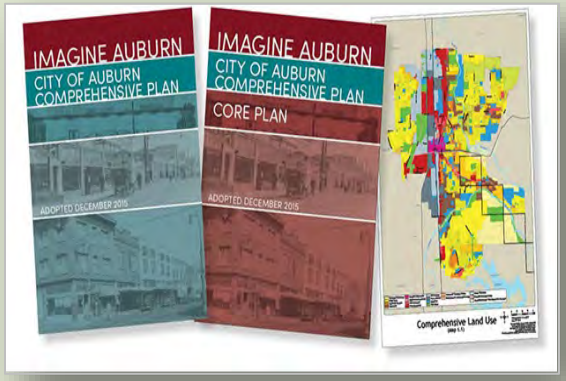
AUBURN VALUES

SERVICE
ENVIRONMENT
ECONOMY
CHARACTER
SUSTAINABILITY
WELLNESS
CELEBRATION

2024 PERIODIC COMPREHENSIVE PLAN FRAMEWORK AND UPDATE

Purpose and Scope of Comprehensive Plan & Amendments

Each city and county in Washington state is required to conduct a periodic update of its comprehensive plan and development regulations per RCW 36.70A.130 (The Growth Management Act, or GMA)



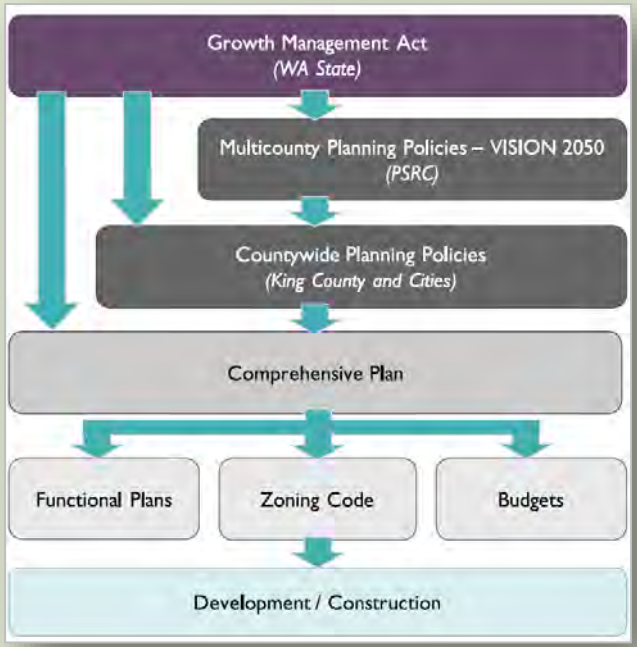
Auburn first adopted a growth management compliant Comprehensive Plan in 1995 in response to the Washington State Growth Management Act (GMA) requirements, as amended each year since.

City Council adopted a substantially revised Comprehensive Plan in Dec. 2015 by Ordinance #6584. The Comprehensive Plan has been amended annually each year since.

2024 PERIODIC COMPREHENSIVE PLAN FRAMEWORK AND UPDATE

Purpose and Scope of Comprehensive Plan & Amendments

- The Comprehensive Plan must be consistent with:
  - Puget Sound Regional Council (PSRC) Vision 2050
  - Urban Growth Capacity Report (King & Pierce)
  - Countywide Planning Policies (CPP) (King & Pierce)
  - Changes in state laws over the intervening time (Commerce/GMA)
  - Respond to changing conditions within the local community.
- GMA, PSRC, and CPP Requirements drive comprehensive plan update process.
- Coordination with departments on Element and referenced plan updates
- Coordination with Auburn Downtown Plan and HAPI Project



Source: King County GMPC

2024 PERIODIC COMPREHENSIVE PLAN FRAMEWORK AND UPDATE

Purpose and Scope of Comprehensive Plan & Amendments

- GMA establishes the primacy of the comprehensive plan
- Centerpiece of local planning and articulates goals, objectives, policies, actions, and standards that are intended to guide day-to-day decisions by elected officials and local government staff
- GMA places strong emphasis on implementation
- Current review cycle is 8 years, with Auburn's next update due in December 2024

Mandatory Comp Plan Elements (RCW 36.70A.070)	Optional Comp Plan Elements
• Land Use	• Economic Development*
• Housing	• Parks and Recreation*
• Capital Facilities Plan	• Conservation (RCW 36.70A.080)
• Utilities	• Solar Energy (RCW 36.70A.080)
• Rural Development (counties only)	• Recreation (RCW 36.70A.080)
• Transportation	• Subarea Plans (neighborhoods, rural villages, urban growth areas, tribal areas, etc.)
• Ports (mandatory for cities with annual maritime port revenues exceeding $60 million, RCW 36.70A.085)	• Ports (optional for cities with annual maritime port revenues of $20 million to $60 million, RCW 36.70A.085)

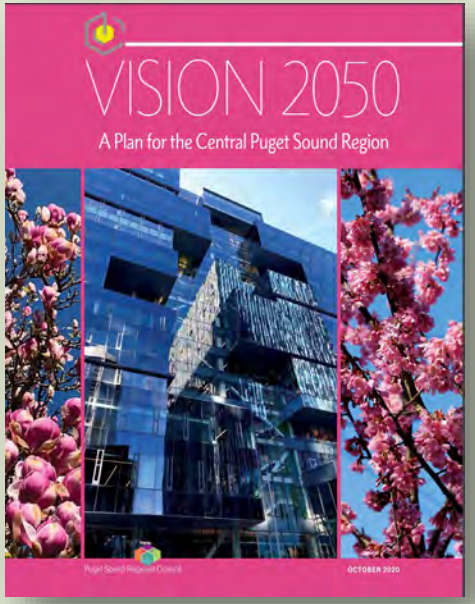
**The elements with an asterix are listed as mandatory in RCW 36.70A.070(7) and (8), but they are actually optional because funds have not been appropriated to help pay for preparing them, per RCW 36.70A.070(9).*

Source: King County GMPC

2024 PERIODIC COMPREHENSIVE PLAN FRAMEWORK AND UPDATE

Purpose and Scope of Comprehensive Plan & Amendments

- **Vision 2050**
  - Multicounty Planning Policy Document created by Puget Sound Regional Council (PSRC) which covers King, Pierce, Snohomish, and Kitsap Counties
  - Vision 2050 was adopted in October 2020 and builds from Vision 2040
  - Local jurisdictions prepare plans that must be consistent with multicounty and countywide policies
  - PSRC certifies countywide planning policies and local plans – important for grant funding
  - Vision 2050 notes that region is projected to grow by about **1.6 million people** and **1.1 million jobs** by 2050. Auburn's share of growth is found in Countywide Planning Policies

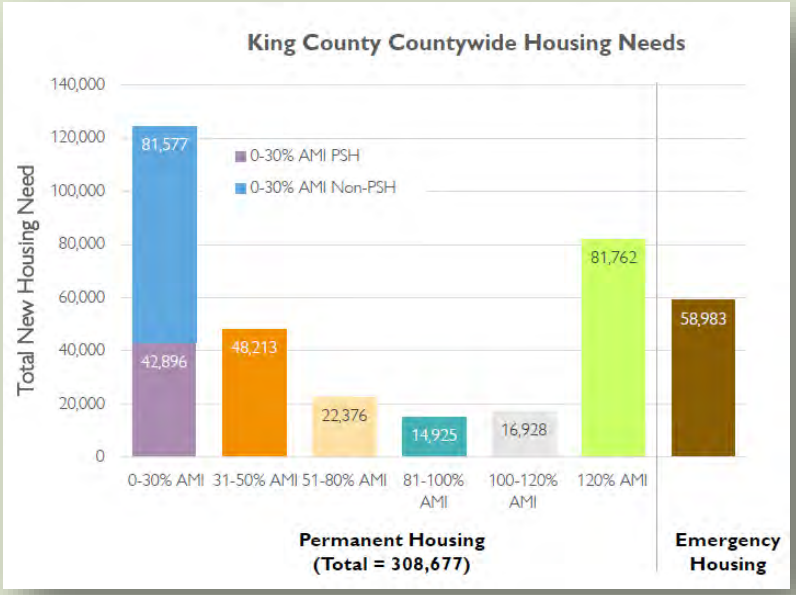


2024 PERIODIC COMPREHENSIVE PLAN FRAMEWORK AND UPDATE

Purpose and Scope of Comprehensive Plan & Amendments

- **Countywide Planning Policies**
  - Guidance for the comprehensive plans
  - Urban growth area boundary and criteria for revising growth boundary
  - Housing unit and employment growth targets (2019-2044)
  - Policies for issues of countywide nature
  - Covers Environment, Development Patterns, Transportation, Economy, Public Facilities
  - Updated to align with Vision 2050 and Regional Centers Framework, GMA changes, and Urban Growth Capacity Study (Buildable Lands Report)

  - KC CPP Identifies 2019-2044 housing targets (**12,000 net new residential** units, **19,520 net new** jobs)
  - PC CPP (draft, 2022) identifies 2020-2044 housing targets (96 net new residential units, and 0 net new jobs)



2024 PERIODIC COMPREHENSIVE PLAN FRAMEWORK AND UPDATE

State and Regional Requirements Updates

The City is moving forward with comprehensive plan update process while additional information/requirements are expected from the state, PSRC, and Counties.

- **Housing Affordability Targets**
  - State to provide methodology for determining the number of units needed for extremely low, very low-, low-, and moderate-income households. Future zoning will need to demonstrate capacity to meet these targets. (Spring 2023)
- **Racially Disparate Impacts Analysis**
  - Examination of racially disparate impacts, displacement and exclusion risk in housing policies and regulations. Analysis of future zoning changes. (February 2023)
- **Middle Housing Legislation**
  - Multiple bills are currently being considered that allow for middle housing in all existing residential zones, address minimum parking standards, SEPA regulations, and design review. (Spring/Summer 2023 with potential later implementation date)
- **Transit-Oriented Development Legislation**
  - Bill that would require cities to provide additional density near High Capacity Transit stops and reduce parking requirements in those areas

2024 PERIODIC COMPREHENSIVE PLAN FRAMEWORK AND UPDATE

Purposed and Scope of Comprehensive Plan & Amendments

- **Auburn Comprehensive Plan Elements**
  - Core Plan (Community Development)
  - Land Use (Community Development)
  - Housing (Community Development)
  - Historic Preservation (Community Development)
  - Climate Change – NEW (Community Development)
  - Economic Development (Community Development)
  - Capital Facilities (Public Works)
  - Transportation (Public Works)
  - Utilities (Public Works)
  - Parks and Recreation (Parks)

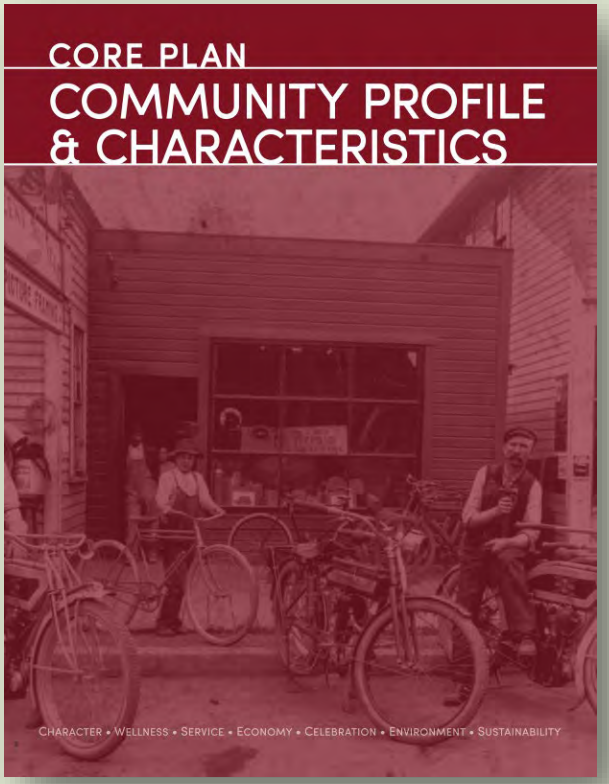
Citywide effort involving all departments coordinating together to create a cohesive, consistent, and forward-thinking Plan covering range of subject areas

2024 PERIODIC COMPREHENSIVE PLAN FRAMEWORK AND UPDATE

Anticipated Scope of Comprehensive Plan & Amendments

- **Auburn Comprehensive Plan – Community Development**

- **Core Plan**
  - Overview of role within Comprehensive Plan
    - *Stand-alone document*
    - *Provides an overview of information contained in Elements*
    - *Serves as a high-level, consolidated document for variety of readers*
  - Anticipated Policy and Framework Updates for 2024
    - *Content to be updated after Elements are approved*
    - *Updates will cover population, demographics, employment and other resident characteristics from previous Core Plan*
    - *New information will be considered for inclusion*

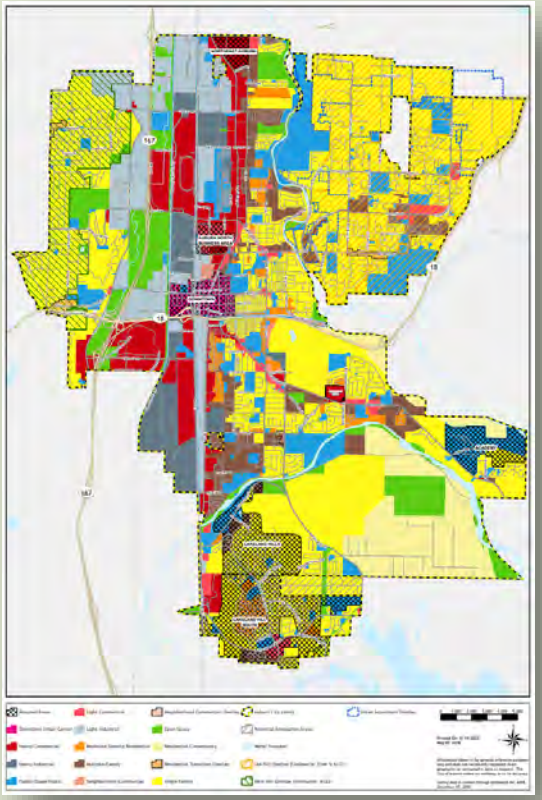


2024 PERIODIC COMPREHENSIVE PLAN FRAMEWORK AND UPDATE

Anticipated Scope of Comprehensive Plan & Amendments

- **Auburn Comprehensive Plan – Community Development**

- **Land Use Element**
  - Overview of role within Comprehensive Plan
    - *Location and boundaries for each land use designation and associated written policies*
    - *Updates to implementing zoning districts*
    - *Provides capacity for accommodating 2044 household and employment targets*
    - *Relationship to Transportation facilities is important*
  - Anticipated Policy and Framework Updates for 2024
    - *Middle Housing accommodations and findings from Housing Action Plan Implementation Project*
    - *Downtown land use updates per Auburn Downtown Plan Update*
  - Other Considerations (if needed)
    - *Related Development Regulations will also need to be adopted by December 2024*
    - *Flexibility to accommodate State, Regional, and County requirements*
    - *Outcome of 2023 State Legislative Session*

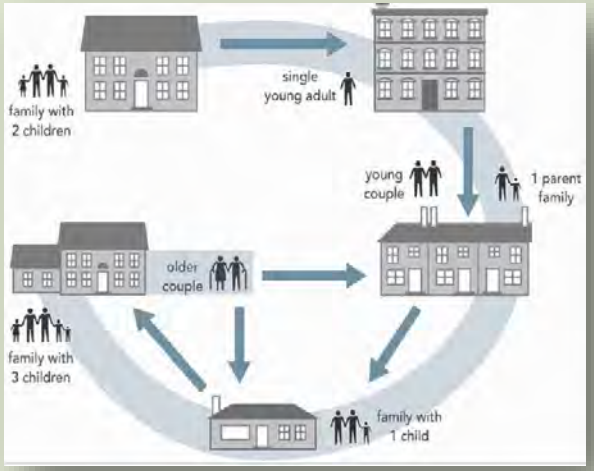


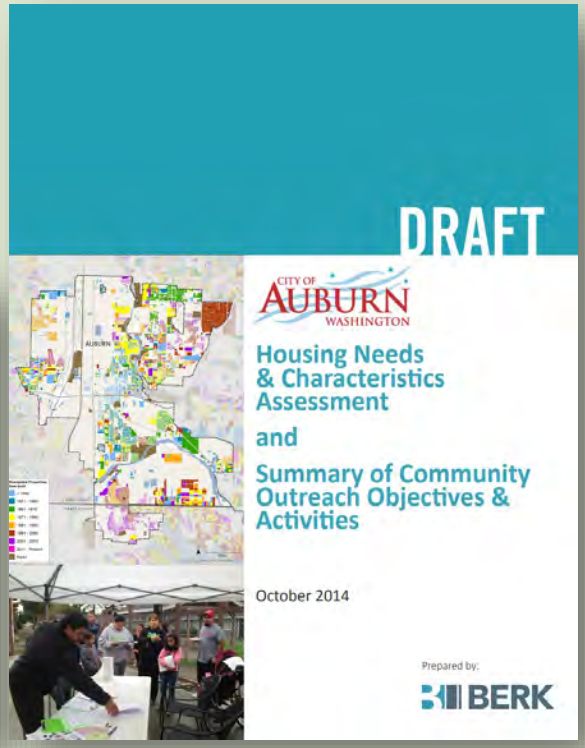
2024 PERIODIC COMPREHENSIVE PLAN FRAMEWORK AND UPDATE

Anticipated Scope of Comprehensive Plan & Amendments

- **Auburn Comprehensive Plan – Community Development**

- **Housing Element**
  - Overview of role within Comprehensive Plan
    - *Provides goals, policies, actions, and information on housing trends*
    - *Incorporates analysis from Housing Needs and Characteristics Report*



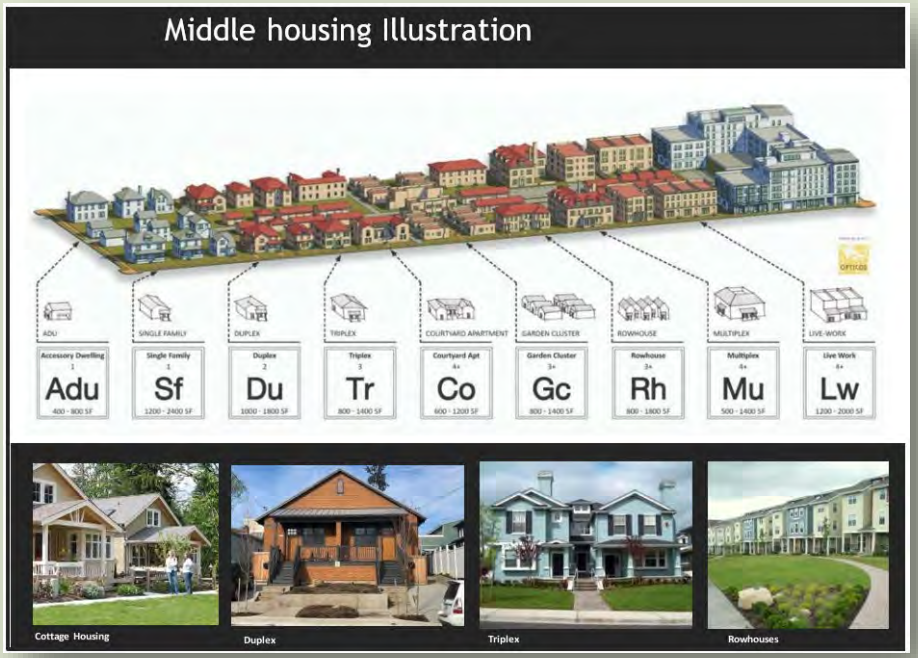


2024 PERIODIC COMPREHENSIVE PLAN FRAMEWORK AND UPDATE

Anticipated Scope of Comprehensive Plan & Amendments

- **Auburn Comprehensive Plan – Community Development**

- **Housing Element**
  - Anticipated Policy and Framework Updates for 2024
    - *Incorporation of Middle Housing Types and Strategies*
    - *Housing Action Plan Implementation Project Findings*
    - *Housing Affordability Analysis and Capacity*
    - *Updates to comply with PSRC and Commerce requirements*
  - Other Considerations (if needed)
    - *Housing Action Plan and Implementation Projects provides recommendations for policy updates*
    - *Required analysis by King County and Commerce*



2024 PERIODIC COMPREHENSIVE PLAN FRAMEWORK AND UPDATE

Anticipated Scope of Comprehensive Plan & Amendments

- **Auburn Comprehensive Plan – Community Development**

- **Historic Preservation Element**
  - Overview of role within Comprehensive Plan
    - *Planning approach to maintain, preserve, and enhance City's historic, cultural, and archaeological resources to provide a sense of local identify and history to the visitors and residents of the community.*

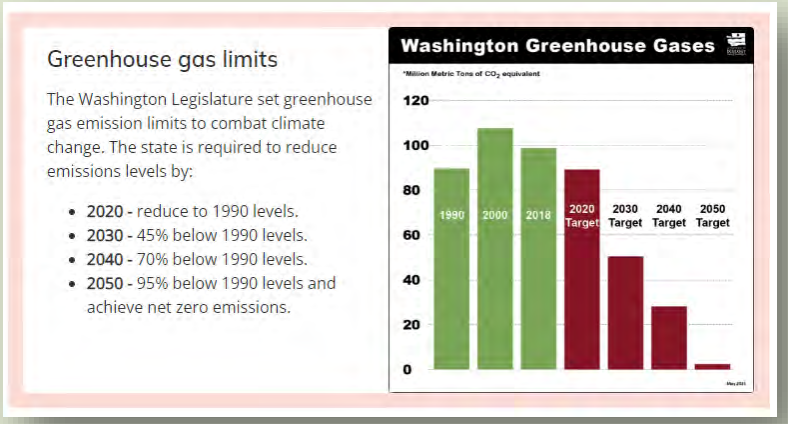
  - Anticipated Policy and Framework Updates for 2024
    - *Minimal, To Be Determined*

2024 PERIODIC COMPREHENSIVE PLAN FRAMEWORK AND UPDATE

Anticipated Scope of Comprehensive Plan & Amendments

- **Auburn Comprehensive Plan Element – Community Development**

- **Climate Change Element**
  - Overview of role within Comprehensive Plan
    - ***New Element of the Comprehensive Plan***
    - ***Incorporates current goals and policies related to climate, sustainability***
    - ***New and revised goals, policies, and actions to plan for climate change over next 20 years***
  - Anticipated Policy and Framework Updates for 2024
    - ***Consultant assistance to deliver Element framework, Implementation Plan, Best Practices, and assessment of Mitigation and Resilience strategies***
  - Other Considerations (if needed)
    - ***Coordination among city departments, planning commission, and city council will be key***



2024 PERIODIC COMPREHENSIVE PLAN FRAMEWORK AND UPDATE

Anticipated Scope of Comprehensive Plan & Amendments

- **Auburn Comprehensive Plan Element – Community Development**
- **Economic Development Element**
  - **Identify Who and What We Want To Be**
    - ***Proactive Economic Prosperity***
    - ***Positive Civic Image***
    - ***Preferred Place for Investment***
  - **Goals and Objectives for the Economic Development Element**
    - ***Diverse Economic Portfolio***
    - ***Recruitment***
    - ***Retention***
    - ***Limited Commercial Land for Future Development***
    - ***Sales Tax Revenue***

2024 PERIODIC COMPREHENSIVE PLAN FRAMEWORK AND UPDATE

Anticipated Scope of Comprehensive Plan & Amendments

- **Auburn Comprehensive Plan Element – Community Development**
- **Economic Development Element**
  - **Identify Our Current Challenges**
    - *Missing or Under-Represented Sectors*
    - *Unoccupied Commercial Spaces*
  - **Identify Policies and Actions to Achieve Our Vision, Goals & Objectives**
    - *Choosing the Best Programs and Investments*
    - *Laying the Foundation for Future Regulations*
    - *Solidify Our High Priority Partnerships*
  - **Anticipated Policy and Framework Updates for 2024**
    - *Review Existing Policies and Update to Reflect Goals & Objectives*

2024 PERIODIC COMPREHENSIVE PLAN FRAMEWORK AND UPDATE

Anticipated Scope of Comprehensive Plan & Amendments

- **Auburn Comprehensive Plan – Community Development**

Any Questions?

2024 PERIODIC COMPREHENSIVE PLAN FRAMEWORK AND UPDATE

Anticipated Scope of Comprehensive Plan & Amendments

- **Auburn Comprehensive Plan – Public Works**

- **Capital Facilities Element**
  - Overview of role within Comprehensive Plan
    - *Capital Facilities Plan (current 2023-2028) to support the future growth to meet the needs of the community*
    - *GMA and Concurrency Requirements*
    - *Element focus on facility inventory and investment*
    - *Includes City Utilities, Communications and Data Infrastructure, Transportation, Airport, Parks & Recreation, Public Buildings and Facilities, School Districts and VRFA*

  - Anticipated Policy and Framework Updates for 2024
    - *General Review of Existing Policies*
    - *City Utility Related Policies to be moved to Utilities Elements*

2024 PERIODIC COMPREHENSIVE PLAN FRAMEWORK AND UPDATE

Anticipated Scope of Comprehensive Plan & Amendments

- **Auburn Comprehensive Plan – Public Works**

- **Transportation Element**
  - Overview of role within Comprehensive Plan
    - *GMA requires transportation planning to be directly tied to the City's land use decisions and fiscal planning*
  - Required Components:
    - Inventory of existing transportation system
    - Identify level-of-service (LOS) standards for evaluating system performance;
    - Determine existing deficiencies of the system
    - Identify projects and other actions to address deficiencies
    - Estimate future travel demand and system needs
    - Identify projects and actions to address future system needs
    - Include a multiyear financing plan based on the identified needs = CFP/TIP
    - Address intergovernmental coordination
    - Include transportation demand management strategies
  - NEW APPROACHES:
    - *Multi-modal level of service*
    - *Target Zero and Safe Systems Approach*
  - Council Policy Review Beginning in May 22nd

2024 PERIODIC COMPREHENSIVE PLAN FRAMEWORK AND UPDATE

Anticipated Scope of Comprehensive Plan & Amendments

- **Auburn Comprehensive Plan – Public Works: Capital Facilities and Transportation**

Any Questions?

2024 PERIODIC COMPREHENSIVE PLAN FRAMEWORK AND UPDATE

Anticipated Scope of Comprehensive Plan & Amendments

- **Auburn Comprehensive Plan – Public Works**

- **Utilities Element – General and Private Utilities Update**
  - Overview of role within Comprehensive Plan
    - *To support future growth and provide infrastructure that meets the needs of the community*

    - *Element Encompasses:*
      1. *City Utilities*
      2. *Private Utilities and Communications*
      3. *Other Water/Sewer Purveyors*
      4. *Solid Waste*

  - Anticipated Policy and Framework Updates for 2024
    - *Incorporate any regulatory changes since the previous update*

2024 PERIODIC COMPREHENSIVE PLAN FRAMEWORK AND UPDATE

Anticipated Scope of Comprehensive Plan & Amendments

- **Auburn Comprehensive Plan – Public Works**
- **Utilities Element – Water**
  - Overview of role within Comprehensive Plan
    - *Water System Plan component of Comprehensive Plan*
    - *Format updated to follow Department of Health (DOH) Guidebook and DOH Design Manual*
  - Anticipated Policy and Framework Updates for 2024
    - *Policies updated to address evolving water regulations*
    - *Policies formatted to fit City established guidelines*
  - Council Policy Review Beginning *June 26th*

2024 PERIODIC COMPREHENSIVE PLAN FRAMEWORK AND UPDATE

Anticipated Scope of Comprehensive Plan & Amendments

- **Auburn Comprehensive Plan – Public Works**
- **Utilities Element – Water Continued**
  - Other Considerations
    - *System Analysis*
    - *Updating and Calibrating Hydraulic Model*
    - *Develop Supply Strategy for Future Needs*
    - *Creating 10-yr and 20-yr Planning Periods*
    - *Updating Wellhead Protection, Water Use Efficiency, and Water Shortage Plans*
    - *Water Comprehensive Plan Requires Approvals from King and Pierce Counties*
    - *Water Comprehensive Plan Requires DOH Approval*

2024 PERIODIC COMPREHENSIVE PLAN FRAMEWORK AND UPDATE

Anticipated Scope of Comprehensive Plan & Amendments

- **Auburn Comprehensive Plan – Public Works**
- **Utilities Element – Sanitary Sewer**
  - Overview of role within Comprehensive Plan
    - *Sewer Comprehensive Plan component of Comprehensive Plan*
  - Anticipated Policy and Framework Updates for 2024
    - *General policy review and updates*
    - *Policies formatted to fit City established guidelines*

2024 PERIODIC COMPREHENSIVE PLAN FRAMEWORK AND UPDATE

Anticipated Scope of Comprehensive Plan & Amendments

- **Auburn Comprehensive Plan – Public Works**
- **Utilities Element – Sanitary Sewer Continued**
  - Other Considerations
    - *Updating and Calibrating Hydraulic Model*
    - *Develop Strategy for Future Capacity Needs*
    - *Creating 6-yr and 20-yr Planning Periods*
    - *Develop Strategy for Future Expansion*
    - *Operating and Maintenance Needs*
    - *Sewer Comprehensive Plan Requires Approvals from King County*
    - *Sewer Comprehensive Plan Requires Ecology Approval*
  - Council Policy Review Beginning *May 22nd*

2024 PERIODIC COMPREHENSIVE PLAN FRAMEWORK AND UPDATE

Anticipated Scope of Comprehensive Plan & Amendments

- **Auburn Comprehensive Plan – Public Works**
- **Utilities Element – Storm Drainage**
  - Overview of role within Comprehensive Plan
    - *Storm Drainage Comprehensive Plan component of Comprehensive Plan*
  - Anticipated Policy and Framework Updates for 2024
    - *Policies updated to reflect evolving National Pollutant Discharge Elimination System (NPDES) requirements*
    - *Policies formatted to fit City established guidelines*

2024 PERIODIC COMPREHENSIVE PLAN FRAMEWORK AND UPDATE

Anticipated Scope of Comprehensive Plan & Amendments

- **Auburn Comprehensive Plan – Public Works**
- **Utilities Element – Storm Drainage Continued**
  - Other Considerations
    - *Updating and Calibrating Hydraulic Model*
    - *Develop Strategy for Future Capacity Needs*
    - *Incorporate Stormwater Management Action Plan (SMAP)*
    - *Creating 6-yr and 20-yr Planning Periods*
    - *Develop Strategy for Future NPDES Compliance Requirements*
    - *Operating and Maintenance Needs*
  - Council Policy Review Beginning *June 26th*

2024 PERIODIC COMPREHENSIVE PLAN FRAMEWORK AND UPDATE

Anticipated Scope of Comprehensive Plan & Amendments

- **Auburn Comprehensive Plan – Public Works: Utilities**

Any Questions?

2024 PERIODIC COMPREHENSIVE PLAN FRAMEWORK AND UPDATE

Anticipated Scope of Comprehensive Plan & Amendments

- **Auburn Comprehensive Plan – Parks, Arts, and Recreation**

- **Parks, Recreation, and Open Space Element**
  - Anticipated Policy and Framework Updates for 2024
    - *Updating parks-needs calculations from acreage/resident to wants/needs*
    - *Updating Park Impact Fees and land dedication in-lieu-of calculations*
    - *Identifying bigger picture, park specific, projects*
  - Element Update Timeline
    - *Park Board in April/May 2023*
    - *City Council in late Spring / early summer 2023*

2024 PERIODIC COMPREHENSIVE PLAN FRAMEWORK AND UPDATE

Anticipated Scope of Comprehensive Plan & Amendments

- **Auburn Comprehensive Plan – Parks, Arts, and Recreation**

Any Questions?

2024 PERIODIC COMPREHENSIVE PLAN FRAMEWORK AND UPDATE

Proposed Schedule/Next Steps (tentative):

- City Council Study Session – Comp Plan Framework Overview (April 10)
- Public Outreach – Late April Open House (In-Person and Virtual); Continuing outreach efforts through Summer 2023
- Planning Commission and City Council Element Updates and Presentations from Departments (Individual), May-September 2023/Early 2024
- Planning Commission Element Presentations – Fall 2023
- Adoption process (PC and CC) – Q1/Q2 2024

2024 PERIODIC COMPREHENSIVE PLAN FRAMEWORK AND UPDATE

Any Questions?

CITY OF AUBURN WASHINGTON	**City Council Study Session Finance, Technology and Economic Development Special Focus Area** **July 10, 2023 - 5:30 PM** **City Hall Council Chambers** **MINUTES** **Watch the meeting LIVE!** **Watch the meeting video** Meeting videos are not available until 72 hours after the meeting has concluded.

I. CALL TO ORDER

II. PUBLIC PARTICIPATION

A. Public Participation

The City Council Meeting was held in person and virtually.

B. Roll Call

Councilmembers present: Deputy Mayor James Jeyaraj, Kate Baldwin, Larry Brown, Robyn Mulenga, Cheryl Rakes, and Councilmember Yolonda Trout-Manuel. Councilmember Bob Baggett attended the meeting virtually.

Department directors and staff members present included: City Attorney Kendra Comeau, Chief of Police Mark Caillier, Director of Public Works Ingrid Gaub, Director of Equity and Inclusion Brenda Goodson-Moore, Director of Innovation and Technology David Travis, Director of Human Resources Jamie Thomas, Financial Planning Manager Frank Downard, Neighborhood Programs Coordinator Chris Lovings, Utility Engineering Manager Ryan Vondrak, Water Engineer Senait Gebreeyesus, Diversity, Equity, and Inclusion Analyst Kia McGlone, Economic Development Manager Jenn Francis, Business Systems Analyst Jonathan Barbano, and City Clerk Shawn Campbell.

III. AGENDA MODIFICATIONS

Ordinance No. 6912 and Inclusive Auburn Coalition presentation were moved to presentations.

IV. ANNOUNCEMENTS, REPORTS, AND PRESENTATIONS

A. Ordinance No. 6912 (Thomas) (10 Minutes)

Manager Downard and Vice President, Angie Sanchez, with FCS Group provided Council with an overview of the Wholesale Water Rate Update including background, customers, methodology, the continual service rates, and standby charges.

Council discussed continuous water costs and water demands in regards to Tacoma Water.

B. Inclusive Auburn Coalition Presentation (Goodson-Moore) (20 Minutes)

Director Goodson-Moore and Analyst McGlone provided Council with an overview of the Office of Equity. She explained they are working on normalizing racial equity in the City and explained what normalizing racial equity means.

Diversity, Equity, Inclusion, and Justice (DEIJ) Consultant, Sapna Sopori, with Sapna Strategies provided Council with the plan for the Coalition. She reviewed the purpose of creating the Coalition, shared the job description for the Auburn Coalition membership, reviewed the groups that will be apart of the Coalition, the dispositions and skills to be a Coalition member, and reviewed the nomination process. Scott Miller reviewed what the goal for the Coalition is.

Council discussed makeup of the Coalition, the meeting locations, creating a toolbox, the work from the previous consultant, and frequency of updates to Council.

V. AGENDA ITEMS FOR COUNCIL DISCUSSION

A. Ordinance No. 6911 (Thomas) (20 Minutes)

An Ordinance amending Ordinance No. 6879, the 2023-2024 Biennial Operating Budget Ordinance, and Ordinance No. 6888, the 2023-2024 Biennial Capital Budget, authorizing amendment to the City of Auburn 2023-2024 Budget as set forth in schedule “A” and schedule “B”

Director Thomas provided Council with an overview of Ordinance No. 6911 regarding the second Budget Amendment including the adjustment of the beginning fund Balances, new requests, addition of grant funds, and adjustments to Capital Projects.

Council discussed the closure of the BIA fund.

B. 2023 National Night Out Presentation (Tate) (15 Minutes)

An update on Auburn’s 2023 National Night Out event

Neighborhood Coordinator Lovings provided Council with the 2023 National Night Out Presentation. He reviewed the Neighborhood Programs, provided a recap of the National Night Out event from 2022, and discussed the plan for the 2023 National Night Out.

Council discussed getting neighborhoods involved, and appreciation of the inclusive nature of the event.

C. Water System Comprehensive Plan Update - Policy Review (Gaub) (30 Minutes)

Manager Vondrak and Engineer Gebreeyesus provided Council with an overview of the Water System Comprehensive plan update, they reviewed the goals and polices of the update, an introduction into the water system including removal, addition and modification of polices in regarding business practices, service area goal, operation and maintenance goals, financial goals, planning, environmental stewardship, and design and construction goals.

Council discussed the reduction goals.

VI. FINANCE, TECHNOLOGY AND ECONOMIC DEVELOPMENT DISCUSSION ITEMS

A. Economic Development Update – 2nd Quarter 2023 (Tate) (15 Minutes)
An update on Economic Development Division activity

Councilmember Baldwin Chaired this section of the meeting.

Manager Francis provided Council with an overview of the Economic Development Second Quarter update. She reviewed the Downtown Auburn Cooperative and the BIA update including the partnership projects, downtown engagement, murals in the downtown, downtown business ribbon cutting, the Outlet Collection Marketing Campaign, the Pacific Raceway Marketing Campaign, Pacific Raceways NHRA FanFest 2023, Business Connect Events, the Economic Development element of the Comprehensive Plan, business outreach meetings, tourism, Good Neighbor Agreement, National Night Out, Request for Proposals for Web Location Intelligence Application, and plans for the next update.

Council discussed the SHAG allowance for tenant improvements, the advertising signs and return on investment, the Explore Auburn website, the Muckleshoot Tribal Hotel, the Muckleshoot Canoe Journey event, and partnership opportunities with the Muckleshoot Tribe.

Deputy Mayor announced that the Ad Hoc Committee for the Council Rules of Procedure has been formed and consists of himself, Councilmember Brown, and Councilmember Rakes. Councilmember Rakes will Chair the Committee and their first meeting is July 11, 2023.

VII. ADJOURNMENT

There being no further business to come before the Council, the meeting was adjourned at 7:58 p.m.

APPROVED this 17th day of July, 2023.

_____ _____

JAMES JEYARAJ, DEPUTY MAYOR Shawn Campbell, City Clerk

Agendas and minutes are available to the public at the City Clerk's Office, on the City website (http://www.auburnwa.gov), and via e-mail. Complete agenda packets are available for review at the City Clerk's Office.

AGENDA BILL APPROVAL FORM

Agenda Subject:
Water System Comprehensive Plan Update - Policy Review (Gaub) (30 Minutes)

Date:
July 3, 2023

Department:
Public Works

Attachments:
Presentation
Draft 2024 Water System Policies & Criteria

Budget Impact:
Current Budget: $0
Proposed Revision: $0
Revised Budget: $0

Administrative Recommendation:

For discussion only.

Background for Motion:

Background Summary:

The City is updating the Water System Comprehensive Plan (Plan) in coordination with the update of the City's overall Comprehensive Plan. The purpose of the Plan is to guide the City with respect to future activities and improvements for the Storm Drainage Utility.

The purpose of this discussion is to provide Council with the staff recommended policies to be incorporated into the Plan. The policies are the foundation of the Plan and outline how the water system should be operated and maintained and are grouped within goal statements that are headlined under the following categories:

- Business Practices
- Service Area
- Operations and Maintenance
- Financial
- Planning
- Environmental Stewardship
- Design and Construction

Staff will review the recommended policies as provided in the attachment with specific focus on the additions, changes and removals from the previous Plan.

Reviewed by Council Committees:

Councilmember: Brown
Staff: Gaub
Meeting Date: July 10, 2023
Item Number:

ENGINEERING SERVICES

WATER COMPREHENSIVE PLAN POLICY REVIEW

RYAN VONDRAK, UTILITIES ENGINEERING MANAGER
SENAIT GEBREEYESUS, WATER UTILITY ENGINEER

CITY COUNCIL STUDY SESSION
JULY 10, 2023

Public Works Department
Engineering Services • Airport Services • Maintenance & Operations Services

AUBURN VALUES

SERVICE
ENVIRONMENT
ECONOMY
CHARACTER
SUSTAINABILITY
WELLNESS
CELEBRATION

COUNCIL SCHEDULE OVERVIEW

April 10, 2023	• City Comprehensive Plan Overview
July 10, 2023	• General Water Policies Review & Discussion
2023 Date TBD	• Draft Plan Discussion
2024 Date TBD	• Final Draft Review & Discussion • Resolution for Adoption

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GOALS – POLICIES

Goals

- Broad statements indicating a general aim or purpose to be achieved.

Policies

- Topic-specific statement providing guidelines for current and future decision-making.
- Indicates a clear commitment of the local legislative body.

GOALS – POLICIES

- Policies Format
  - Goal Statements
  - Policies Reflecting Goal Statements

1. BUSINESS PRACTICES

Goal 1.1: To employ recognized best business practices resulting in creating a sustainable, efficient, and cost-effective operation of the water utility.

Policy 1.1.1 Element of City Comprehensive Plan
Incorporate the Water Comprehensive Plan as an Element of the City's Comprehensive Plan.

Policy 1.1.2 Water Service By Others
Water Service supplied by outside purveyors within Auburn City limits are required to obtain a franchise with the City and are required to conform to all federal, state, and local laws and regulations. [ACC 20.02.040 and 20.04]

INTRODUCTION

- 4 Water Service Areas
  - Academy, Lakeland Hills, Lea Hill & Valley
- Sources of Water:
  - 7 active Wells, 2 Springs & 2 Interties
- ≈ 302 miles Water Main
- 15,047 Service Connections
- 10 Pump Stations
  - 2 Treatment Facilities
- 8 Reservoirs

Academy Pump Station

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WATER POLICY CATEGORIES

1. Business Practices
2. Service Area
3. Operations and Maintenance
4. Financial
5. Planning
6. Environmental Stewardship
7. Design and Construction

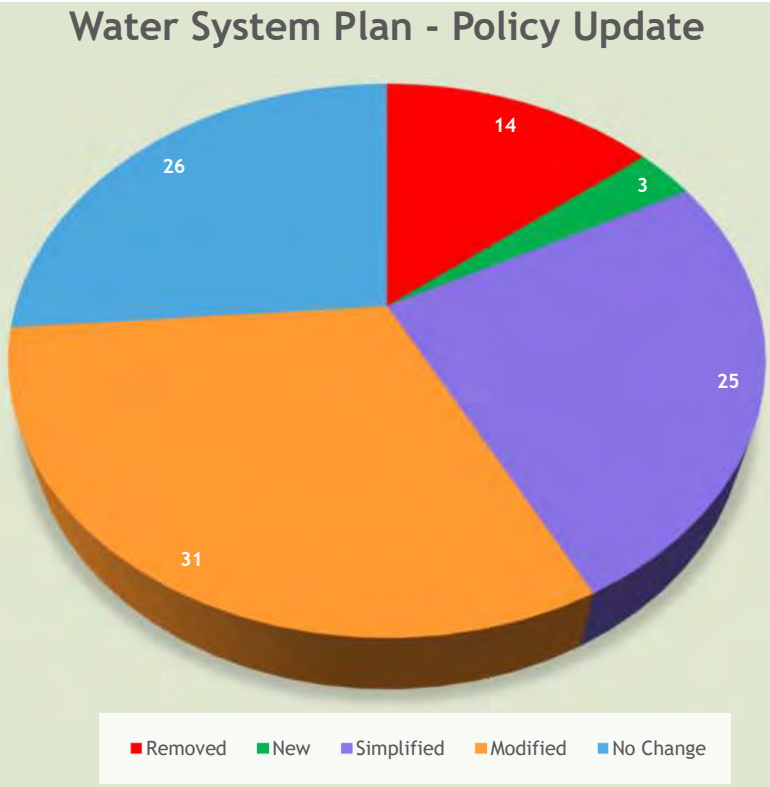
WATER POLICY UPDATE

- **Types of Updates (from Previously Adopted Plan)**

1. **Removed Policies**
2. **Simplified Policy Language**
3. **Modified Policies**
4. **New Policies**

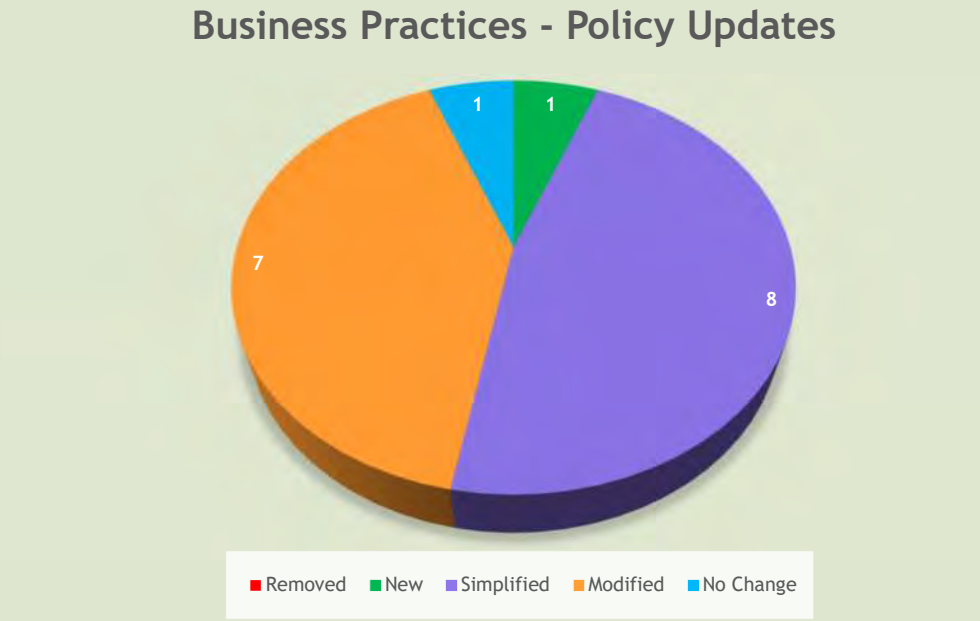
WATER POLICY UPDATE

- Policy Update Criteria
  - Compliance with other Regulations
  - Increase Efficiency
  - Enhance Sustainability
  - Avoid Redundancy
  - Remove Action Plan
  - Minimize Circular References



BUSINESS PRACTICES - GOAL

Goal 1: To employ recognized best business practices resulting in creating a sustainable, efficient, and cost-effective operation of the water utility.



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BUSINESS PRACTICES – MODIFIED POLICIES

- **Policy 1.2 Water Service By Others**
  - Water Service supplied by outside purveyors within Auburn City limits are required to obtain a franchise with the City and are required to conform to all federal, state, and local laws and regulations. [ACC 20.02.040 and 20.04]

- **Policy 1.3: Asset Improvements**
  - The City will develop and implement system improvements, infrastructure renewal (repair, rehabilitation, or replacement), and operations and maintenance programs for the water system according to asset management principles that address levels of service, address the triple bottom line (economic, social, and environmental benefits and costs), minimize asset life cycle costs, and incorporate risk management into decision-making.

- **Policy 1.6: Condition Assessments of Assets**
  - The City will perform condition assessments of assets through development and implementation of an inspection schedule for all assets.

BUSINESS PRACTICES – MODIFIED POLICIES

- **Policy 1.7: Design Life of Assets**
  - The City will assign industry standard design life for all assets. The actual physical assessment will be compared to the theoretical design life to determine the optimal economic life. The City will attempt to repair or replace system assets before they exceed their economic life.

- **Policy 1.9: Addressing Water Quality Complaints**
  - The City will monitor the frequency, location, and details of all water quality complaints. At a minimum, the City will respond, research the cause of, and propose control methods once an issue is verified and documented.

BUSINESS PRACTICES – MODIFIED POLICIES

- **Policy 1.11: Public Health Protection**
  - The City will conduct regular inspections of its water system and any non-public water supply systems connected to it, in collaboration with the Washington State Department of Health.
  - To protect the municipally owned water supply from contamination, the City will establish and publish rules and regulations as needed. The City will take all necessary measures to enforce the regulations to prevent any risks to public health associated with water supply contamination. [ACC 13.12.080]

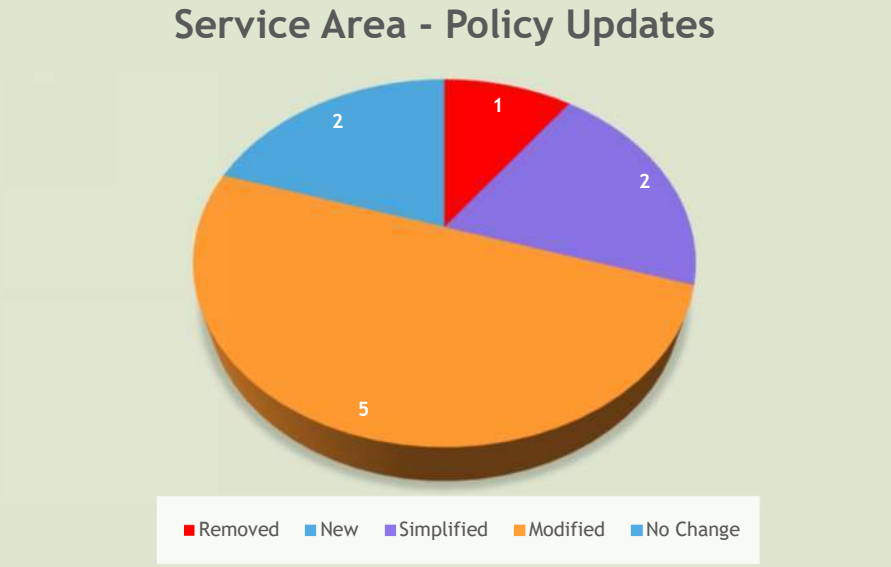
- **Policy 1.15: Fire Hydrant Use**
  - Fire hydrant use is a permitted activity unless that use is conducted by authorized City or Fire Authority employees. [ACC 13.06.415 & 13.12.035]

BUSINESS PRACTICES – NEW POLICIES

- **Policy 1.1: Element of City Comprehensive Plan**
  - **Incorporate the Water Comprehensive Plan as an Element of the City's Comprehensive Plan.**

SERVICE AREA - GOAL

Goal 2: Ensure sustainable provision of retail water services through the development and implementation of policies that define the duty to serve and conditions of service, while adhering to best management practices to meet the needs of the community.



SERVICE AREA – REMOVED POLICIES

- **Policy 3.3.7: Agency Coordination**
  - The City should coordinate closely with adjacent jurisdictions to determine applicable regulatory requirements, growth projections, and opportunities for joint projects. Agreements should be prepared between the pertinent parties on all joint projects.
  - The City shall protect the municipal water supply from adverse impacts resulting from the activities of adjacent purveyors.

SERVICE AREA – MODIFIED POLICIES

- **Policy 2.4: Conditions of Service**
  - For areas within the Retail Water Service Area, the City will provide water service to new customers, conditioned on the agreement that any infrastructure improvements provided by the developer/development is in compliance with City water system standards.
  - In addition, the City requires that residents within the City's Potential Annexation Areas will receive water services from the City, to the extent practical. The City will work with existing water purveyors within the City limits and within the City's Potential Annexation Areas in order to provide fair and equitable water service. New customers within the City's Potential Annexation Areas are to sign an Annexation Agreement before a Water Availability Certificate is issued.

SERVICE AREA – MODIFIED POLICIES

- **Policy 2.5: Satellite Systems Assistance**
  - The City recognizes there may be instances where satellite system water providers require assistance with providing water service. In these cases, the City may consider providing assistance on a case-by-case basis. The assistance could take a variety of forms, such as offering technical support and/or access to City infrastructure to help with the provision of water service. Ultimately, the decision to provide assistance will be based on the specific needs and circumstances of the water provider and will be made on a case-by-case basis after careful consideration.

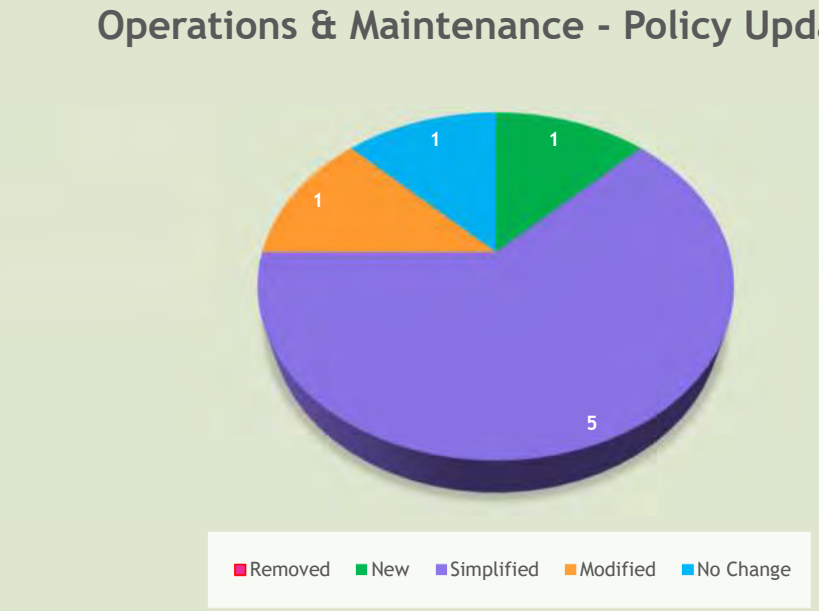
- **Policy 2.6: Satellite System Connecting to City Service**
  - The City will not assume ownership of any satellite water system, unless it meets all current City standards. The responsibility and all costs to bring a satellite system up to City standards and any infrastructure necessary to connect the satellite system to the City's water system network, shall be the system owner(s). [ACC 13.06.150]

SERVICE AREA – MODIFIED POLICIES

- **Policy 2.8: Concurrency of Improvements for Service**
  - **Provision of water service, including supply, in the City's Retail Water Service Area is conditioned on concurrency with development and the necessary water facilities, including water right permit(s) and certificate(s), are available and adequate to serve the development at the time it is ready for occupancy and use, as required by the Water Comprehensive Plan. Water service may not always be immediately available for a new development. The property developer must provide the required water system facilities before the City can provide water service, if the facilities do not already exist, or are not under construction or under a binding development agreement.**

OPERATIONS AND MAINTENANCE - GOAL

Goal 3: Employ operations and maintenance best management practices, which includes a commitment to training and certification opportunities for its employees.



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OPERATIONS AND MAINTENANCE – MODIFIED POLICIES

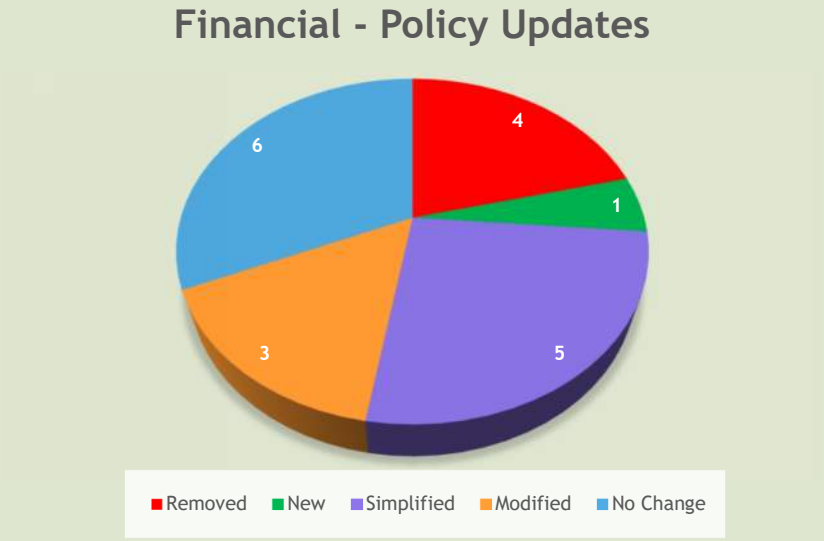
- **Policy 3.5: Pressure Reducing Valve Program**
  - To maximize system operational efficiency, conserve resources and provide consistent water service to customers of the water system, the City will adjust all water pressure reducing valves to the proper setting based on the frequency outlined in the operation and maintenance chapter of the Comprehensive Water Plan.

OPERATIONS AND MAINTENANCE – NEW POLICIES

- **Policy 3.7: ADU Metering**
  - **Property owners with accessory dwelling units (ADUs) on a single-family property may choose to supply the ADU from a master meter serving both units or separate meter installed to serve the ADU at owner's expense. Water usage of each ADU will be billed to the property owner based on readings from the master meter or individual meter serving the ADU, whichever is applicable.**

FINANCIAL - GOAL

Goal 4: Manage the water utility in a professional manner in compliance with applicable laws, regulations, and City financial policies, which requires ongoing monitoring of revenues and expenses in order to make prudent business decisions and report to City officials, as needed, regarding the status of utility operations.



FINANCIAL – REMOVED POLICIES

- **Policy 3.5.2: Water Use from Fire Hydrants**
  - All hydrant water sales shall be metered and require a hydrant meter use permit that authorizes the use of hydrants.

- **Policy 3.5.7: Capital Facilities Plan (summary)**
  - Fund utilities through user fees and grants.
  - Explore joint ventures for facility construction and coordination.
  - Provide assistance and funding for beneficial developer-initiated improvements.
  - Prioritize financial feasibility before constructing facilities.

FINANCIAL – REMOVED POLICIES

- **Policy 3.5.8: Capital Project**
  - Enterprise fund working capital in excess of that needed for operations may be used for capital needs in order to conserve the debt capacity of those funds for major facility expansions to meet future needs. [BBP Policies – 6, (Page 41)]

- **Policy 3.5.14: Water Rate Uniformity**
  - Water rates should be uniform for all water utility customers of the same class throughout the City.

FINANCIAL – MODIFIED POLICIES

- **Policy 4.7: Development Charge Cost Recovery**
  - The City shall continue to recognize the overall system impacts of new development upon the City water system through the collection and appropriate use of system development charges or similar fees. [ACC 13.41.020]

- **Policy 4.9: Water Rate Levels**
  - Water rates will be set at a level sufficient to cover the on-going expenses of the water utility, including operations, maintenance, repair, replacement, and capital improvements, as well as the general business expenses. Additionally, rates shall account for the depreciation of assets to ensure that the utility has adequate funds to maintain its infrastructure and facilities. Furthermore, the rates shall enable the water utility to maintain sufficient reserves.

FINANCIAL – MODIFIED POLICIES

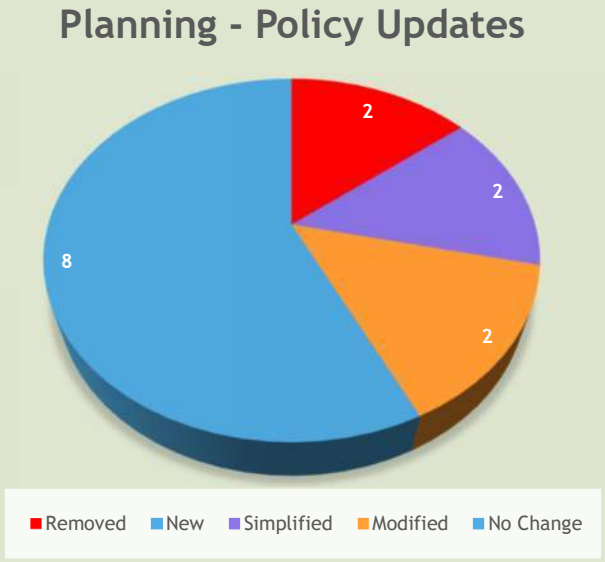
- **Policy 4.11: Water Rate Equity**
  - **The water-rate structure will allocate costs between the different customer classes. Rates will be established on a "Cost of Service" basis so that each customer class pays its prorated share of the total costs needed to operate and maintain the water utility. All projected future costs will be allocated to each customer class by using established criteria that reflect the benefit that each customer class receives from the service. A Cost of Service and Rate Study will be performed periodically to ensure ongoing equity between customer classes.**

FINANCIAL – NEW POLICIES

- **Policy 4.3: Rates and Charges**
  - **The City Council establishes rates and charges to be paid by a customer receiving water service from the City. As a condition of supplying a customer water service, the City reserves the right to temporarily discontinue service at any time without notice to the customer and the City will not be liable for damages for service interruptions or failure. [ACC 13.06.065]**

PLANNING - GOAL

Goal 5: Employ best management practices related to water supply planning and capital facility planning activities, which includes conditions for service extensions, fire system responsibility, oversizing, and service pressures and flow.



PLANNING – REMOVED POLICIES

- **Policy 3.6.1: Connections for Existing Wells (summary)**
  - Landowners must extend the municipal water system at their own cost when applying for water service. Owners near a water line must connect to the municipal system for new nonresidential construction.
  - Private well owners must seek authorization to transfer water rights and decommission wells before connecting to the municipal system. Auburn water system applicants must agree not to install irrigation wells.

- **Policy 3.6.6: Fire System Responsibility**
  - The City should provide and maintain water-system infrastructure to deliver adequate water for fire protection to retail customers served by the multi-source municipal water system. The multi-source water system, including water mains, storage facilities, hydrants, booster-pump stations, and related facilities, shall be designed to meet all applicable codes at the time of construction. The City should maintain, repair, or replace mains, lines, hydrants, and valves as necessary to keep the facilities in good working order.

PLANNING – MODIFIED POLICIES

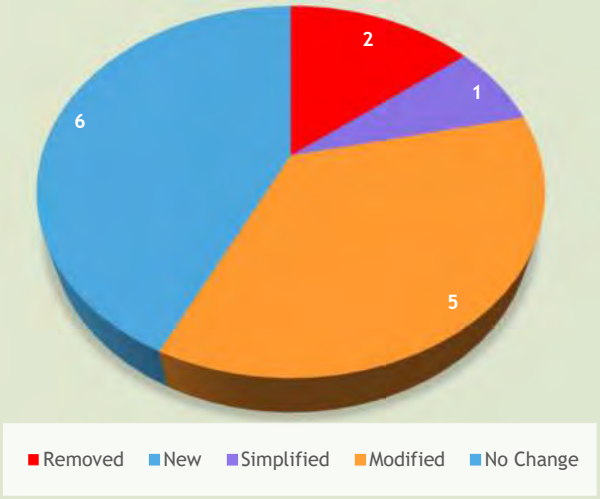
- **Policy 5.1: Service Extension (summary)**
  - Water system extensions must meet City codes and standards. Upgrades are required for systems not meeting City standards. Water mains must be extended across the full width of the property for future extensions.
  - Water system extensions for new developments should be built before or alongside development. Financing options like System Development Charges credits, Local Improvements Districts, and payback agreements may be utilized.

- **Policy 5.5: Capital Facilities Plan**
  - The City is required by the Washington State Growth Management Act to adopt a Capital Facilities Plan. The plan will include capital projects and capital project programs for the water utility for a six-year period. Identified projects and programs will be financially constrained and broken-down into capacity and non-capacity projects and programs. The City will match revenue sources to capital projects based on sound fiscal policies.

ENVIRONMENTAL STEWARDSHIP - GOAL

Goal 6: Employ best management practices related to water environmental stewardship and the Water utility's dedication to develop and implement facilities and programs that will protect the environment, including water conservation, demand management and water shortage response.

Environmental Stewardship - Policy Updates



ENVIRONMENTAL STEWARDSHIP – REMOVED POLICIES

- **Policy 3.7.3: Natural Resources**
  - Promote conservation of energy, water, and other natural resources in the location and design of public facilities. [CFP Policy 3.1, (Page 13)]

- **Policy 3.7.9: Mining Impacts**
  - The City shall consider impacts of mining on groundwater and surface water quality as well as possible changes in hydrology as a result of the mining during the environmental review process and require appropriate mitigating measures to prevent water quality degradation. [EN-50, (Page 9-11)]

ENVIRONMENTAL STEWARDSHIP – MODIFIED POLICIES

- **Policy 6.2: Water Shortage or Emergency Response**
  - In the event of a current or threatened water-supply shortage, the Mayor may declare a water shortage or emergency and issue water use restrictions or conservation measures as necessary and consistent with the Water Shortage Response plan. The Public Works Department is responsible for implementing these measures and making reasonable attempts to notify affected customers. [ACC 13.14]

- **Policy 6.3: Water Quality Responsibility**
  - The City shall provide water to all water-system customers that meet all state and federal water quality standards. The City shall take the actions necessary to ensure that all water quality standards are met to the point of delivery (meter). The customer is responsible for maintaining water quality from the meter to the actual point of use.

ENVIRONMENTAL STEWARDSHIP – MODIFIED POLICIES

- **Policy 6.4: Water Resource Protection**
  - The City shall maintain a Water Resource Protection Program that incorporates best management practices and adaptive management concepts, to protect the City's groundwater supplies from degradation.
  - The Comprehensive Water Plan shall provide for the evaluation of existing and potential future groundwater sources with regard to threats to the quantity and quality of such sources. The Plan shall ensure that strategies are established for the protection of groundwater sources that are used or likely to be used for public water supplies.

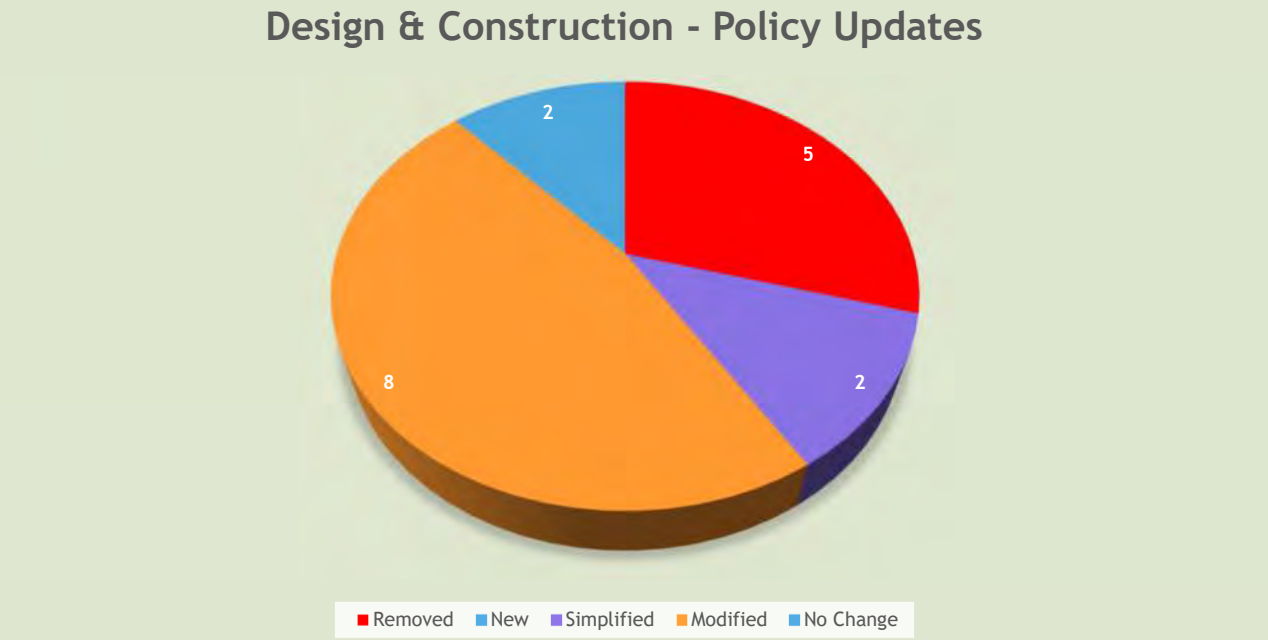
- **Policy 6.6: Springs Protection**
  - Protection of the City's Coal Creek Springs and West Hill Spring watersheds, wells, and other sources shall be a high priority in the designation of appropriate land uses in the vicinity of these areas and facilities.

ENVIRONMENTAL STEWARDSHIP – MODIFIED POLICIES

- **Policy 6.8: Water Use Efficiency Goals**
  - **The City will continue implementation of its existing Water Use Efficiency Program. The City will target a 1 percent reduction in equivalent residential unit value for each year until reaching a planning Equivalent Residential Unit (ERU) value of 172 gpd/ERU. A goal of the City is to reduce peaking factors that occur during the high usage periods to maximize existing water supply sources. City's goal shall be in compliance and consistent with all applicable local, state, and federal laws and regulations within the Retail Water Service Area.**

DESIGN AND CONSTRUCTION - GOAL

Goal 7: Employ best management practices related to the design and construction of water facilities.



DESIGN AND CONSTRUCTION – REMOVED POLICIES

- **Policy 3.8.6: Fire Protection Services**
  - Services for fire protection are required to be installed with the proper backflow assemblies. It shall be mandatory for the installation to be made with an approved water flow alarm, as approved by the City and the chief of the Fire Authority, or their delegate, on each such service installation. [ACC 13.06.270]

- **Policy 3.8.10: Fire Flow Duration**
  - The time or duration, for which a fire flow is to be provided, is based on the quantity of fire flow required:
    - Required Fire Flow; Duration
      - 2,000 gpm or less: 2 hours
      - 2,001 to 3,000 gpm: 3 hours
      - 3,001 to 4,000 gpm: 4 hours
      - 4,001 to 5,000 gpm: 5 hours
      - 5,001 to 6,000 gpm: 6 hours
      - 6,001 to 7,000 gpm: 7 hours
      - 7,001 to 8,000 gpm: 8 hours

DESIGN AND CONSTRUCTION – REMOVED POLICIES

- **Policy 3.8.13: Construction Standards (summary)**
  - Projects must comply with standard plans and specifications from the Washington State Department of Transportation and County road standards. City will maintain services during construction and reconnect owner-maintained service pipes upon completion.

- **Policy 3.8.14: Hydrants (summary)**
  - Dead-end mains supplying hydrants over 50 feet must be at least 8 inches in size.
  - New hydrants in commercial, industrial, and multifamily residential areas must be supplied by at least 8-inch mains.
  - Hydrants must meet specific standards for valve opening, hose nozzles, steamer port, and connections.
  - Maximum distances between fire hydrants vary based on zone type.
  - Hydrant spacing requires approval from the Fire Authority, typically at street intersections.
  - Hydrant leads should be at least 6 inches in diameter, with leads over 50 feet being at least 8 inches in diameter.

DESIGN AND CONSTRUCTION – REMOVED POLICIES

- **Policy 3.8.15: Dead-End Mains**
  - **Provisions shall be made wherever appropriate in any project for looping all dead-end or temporarily dead-end mains. Construction plans must be approved by the appropriate water authority prior to the commencement of construction. Where it is not feasible at the time of approval and installation to loop a water system, the loop requirement may be relaxed if the intent of the code is met and a stub is provided on the main for future expansion. (Ordinance 3064 § 1, 1976) [ACC 13.16.090]**

DESIGN AND CONSTRUCTION – MODIFIED POLICIES

- **Policy 7.1: Service Ownership / Responsibility**
  - The City shall own and maintain the service line between the main and the meter, the meter and setter, the meter box, and tail piece. The property owner shall own and maintain the service line from the tail piece to the point of service including pressure-reducing valves, pumps, or cross-connection assemblies beyond the meter. [ACC 13.06.027]
  - For unmetered connections (fire sprinklers), City ownership ceases at the fitting on the water line. Where on-site fire hydrants are required, the City shall own the mains and hydrants located within established easements, unless the on-site mains and hydrants are located behind a master meter and designated as private.

- **Policy 7.2: Source of Supply**
  - The City shall have sufficient system-wide supply facilities (including both permanent and emergency interties) to meet the Maximum Day Demand with the largest active water supply source out of service. Since power continuity is a concern, auxiliary power, such as an installed or portable generator of sufficient capacity to power the well or spring pumps should be provided.

DESIGN AND CONSTRUCTION – MODIFIED POLICIES

- **Policy 7.3: Pump Stations**
  - A minimum of two pumps or a complete spare pump will be provided for each distribution system pump station to provide flexibility and system redundancy. Where multiple pumps are provided, the pumps will be sized so that the station can meet Maximum Day Demand flow conditions with the largest pump out-of-service. If the area is not served by gravity by a reservoir, booster pumps (along with any supply available) will be sized to provide peak hour demand and fire demand for the service area should the largest pump be out-of- service. Since power continuity is a concern, auxiliary power, such as an installed or portable generator of sufficient capacity to power the station with any single pump out of service should be provided.

- **Policy 7.4: Storage Reservoirs**
  - Reservoir redundancy is not a requirement for service areas where the Maximum Day Demand and fire demand can be met by supply or pumping.

DESIGN AND CONSTRUCTION – MODIFIED POLICIES

- **Policy 7.8: Fire-Flow Quantity**
  - The quantity of water available for firefighting establishes an important level of service for a water system. The fire flow requirements shall be based on the minimum City fire flow requirements specified in the current City of Auburn Engineering Design Standards. Additional fire flow may be required per the International Fire Code.
  - Where the City determines higher fire flows are required than the minimums, the higher flow will be the criterion used to determine the required system improvements. Fire flows are to be provided during Maximum Day Demand at the pressure requirements discussed in the paragraphs on Distribution System.

DESIGN AND CONSTRUCTION – MODIFIED POLICIES

- **Policy 7.9: Reservoir Sizing**
  - The City reservoir storage components shall be sized to meet WAC 246-290-235 and Department of Health recommendations and requirements.

- **Policy 7.11: System Pressure**
  - The City of Auburn has established a criterion for minimum pressure within the water distribution system of 30 psi for all new facilities during Peak Hour Demand.
  - The distribution system shall be capable of providing required fire flow under Maximum Day Demand conditions. During these conditions, a minimum pressure of 20 psi is allowed at any point within the distribution system when firefighting storage and equalizing storage are depleted (WAC 246-290-230 Distribution Systems). The maximum target pressure within the water distribution system is 80 psi.

DESIGN AND CONSTRUCTION – MODIFIED POLICIES

- **Policy 7.12: Elements of Required Storage**
  - The City storage reservoir volume requirements are comprised of three separate categories: Equalizing Storage (when necessary), Fire Fighting Storage, and Emergency Storage. In addition, reservoirs may include a "dead storage" volume that is not useful because of the water system configuration.
  - Auburn will provide sufficient storage volume so that each storage component is provided separately, recognizing that a fire could occur during an emergency (supply or pump station out-of-service). As a result, nesting of storage (using the same storage for both emergency and firefighting) is not acceptable and the City requires these volumes to be stacked. Evaluation of the required reservoir volume must be done by analyzing each reservoir independently to ensure that adequate storage is provided to meet the needs of customers within the reservoir service area. Storage within a zone of higher elevation can be used to meet the storage requirements of lower zones served by the reservoir.

WATER POLICY REVIEW

Any Questions?

CITY OF AUBURN WASHINGTON

Special City Council Meeting
April 1, 2024 - 6:30 PM
City Hall Council Chambers
MINUTES

I. CALL TO ORDER

Mayor Nancy Backus called the meeting to order at 6:30 p.m. in the Council Chambers of Auburn City Hall, 25 West Main Street.

II. LAND ACKNOWLEDGEMENT

III. PUBLIC PARTICIPATION

1. Public Participation

The City Council Meeting was held in person and virtually.

A. Pledge of Allegiance

Mayor Backus led those in attendance in the Pledge of Allegiance.

IV. ROLL CALL

Councilmembers present: Deputy Mayor Larry Brown, Hanan Amer, Kate Baldwin, Cheryl Rakes, Clinton Taylor, and Tracy Taylor. Councilmember Yolonda Trout-Manuel was excused.

Mayor Nancy Backus and the following staff members present included: Chief of Police Mark Caillier, Director of Public Works Ingrid Gaub, Utilities Engineering Manager Ryan Vondrak, Business Systems Analyst Chrissy Malave, and City Clerk Shawn Campbell.

V. DISCUSSION ITEMS

A. Briefing - Utility Plans (Gaub) (30 Minutes)

Manager Vondrak provided Council with a presentation on the 2024 Sewer, Storm, and Water Comprehensive Plans. He reviewed the updates to each Plan chapter by chapter, and reviewed the next steps for the 2024 Sewer, Storm, and Water Plans.

Council discussed guidance from the County or State regarding weather events, and modeling of severe weather events.

VI. ADJOURNMENT

There being no further business to come before the Council, the meeting was adjourned at 6:54 p.m.

APPROVED this 15th day of April 2024.

NANCY BACKUS, MAYOR

Shawn Campbell, City Clerk

Agendas and minutes are available to the public at the City Clerk's Office, on the City website (http://www.auburnwa.gov), and via e-mail. Complete agenda packets are available for review at the City Clerk's Office.

CITY OF AUBURN WASHINGTON

AGENDA BILL APPROVAL FORM

Agenda Subject:
Briefing - Utility Plans (Gaub) (30 Minutes)

Date:
March 21, 2024

Department:
Public Works

Attachments:
Presentation

Budget Impact:
Current Budget: $0
Proposed Revision: $0
Revised Budget: $0

Administrative Recommendation:

For discussion only.

Background for Motion:

Background Summary:

The City is updating the individual Comprehensive Plan (Plans) for the Sanitary Sewer, Storm Drainage, and Water Utilities in coordination with the update of the City's overall Comprehensive Plan. The purpose of this discussion is to provide Council with a general overview of each of the Plans, what they entail, and discuss next steps in the development of the Plans.

Reviewed by Council Committees:

Councilmember: Tracy Taylor
Staff: Ingrid Gaub
Meeting Date: April 1, 2024
Item Number: DI.A

ENGINEERING SERVICES

2024 SEWER, STORM, WATER COMPREHENSIVE PLANS OVERVIEW AND UPDATE

RYAN VONDRAK, UTILITIES ENGINEERING MANAGER

CITY COUNCIL SPECIAL MEETING
APRIL 1, 2024

Public Works Department
Engineering Services • Airport Services • Maintenance & Operations Services

AUBURN VALUES

SERVICE
ENVIRONMENT
ECONOMY
CHARACTER
SUSTAINABILITY
WELLNESS
CELEBRATION

2024 SEWER, STORM, WATER COMPREHENSIVE PLANS OVERVIEW AND UPDATE

- **Auburn Comprehensive Plan Elements**
  - **Core Plan (Community Development)**
  - **Land Use Element (Community Development)**
  - **Housing Element (Community Development)**
  - **Historic Preservation (Community Development)**
  - **Climate Change – NEW (Community Development)**
  - **Economic Development (Community Development)**
  - **Capital Facilities Element (Public Works)**
  - **Transportation Element (Public Works)**
  - **Utilities Element (Public Works)**
  - **Parks and Recreation (Parks)**

IMAGINE AUBURN
~COMPREHENSIVE PLAN UPDATE 2024~

Citywide effort involving all departments coordinating together to create a cohesive, consistent, and forward-thinking Plan covering range of subject areas

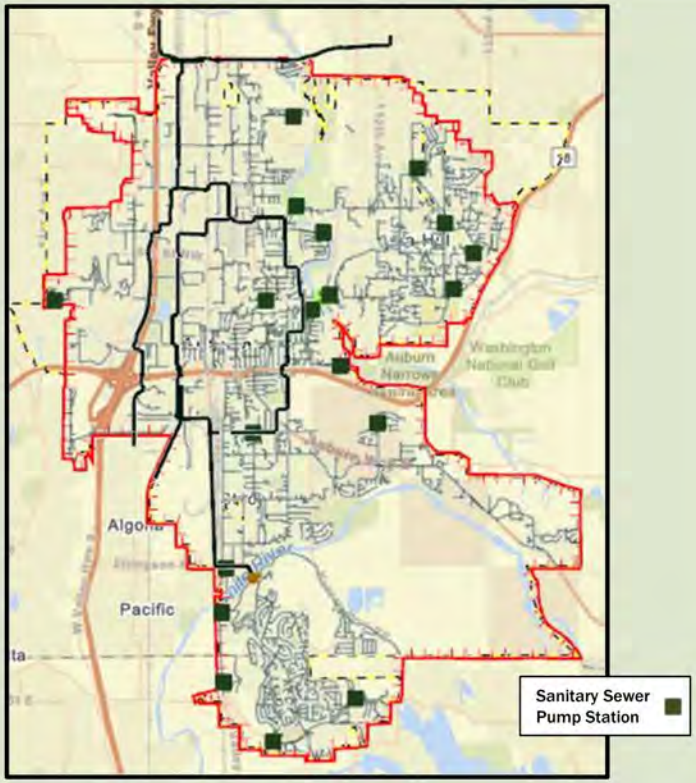
CITY COUNCIL SCHEDULE OVERVIEW

SERVICE • ENVIRONMENT • ECONOMY • CHARACTER • SUSTAINABILITY • WELLNESS • CELEBRATION

3

2024 SANITARY SEWER COMPREHENSIVE PLAN

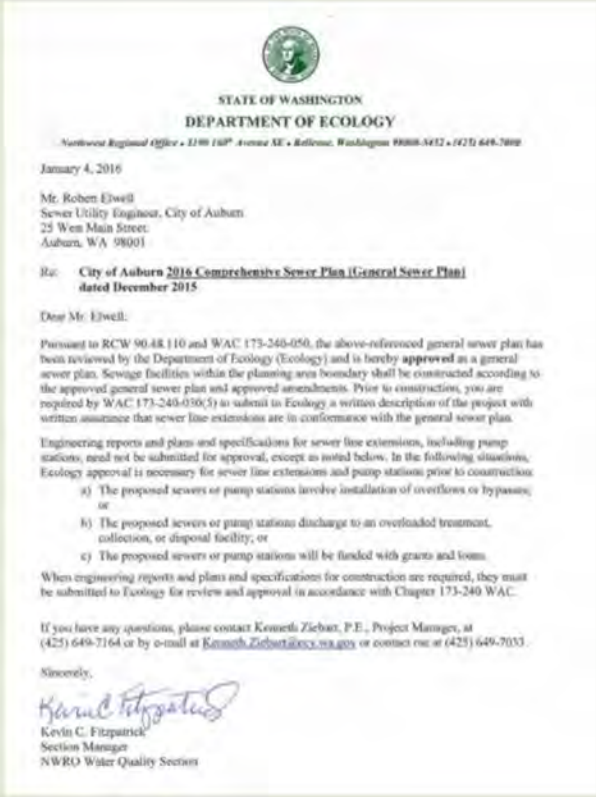
- Approximately 205 miles of Gravity Mains
- Approximately 5 miles of Force Mains
- 12,700 Service Connections
- 17 Pump Stations



2024 SANITARY SEWER COMPREHENSIVE PLAN

Key Elements

- Creating 6-yr and 20-yr Planning Periods
- Sewer Comprehensive Plan Requires Approval from King County
- Sewer Comprehensive Plan Requires Ecology Approval



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Northwest Regional Office • 3190 160th Avenue SE • Bellevue, Washington 98008-5452 • (425) 649-7000

January 4, 2016

Mr. Robert Elwell
Sewer Utility Engineer, City of Auburn
25 West Main Street
Auburn, WA 98001

Re: **City of Auburn 2016 Comprehensive Sewer Plan (General Sewer Plan) dated December 2015**

Dear Mr. Elwell:

Pursuant to RCW 90.48.110 and WAC 173-240-050, the above-referenced general sewer plan has been reviewed by the Department of Ecology (Ecology) and is hereby **approved** as a general sewer plan. Sewage facilities within the planning area boundary shall be constructed according to the approved general sewer plan and approved amendments. Prior to construction, you are required by WAC 173-240-030(5) to submit to Ecology a written description of the project with written assurance that sewer line extensions are in conformance with the general sewer plan.

Engineering reports and plans and specifications for sewer line extensions, including pump stations, need not be submitted for approval, except as noted below. In the following situations, Ecology approval is necessary for sewer line extensions and pump stations prior to construction:

a) The proposed sewers or pump stations involve installation of overflows or bypasses; or
b) The proposed sewers or pump stations discharge to an overloaded treatment, collection, or disposal facility; or
c) The proposed sewers or pump stations will be funded with grants and loans.

When engineering reports and plans and specifications for construction are required, they must be submitted to Ecology for review and approval in accordance with Chapter 173-240 WAC.

If you have any questions, please contact Kenneth Ziebart, P.E., Project Manager, at (425) 649-7164 or by e-mail at Kenneth.Ziebart@ecy.wa.gov or contact me at (425) 649-7033.

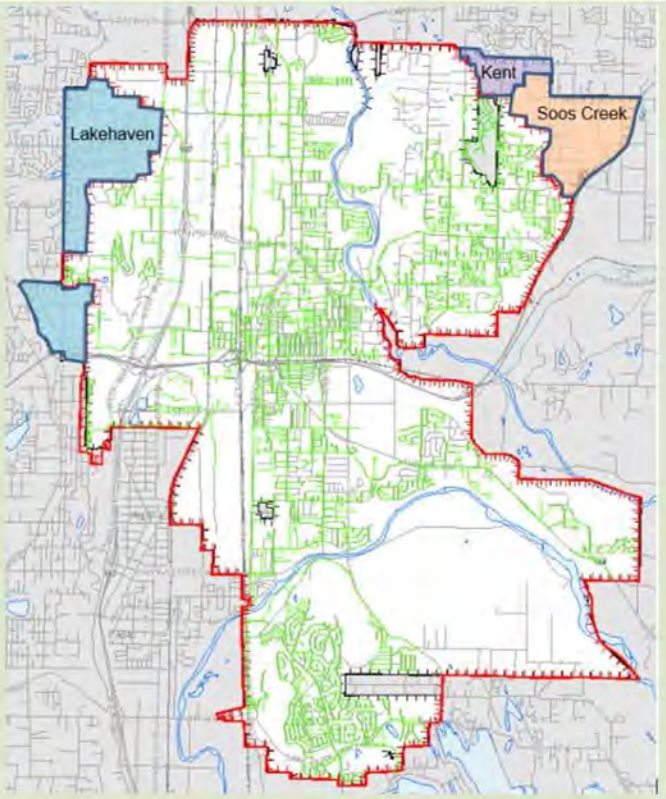
Sincerely,

Kevin C. Fitzpatrick
Section Manager
NWRO Water Quality Section

2024 SANITARY SEWER COMPREHENSIVE PLAN

Chapter 1 Introduction and Background

- Explains need for Updating the Plan
- Identifies Objectives
- Provides Background Utility Information
- Describes the Sanitary Sewer Service Area and Neighboring Service Areas



2024 SANITARY SEWER COMPREHENSIVE PLAN

May 22, 2023

- Sewer Policies Review & Discussion

Goals

- Broad statements indicating a general aim or purpose to be achieved.

Policies

- Topic-specific statement providing guidelines for current and future decision-making.
- Indicates a clear commitment of the local legislative body.

Chapter 2 Wastewater System Policies

Policies:

- Service Area
- System Planning
- Operations and Maintenance
- Environmental Stewardship
- System Performance and Reliability
- Fiscal Responsibility

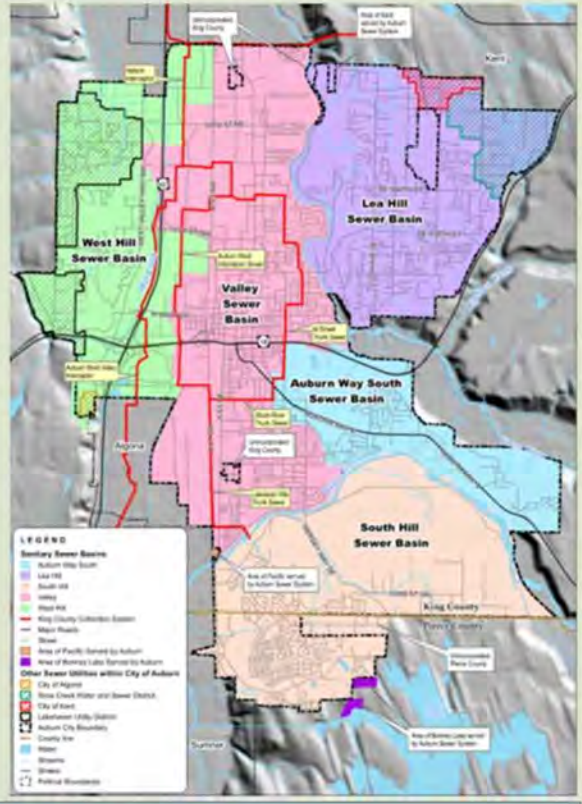
2024 SANITARY SEWER COMPREHENSIVE PLAN

Chapter 3 Planning Considerations

- Hydraulic Modeling for Existing Conditions and Projected (2044)
- Information on Projected Future Growth and Capacity Improvements

Chapter 4 Description of Existing System

- Description of the City's System
- Description of King County System
- Infiltration and Inflow
- Industrial Waste Discharges



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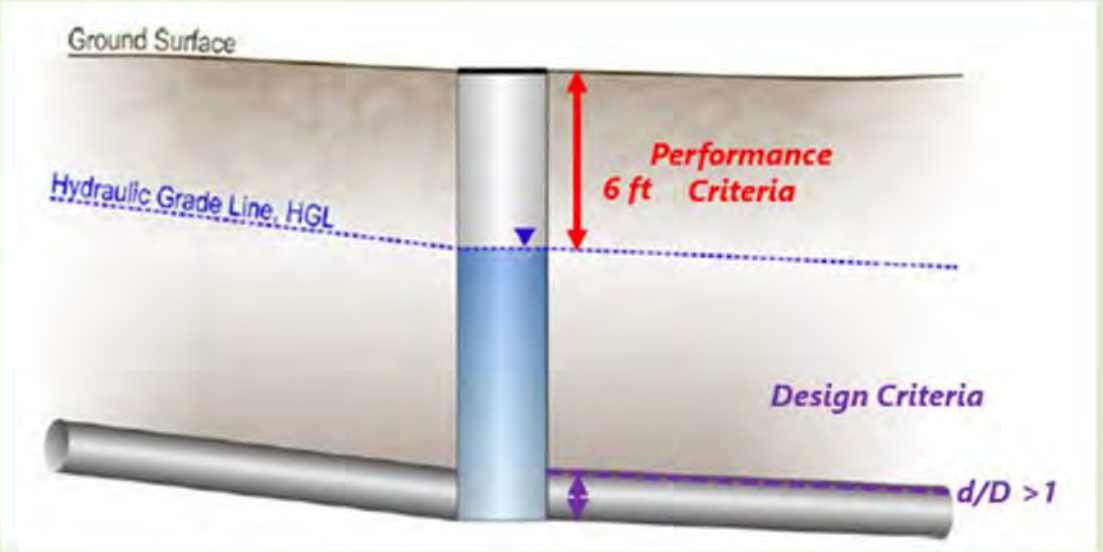
8

2024 SANITARY SEWER COMPREHENSIVE PLAN

Chapter 5 Wastewater System Analysis

- Existing System Evaluation
- Future System Evaluation
- Identify Deficiencies for Capital Improvements
- Inflow and Infiltration Analysis



2024 SANITARY SEWER COMPREHENSIVE PLAN

Chapter 6 Maintenance and Operations

- Organization Overview and Responsibilities
- System Operations
- Fats, Oils, and Grease Reduction Program
- Maintenance Program

2024 SANITARY SEWER COMPREHENSIVE PLAN

Chapter 7 Capital Improvements Plan

- Capital Improvement Needs
- High Level Costs

Chapter 8 Finance

- Costs of Service
- Capital Improvement Funding Plan
- Maintaining Reserves
- Rate Evaluation

2024 SANITARY SEWER COMPREHENSIVE PLAN

Any Questions?

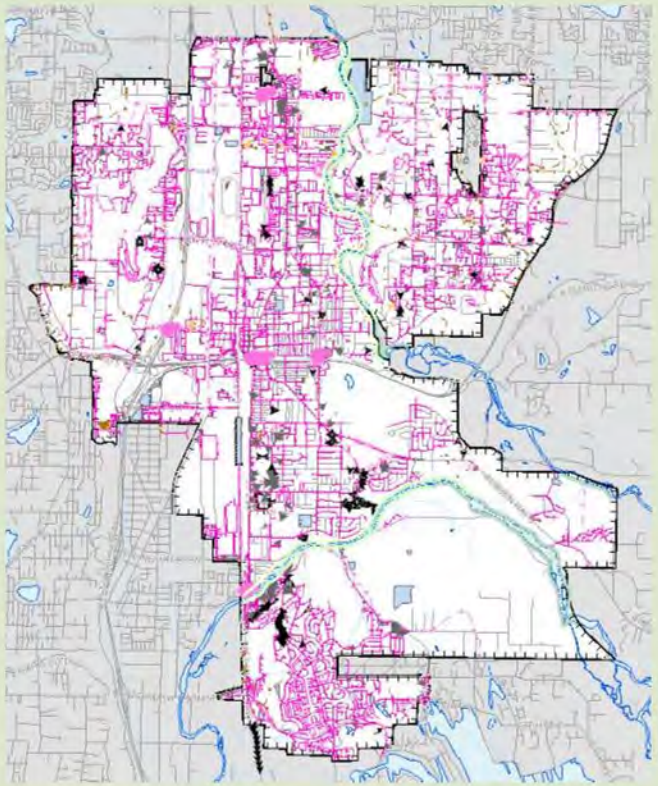
2024 STORM DRAINAGE COMPREHENSIVE PLAN

Key Elements

- Policies updated to reflect evolving National Pollutant Discharge Elimination System (NPDES) requirements
- Incorporate Stormwater Management Action Plan (SMAP)
- Creating 6-yr and 20-yr Planning Periods
- Develop Strategy for Future NPDES Compliance Requirements

2024 STORM DRAINAGE COMPREHENSIVE PLAN

- 240 Miles pipe
- 40 Miles of ditches
- 10,500 Catch Basins
- 3,060 Manholes
- 167 Stormwater Ponds
- 7 Pump Stations



2024 STORM DRAINAGE COMPREHENSIVE PLAN

Chapter 1 Introduction

- Explains need for Updating the Plan
- Identifies Objectives
- Approach and Document Organization

Chapter 2 Background

- Organizational Structure
- Funding Mechanisms
- Development Code and Design Standards
- Regulatory Considerations

Issuance Date: July 1, 2019
Effective Date: August 1, 2019
Expiration Date: July 31, 2024

Western Washington Phase II Municipal Stormwater Permit

National Pollutant Discharge Elimination System and
State Waste Discharge General Permit for discharges from
Small Municipal Separate Storm Sewers
in Western Washington

State of Washington
Department of Ecology
Olympia, WA 98504-7600

In compliance with the provisions of
The State of Washington Water Pollution Control Law
Chapter 90.48 Revised Code of Washington
and
The Federal Water Pollution Control Act
(The Clean Water Act)
Title 33 United States Code, Section 1251 *et seq.*

Until this Permit expires, is modified, or revoked, Permittees that have properly obtained coverage under this Permit are authorized to discharge to waters of the State in accordance with the special and general conditions which follow.

Heather R. Bartlett
Water Quality Program Manager
Department of Ecology

2024 STORM DRAINAGE COMPREHENSIVE PLAN

June 26, 2023

- Storm Policies Review & Discussion

Goals

- Broad statements indicating a general aim or purpose to be achieved.

Policies

- Topic-specific statement providing guidelines for current and future decision-making.
- Indicates a clear commitment of the local legislative body.

Chapter 3 System Goals and Policies

Policies:

- System Planning
- Operations and Maintenance
- Fiscal Responsibility
- Environmental and Regional Coordination

2024 STORM DRAINAGE COMPREHENSIVE PLAN

Chapter 4 Drainage System

- Natural Drainage
- Stormwater Drainage Infrastructure
- Critical Facilities
- Water Quality
- Existing Drainage Problems

Chapter 5 Evolution of the Storm Drainage Utility

- Methodologies for Evaluating Problems
- Developing Capital Improvements

2024 STORM DRAINAGE COMPREHENSIVE PLAN

Chapter 6 Maintenance and Operations

- Organization Overview and Responsibilities
- Routine Operations
- Maintenance Program

2024 STORM DRAINAGE COMPREHENSIVE PLAN

Chapter 7 Capital Improvements

- Capital Improvement Needs
- High Level Costs

Chapter 8 Implementation Plan

- Prioritizes Capital Projects
- Future Work Plan

Chapter 9 Finance

- Costs of Service
- Capital Improvement Funding Plan
- Maintaining Reserves
- Rate Evaluation

2024 STORM DRAINAGE COMPREHENSIVE PLAN

Any Questions?

2024 WATER COMPREHENSIVE PLAN

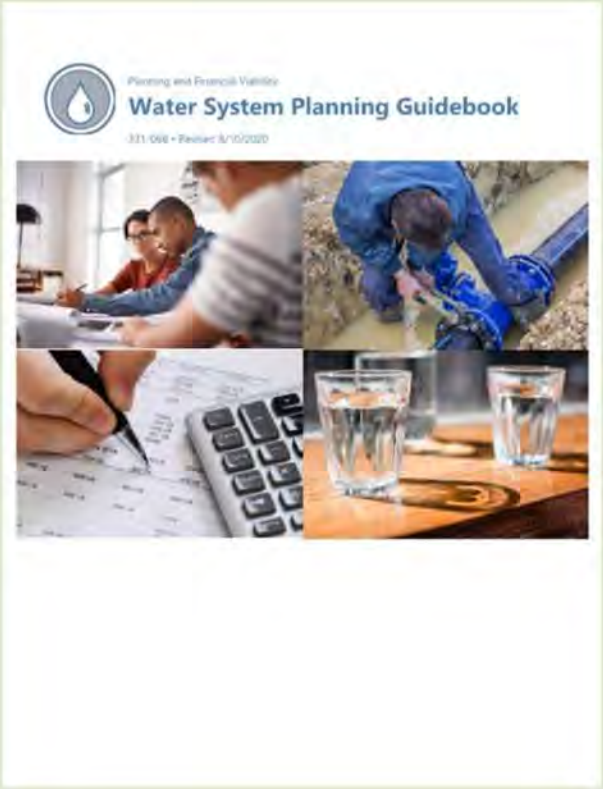
- 4 Water Service Areas
  - Academy, Lakeland Hills, Lea Hill & Valley
- Sources of Water:
  - 6 active Wells, 2 Springs & 2 Interties (Tacoma)
- ≈ 306 miles Water Main
- Over 15,000 Service Connections
- 8 Pump Stations
  - 2 Treatment Facilities
- 8 Reservoirs
- Operate 1 Satellite System
- Provide Wholesale Water to Algona
- Produce ≈ 2.5 billion gallons of water per year

Academy Pump Station

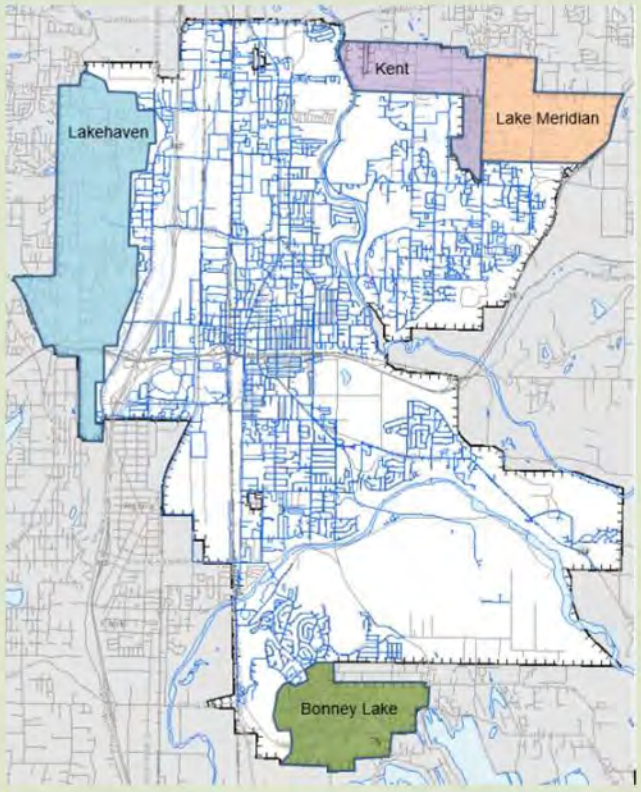
2024 WATER COMPREHENSIVE PLAN

Key Elements

- Format updated to follow Department of Health (DOH) Guidebook and DOH Design Manual
- Creating 10-yr and 20-yr Planning Periods
- Water Comprehensive Plan Requires Approvals from King and Pierce Counties
- Water Comprehensive Plan Requires DOH Approval

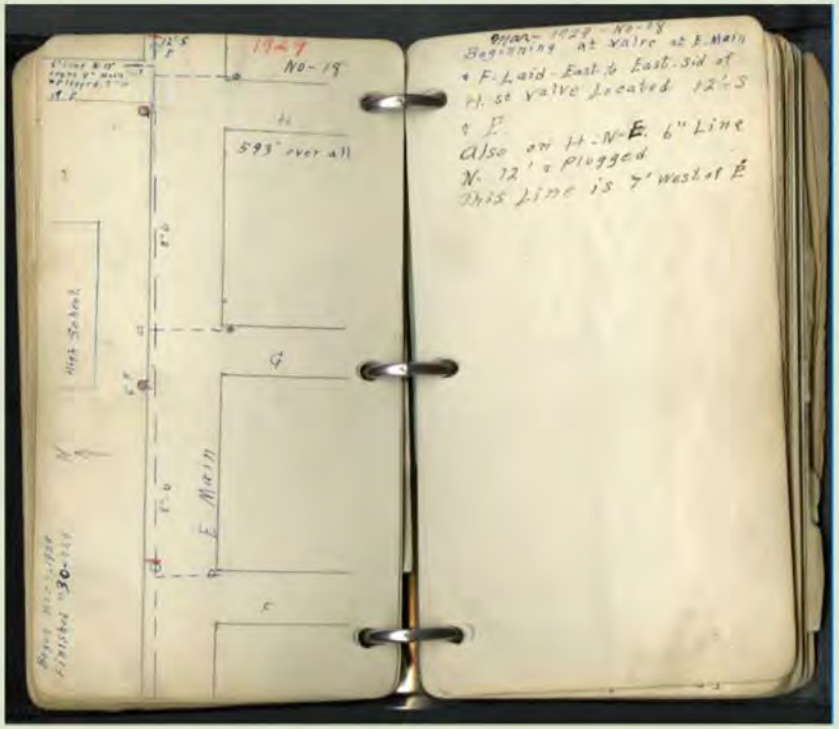


2024 WATER COMPREHENSIVE PLAN



Chapter 1 Description of the Water System

- Ownership and Management
- System History and Background
- Service Areas, Maps, and Land Uses



2024 WATER COMPREHENSIVE PLAN

July 10, 2023

- Water Policies Review & Discussion

Goals

- Broad statements indicating a general aim or purpose to be achieved.

Policies

- Topic-specific statement providing guidelines for current and future decision-making.
- Indicates a clear commitment of the local legislative body.

Chapter 1 Description of the Water System

Policies:

- Business Practice
- Service Area
- Operations and Maintenance
- Financial
- Planning
- Environmental Stewardship
- Design and Construction

2024 WATER COMPREHENSIVE PLAN

Chapter 2 Basic Planning Data

- Water Service Area Population
- Water Service Connections and Usage
- Future Population Projections and Land Use
- Water Supply and Production
- Future Water Demand

Number of Connections per Customer Classification

	2022
Single-Family Residential	11,980
Multi-Family Residential	1,052
Commercial	1,244
Manufacturing & Industrial	2
Schools	55
Municipal (City Accounts)	33
Irrigation	675
Wholesale	5
Number of Connections, Total	**15,046**

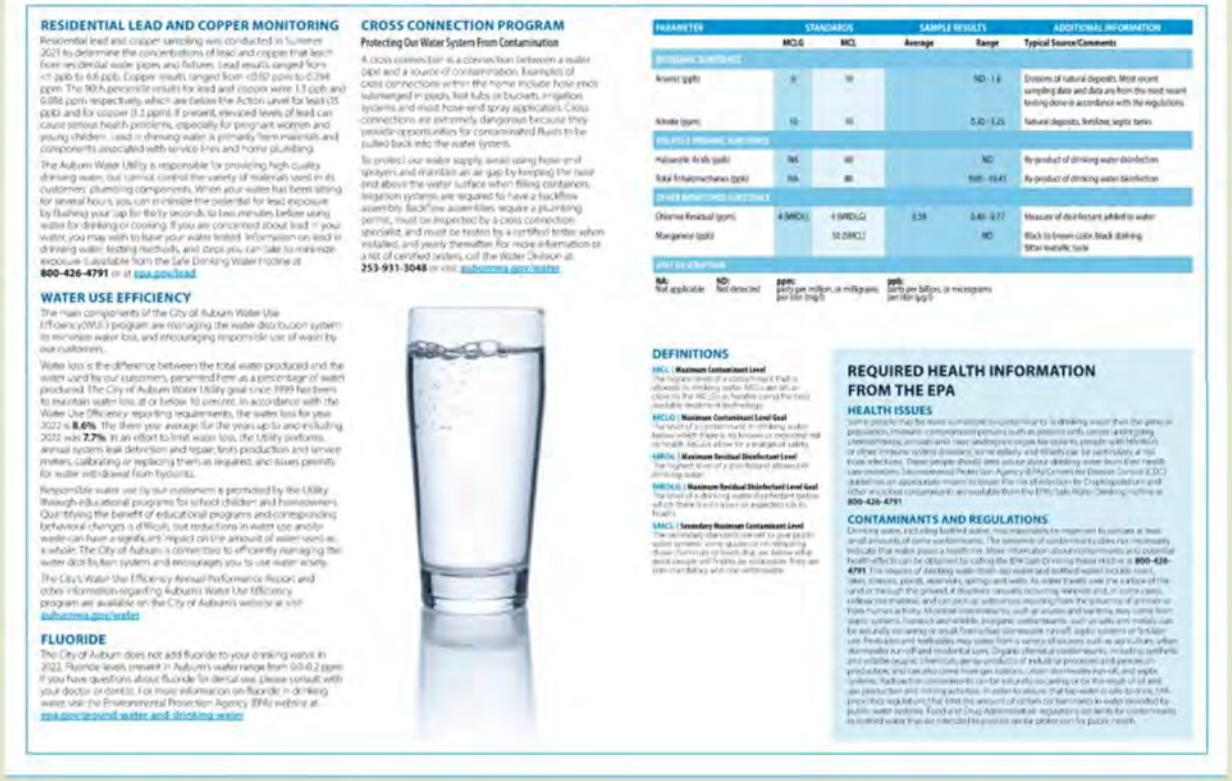
Historical Annual ADD, MDD, Peak Day, and Peaking Factor

	2015	2016	2017	2018	2019	2020	2021	2022
Annual Supply (MG)[1]	2,765	2,808	2,506	2,464	2,410	2,313	2,454	2,425
Average Day Demand (mgd)	7.57	7.67	6.87	6.75	6.60	6.32	6.72	6.64
Maximum Day Demand (mgd)	9.76	12.64	12.54	13.61	11.29	13.62	13.08	12.78
Max Day Date (month/day)	7/7	8/31	7/26	7/11	8/1	8/27	6/29	7/27
MDD/ADD Peaking Factor	1.29	1.65	1.83	2.02	1.71	2.15	1.95	1.92

2024 WATER COMPREHENSIVE PLAN

Chapter 3 System Analysis and Asset Management

- Physical Condition of Facilities
- Water Quality
- Capacity Analysis (Hydraulic Analysis)
- Identify Deficiencies



RESIDENTIAL LEAD AND COPPER MONITORING

Residential lead and copper sampling was conducted in Summer 2021 to determine the concentrations of lead and copper that leach from residential water pipes and fixtures. Lead results ranged from <1 ppb to 6.6 ppb. Copper results ranged from <0.02 ppm to 0.744 ppm. The 90th percentile results for lead and copper were 1.3 ppb and 0.656 ppm respectively, which are below the Action Level for lead (15 ppb) and for copper (1.3 ppm). If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing.

The Auburn Water Utility is responsible for providing high quality drinking water, but cannot control the variety of materials used in its customers' plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for thirty seconds to two minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at **800-426-4791** or at epa.gov/lead.

WATER USE EFFICIENCY

The main components of the City of Auburn Water Use Efficiency (WUE) program are managing the water distribution system to minimize water loss, and encouraging responsible use of water by our customers.

Water loss is the difference between the total water produced and the water used by our customers, presented here as a percentage of water produced. The City of Auburn Water Utility goal since 1999 has been to maintain water loss at or below 10 percent. In accordance with the Water Use Efficiency reporting requirements, the water loss for year 2022 is **8.6%**. The three-year average for the years up to and including 2022 was **7.7%**. In an effort to limit water loss, the Utility performs annual system leak detection and repair, tests production and service meters, calibrating or replacing them as required, and issues permits for water withdrawal from hydrants.

Responsible water use by our customers is promoted by the Utility through educational programs for school children and homeowners. Quantifying the benefit of educational programs and corresponding behavioral changes is difficult, but reductions in water use and/or waste can have a significant impact on the amount of water used as a whole. The City of Auburn is committed to efficiently managing the water distribution system and encourages you to use water wisely.

The City's Water Use Efficiency Annual Performance Report and other information regarding Auburn's Water Use Efficiency program are available on the City of Auburn's website at visit auburnwa.gov/water.

FLUORIDE

The City of Auburn does not add fluoride to your drinking water. In 2022, fluoride levels present in Auburn's water range from 0.0-0.2 ppm. If you have questions about fluoride for dental use, please consult with your doctor or dentist. For more information on fluoride in drinking water, visit the Environmental Protection Agency (EPA) website at epa.gov/ground-water-and-drinking-water.

CROSS CONNECTION PROGRAM

Protecting Our Water System From Contamination

A cross connection is a connection between a water pipe and a source of contamination. Examples of cross connections within the home include hose ends submerged in pools, hot tubs or buckets, irrigation systems and mobile hose-end spray applicators. Cross connections are extremely dangerous because they provide opportunities for contaminated fluids to be pulled back into the water system.

To protect our water supply, avoid using hose-end sprayers and maintain an air gap (by keeping the hose end above the water surface when filling containers). Irrigation systems are required to have a backflow assembly. Backflow assemblies require a plumbing permit, must be inspected by a cross connection specialist, and must be tested by a certified tester when installed, and yearly thereafter. For more information or a list of certified testers, call the Water Division at **253-931-3048** or visit auburnwa.gov/water.

PARAMETER	STANDARDS		SAMPLE RESULTS		ADDITIONAL INFORMATION
	MCLG	MCL	Average	Range	Typical Source/Comments
INORGANIC CONTAMINANTS					
Arsenic (ppb)	0	10		ND - 1.8	Erosion of natural deposits. Most recent sampling date and data are from the most recent testing done in accordance with the regulations.
Nitrate (ppm)	10	10		0.40 - 1.25	Natural deposits, fertilizer, septic tanks
HALOACETIC ACIDS AND TTHMS					
Haloacetic Acids (ppb)	NA	60		ND	By-product of drinking water disinfection
Total Trihalomethanes (ppb)	NA	80		ND - 10.41	By-product of drinking water disinfection
DISINFECTANTS AND DISINFECTION BY-PRODUCTS					
Chlorine Residual (ppm)	4 (MRDLG)	4 (MRDL)	0.59	0.40 - 0.77	Measure of disinfectant added to water
Manganese (ppb)		50 (SMCL)		ND	Black to brown color; Black staining; Bitter metallic taste
OTHER REGULATED SUBSTANCES					

NA: Not applicable. ND: Not detected. ppm: parts per million, or milligrams per liter (mg/l). ppb: parts per billion, or micrograms per liter (µg/l).

DEFINITIONS

MCL | Maximum Contaminant Level
The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG | Maximum Contaminant Level Goal
The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MRDL | Maximum Residual Disinfectant Level
The highest level of a disinfectant allowed in drinking water.

MRDLG | Maximum Residual Disinfectant Level Goal
The level of a drinking water disinfectant below which there is no known or expected risk to health.

SMCL | Secondary Maximum Contaminant Level
The recommended standards are set to give public water systems some guidance in managing those chemicals or traits that are undesirable. They are non-mandatory and not enforceable.

REQUIRED HEALTH INFORMATION FROM THE EPA

HEALTH ISSUES

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. Environmental Protection Agency (EPA)/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the EPA's Safe Water Drinking Hotline at **800-426-4791**.

CONTAMINANTS AND REGULATIONS

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA Safe Drinking Water Hotline at **800-426-4791**. The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Microbial contaminants, such as viruses and bacteria, may come from septic systems, livestock and wildlife. Inorganic contaminants, such as salts and metals, can be naturally occurring or result from urban stormwater runoff, septic systems or fertilizer use. Pesticides and herbicides may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses. Organic chemical contaminants, including synthetic and volatile organic chemicals, are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems. Radioactive contaminants can be naturally occurring or can be the result of oil and gas production and mining activities. In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water that are intended to provide the same protection for public health.

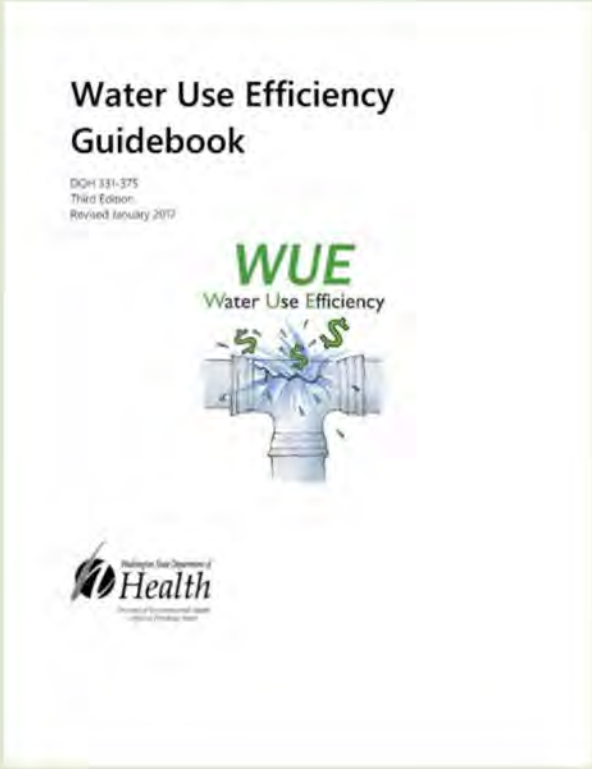
2024 WATER COMPREHENSIVE PLAN

Chapter 4 Water use Efficiency

- Water Use Efficiency Program
- Distribution System Leakage
- Climate Change Resiliency

Chapter 5 Source Water Protection

- Wellhead Protection
- Watershed Control Program
- Sanitary Control Area



2024 WATER COMPREHENSIVE PLAN

Chapter 6 Operation and Maintenance Program

- Organization Overview and Responsibilities
- System Operations
- Maintenance Program

Chapter 7 Design and Construction Standards

- Project Review Procedures
- Design and Construction Standards
- Construction Certification

2024 WATER COMPREHENSIVE PLAN

Chapter 8 Capital Improvements Plan

- Capital Improvement Needs
- High Level Costs

Chapter 9 Financial Analysis

- Costs of Service
- Capital Improvement Funding Plan
- Maintaining Reserves
- Rate Evaluation

2024 WATER COMPREHENSIVE PLAN

Any Questions?

NEXT STEPS

April 1, 2024
May 21, 2024
June 4, 2024
July 2, 2024
July-September 2024
August 26, 2024
September 9, 2024
October 14, 2024
December 2, 2024
• Sewer, Storm, Water Plans General Overview
• Planning Commission -Sewer, Storm, Water Comp Plans
• Agency Reviews and Coordination
• Draft Storm, Sewer, Water Plans Discussions with Council
• Resolution for Adoption

CITY OF AUBURN WASHINGTON

Planning Commission Meeting
July 2, 2024 - 6:30 PM
City Hall Council Chambers
AGENDA

I. PUBLIC PARTICIPATION

A. Public Participation Information

The City of Auburn Planning Commission Meeting scheduled for Tuesday, July 2, 2024 at 6:30 p.m., will be held in-person and virtually. To attend the meeting virtually, please click one of the links below, or call into the meeting at one of the phone numbers below:

Join Zoom Meeting
https://us06web.zoom.us/j/7999102307
Meeting ID: 799 910 2307
One tap mobile
+12532158782,,7999102307# US (Tacoma)
+12532050468,,7999102307# US
Dial by your location
• +1 253 215 8782 US (Tacoma)
• +1 253 205 0468 US
• +1 669 444 9171 US
• +1 719 359 4580 US
• 888 475 4499 US Toll-free
• 877 853 5257 US Toll-free

Meeting ID: 799 910 2307

Find your local number: https://us06web.zoom.us/u/kbLsn6aJ7H

II. CALL TO ORDER

A. **ROLL CALL/ESTABLISHMENT OF QUORUM**

B. **PLEDGE OF ALLEGIANCE**

III. PUBLIC COMMENT

Comment from the audience on any proposal for action by the Commission. If the comment is related to an action subsequently listed here as a public hearing, the comment should be provided at the time of the public hearing.

IV. APPROVAL OF MINUTES

A. June 4, 2024 Minutes from the Planning Commission Meeting

V. INTRODUCTION

A. Presentation Overview (Steiner)

Brief overview of upcoming Element Presentations and Public Hearing schedule.

VI. PUBLIC HEARINGS

A. Capital Facilities Element (Steiner)

Public Hearing for the public testimony and Planning Commission deliberation on the Capital Facilities Element

VII. OTHER BUSINESS

A. **Utilities Element Presentation (Steiner)**

Staff Presentation of the proposed changes to the Utilities Element

B. **Water System Plan Presentation (Vondrak)**

Staff Presentation of the proposed changes to the Water System Plan

VIII. COMMUNITY DEVELOPMENT REPORT

IX. ADJOURNMENT

The City of Auburn Planning Commission is a seven member advisory body that provides recommendations to the Auburn City Council on the preparation of and amendments to land use plans and related codes such as zoning. Planning Commissioners are appointed by the Mayor and confirmed by the City Council.

Actions taken by the Planning Commission, other than approvals or amendments to the Planning Commission Rules of Procedure, are not final decisions; they are in the form of recommendations to the city council which must ultimately make the final decision.

AGENDA BILL APPROVAL FORM

Agenda Subject:
Water System Plan Presentation (Vondrak)

Date:
June 25, 2024

Department:
Community Development

Attachments:
Attachment E - Water System Plan Presentation
Attachment F - Draft Water System Plan

Budget Impact:
Current Budget: $0
Proposed Revision: $0
Revised Budget: $0

Administrative Recommendation:

Background for Motion:

Background Summary:

Reviewed by Council Committees:

Councilmember:

Staff: Vondrak

Meeting Date: July 2, 2024

Item Number:

ENGINEERING SERVICES

2024 COMPREHENSIVE WATER PLAN OVERVIEW AND UPDATE

RYAN VONDRAK, UTILITIES ENGINEERING MANAGER

PLANNING COMMISSION MEETING
JULY 2, 2024

Public Works Department
Engineering Services • Airport Services • Maintenance & Operations Services

AUBURN VALUES

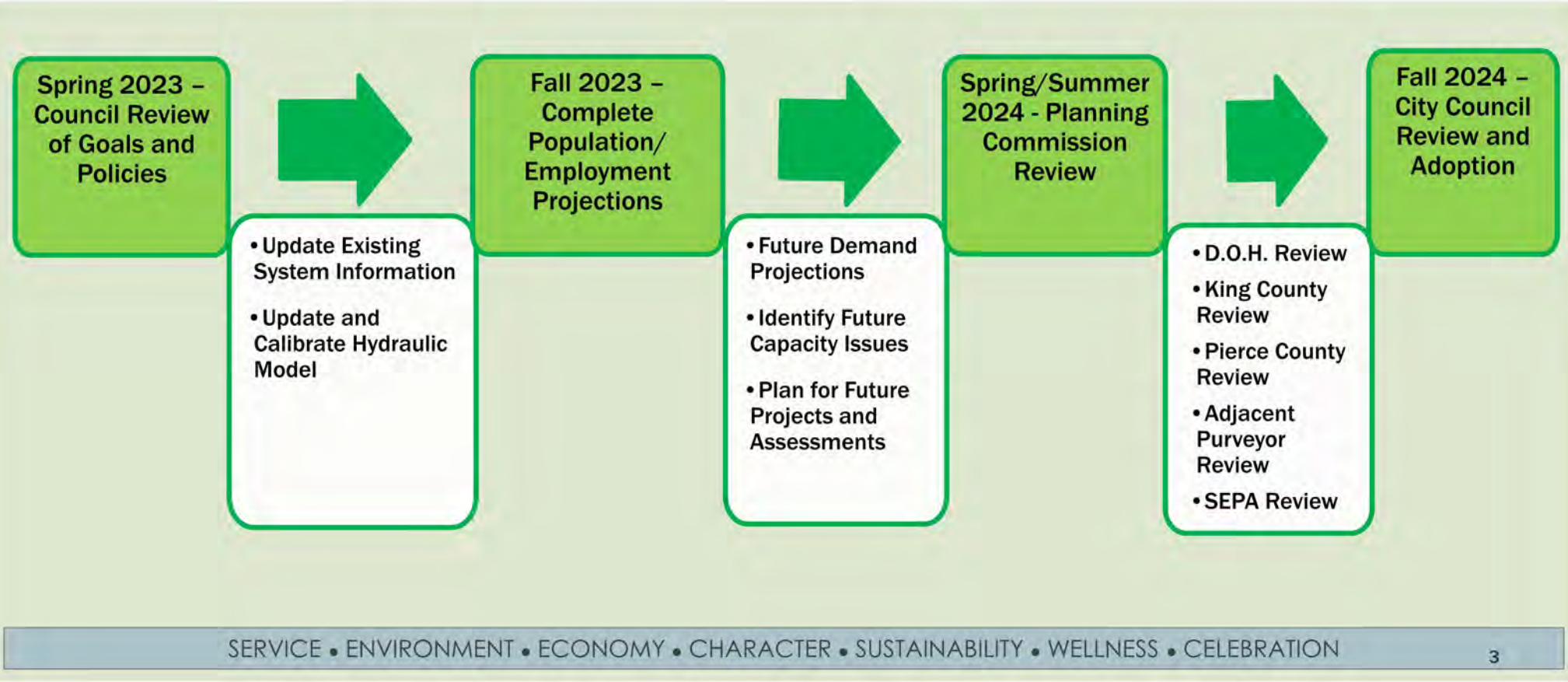
SERVICE
ENVIRONMENT
ECONOMY
CHARACTER
SUSTAINABILITY
WELLNESS
CELEBRATION

2024 COMPREHENSIVE WATER PLAN OVERVIEW AND UPDATE

- **Auburn Comprehensive Plan Elements**
  - Core Plan (Community Development)
  - Land Use Element (Community Development)
  - Housing Element (Community Development)
  - Historic Preservation (Community Development)
  - Climate Change – NEW (Community Development)
  - Economic Development (Community Development)
  - Capital Facilities Element (Public Works)
  - Transportation Element (Public Works)
  - **Utilities Element (Public Works)**
  - Parks and Recreation (Parks)

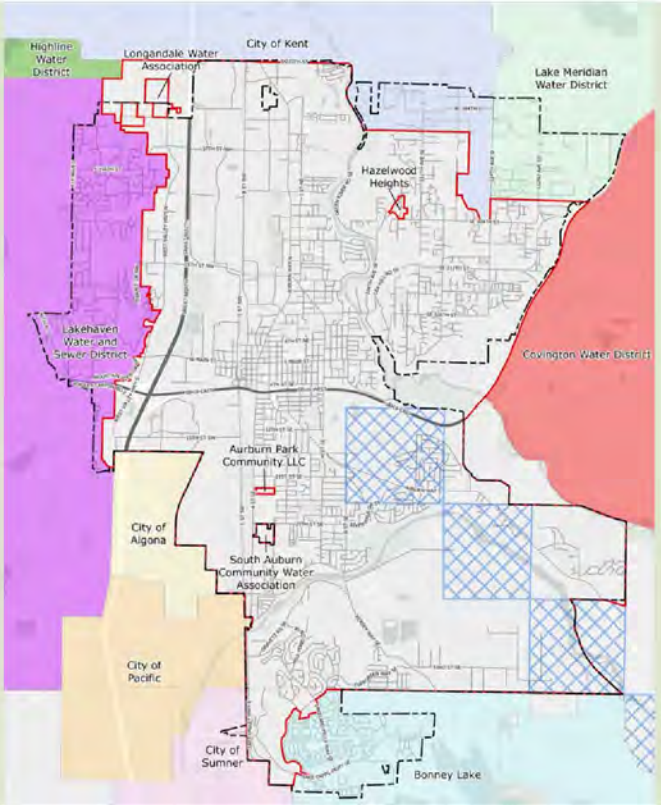
Citywide effort involving all departments coordinating together to create a cohesive, consistent, and forward-thinking Plan covering range of subject areas

PLAN DEVELOPMENT PROGRESS/MILESTONES



2024 WATER UTILITY INTRODUCTION

- 4 Water Service Areas
  - Academy, Lakeland Hills, Lea Hill & Valley
- Sources of Water:
  - 6 active Wells, 2 Springs & 2 Interties (Tacoma)
- ≈ 306 miles Water Main
- Over 15,000 Service Connections



Service Area and Adjacent Purveyors

2024 WATER UTILITY INTRODUCTION

- 8 Pump Stations
  - 2 Treatment Facilities
- 8 Reservoirs
- Operate 1 Satellite System
- Provide Wholesale Water to Algona
- Produce ≈ 2.5 billion gallons of water per year

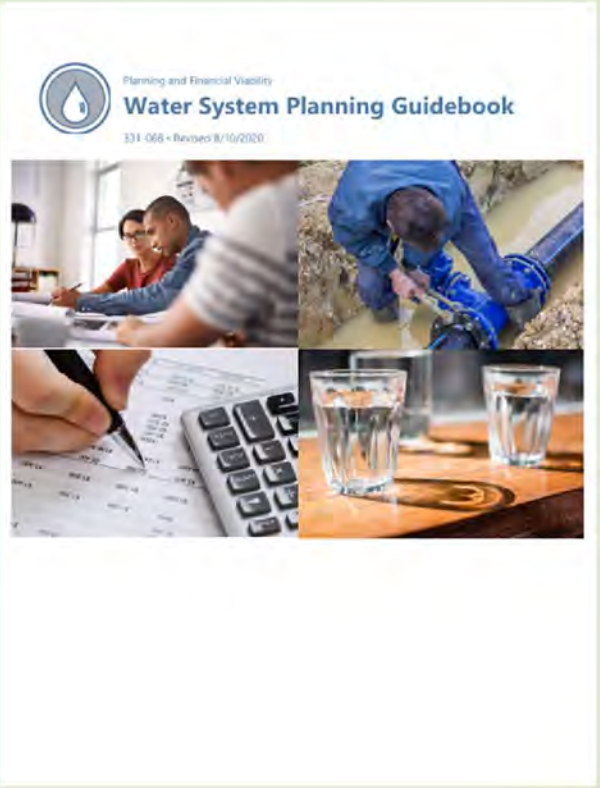
Fulmer Treatment Facility

Academy Pump Station

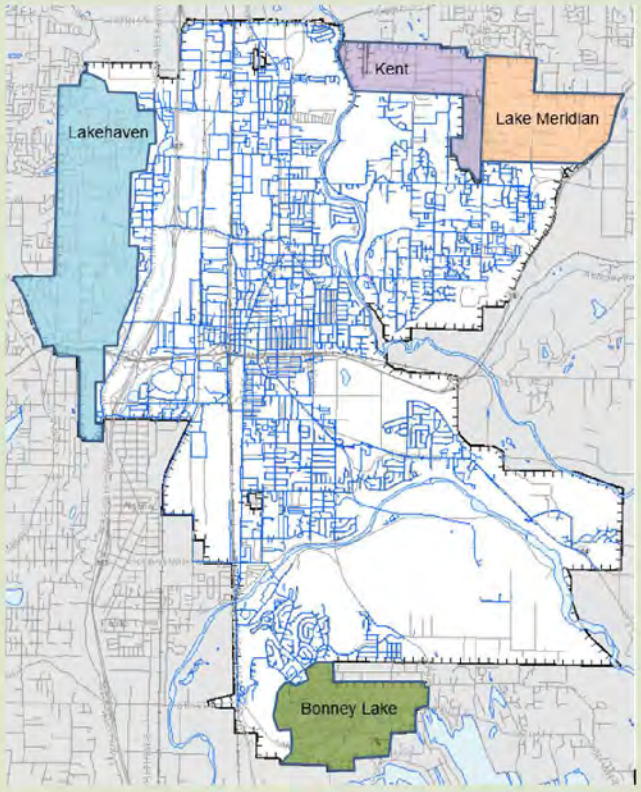
2024 WATER COMPREHENSIVE PLAN

Key Elements

- Format updated to follow Department of Health (DOH) Guidebook and DOH Design Manual
- Creating 10-yr and 20-yr Planning Periods

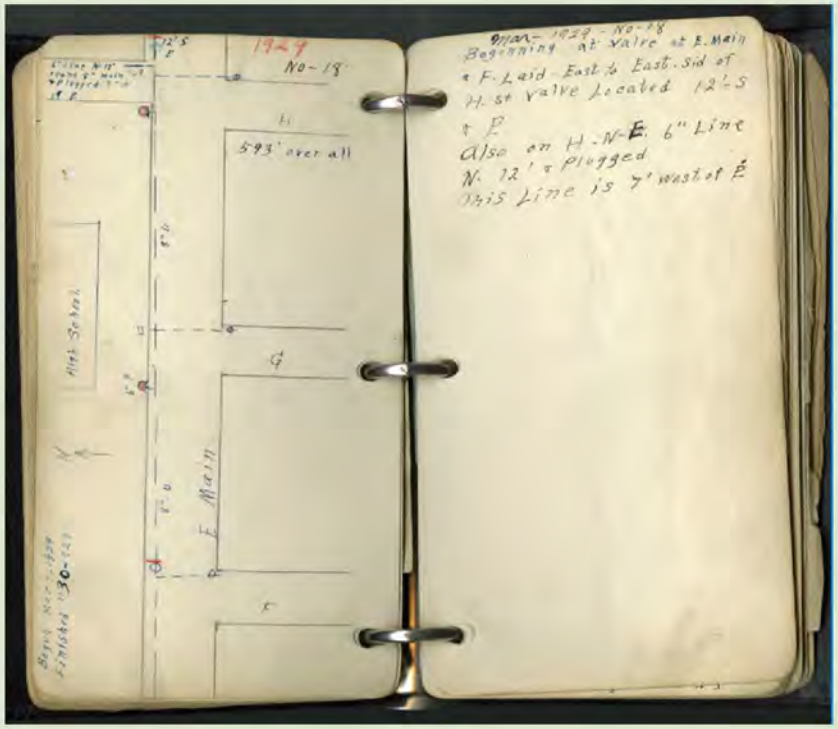


2024 WATER COMPREHENSIVE PLAN



Chapter 1 Description of the Water System

- Ownership and Management
- System History and Background
- Service Areas, Maps, and Land Uses
- System Policies
- Consistency



2024 WATER COMPREHENSIVE PLAN

July 10, 2023

- Water Policies Review & Discussion

Goals

- Broad statements indicating a general aim or purpose to be achieved.

Policies

- Topic-specific statement providing guidelines for current and future decision-making.
- Indicates a clear commitment of the local legislative body.

Chapter 1 Description of the Water System

Policies:

- Business Practice
- Service Area
- Operations and Maintenance
- Financial
- Planning
- Environmental Stewardship
- Design and Construction

2024 WATER COMPREHENSIVE PLAN

Chapter 2 Basic Planning Data

- **Water Service Area Population**
- **Water Service Connections and Usage**
- **Water Supply and Production**
- **Distribution System Leakage**
- **Water Supply Characteristics**
- **Water Supply Reliability Evaluation**
- **Future Population Projections and Land Use**
- **Future Water Demand**

Number of Connections per Customer Classification

	2022
Single-Family Residential	11,980
Multi-Family Residential	1,052
Commercial	1,244
Manufacturing & Industrial	2
Schools	55
Municipal (City Accounts)	33
Irrigation	675
Wholesale	5
Number of Connections, Total	**15,046**

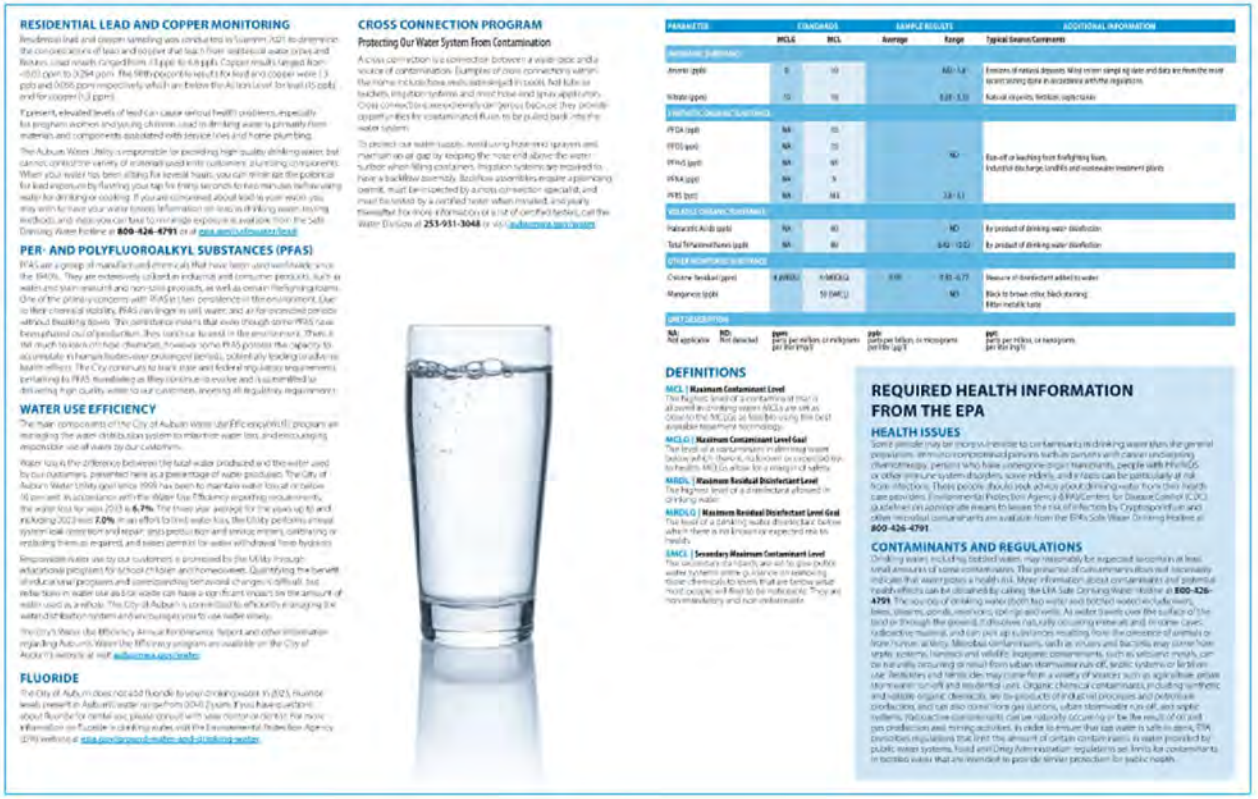
Historical Annual ADD, MDD, Peak Day, and Peaking Factor

	2015	2016	2017	2018	2019	2020	2021	2022
Annual Supply (MG)[1]	2,765	2,808	2,506	2,464	2,410	2,313	2,454	2,425
Average Day Demand (mgd)	7.57	7.67	6.87	6.75	6.60	6.32	6.72	6.64
Maximum Day Demand (mgd)	9.76	12.64	12.54	13.61	11.29	13.62	13.08	12.78
Max Day Date (month/day)	7/7	8/31	7/26	7/11	8/1	8/27	6/29	7/27
MDD/ADD Peaking Factor	1.29	1.65	1.83	2.02	1.71	2.15	1.95	1.92

2024 WATER COMPREHENSIVE PLAN

Chapter 3 System Analysis and Asset Management

- Asset Management – Inventory and Analysis
- Water Quality
- Design Standards
- Capacity Analysis
- Identify Deficiencies



RESIDENTIAL LEAD AND COPPER MONITORING

Residential lead and copper sampling was conducted in Summer 2021 to determine the concentrations of lead and copper that leach from residential water pipes and fixtures. Lead results ranged from <1.0 ppb to 6.6 ppb. Copper results ranged from <0.03 ppm to 0.294 ppm. The 90th percentile results for lead and copper were 1.3 ppb and 0.066 ppm respectively which are below the Action Level for lead (15 ppb) and for copper (1.3 ppm).

To prevent elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing.

The Auburn Water Utility is responsible for providing high quality drinking water, but cannot control the variety of materials used in the customers' plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for many seconds to two minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at **800-426-4791** or at epa.gov/safewater/lead.

PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)

PFAS are a group of manufactured chemicals that have been used worldwide since the 1940's. They are extensively utilized in industrial and consumer products, such as water and stain resistant and non-stick products, as well as certain firefighting foams. One of the primary concerns with PFAS is their persistence in the environment. Due to their chemical stability, PFAS can linger in soil, water, and air for extended periods without breaking down. This persistence means that even though some PFAS have been phased out of production, they can still be found in the environment. There is still much to learn on how chemicals, however some PFAS possess the capacity to accumulate in human bodies over prolonged periods, potentially leading to adverse health effects. The City continues to track state and federal regulatory requirements pertaining to PFAS. As testing is likely to continue to evolve and is committed to delivering high quality water to our customers, ongoing PFAS testing will be performed to meet all regulatory requirements.

WATER USE EFFICIENCY

The main components of the City of Auburn Water Use Efficiency (WUE) program are managing the water distribution system to maximize water loss, and encouraging responsible use of water by our customers.

Water loss is the difference between the total water produced and the water used by our customers, presented here as a percentage of water produced. The City of Auburn Water Utility goal since 1999 has been to maintain water loss at or below 10 percent. In accordance with the Water Use Efficiency reporting requirements, the water loss for years 2013 to **6.7%**. The three year average for the years up to and including 2022 was **7.0%**. In an effort to limit water loss, the Utility performs annual system leak detection and repair, and a production and service meters, calibrating or replacing them as required, and bases permits for water withdrawal from hydrants.

Responsible water use by our customers is promoted by the Utility through educational programs for school children and homeowners. Quantifying the benefit of educational programs and corresponding behavioral changes is difficult, but reductions in water use as for waste can have a significant impact on the amount of water used as a whole. The City of Auburn is committed to efficiently managing the water distribution system and encourages you to use water wisely.

The City's Water Use Efficiency Annual Performance Report and other information regarding Auburn's Water Use Efficiency programs are available on the City of Auburn's website at wuf.auburnwa.gov/index.

FLUORIDE

The City of Auburn does not add fluoride to your drinking water. In 2021, fluoride levels present in Auburn's water ranged from 0.041-0.1 ppm. If you have questions about fluoride for dental use, please consult with your dentist or dentist. For more information on fluoride in drinking water, visit the Environmental Protection Agency (EPA) website at epa.gov/ground-water-and-drinking-water.

CROSS CONNECTION PROGRAM

Protecting Our Water System From Contamination

A cross connection is a connection between a water supply and a source of contamination. Examples of cross connections within the home include hose ends submerged in pools, hot tubs or buckets, irrigation systems and most hose-end spray applications. Cross connections are potentially dangerous because they provide opportunities for contaminated fluids to be pulled back into the water system.

To protect our water supply, everything from sprinkler systems and swimming pools to garden hoses and boilers must have a backflow assembly. Backflow assemblies require a plumbing permit, must be inspected by a cross connection specialist, and must be tested by a certified tester when installed, and yearly thereafter. For more information or a list of certified testers, call the Water Division at **253-931-3048** or visit auburnwa.gov/ccp.

PARAMETER	STANDARDS MCLG	STANDARDS MCL	SAMPLE RESULTS Average	SAMPLE RESULTS Range	ADDITIONAL INFORMATION Typical Source/Comments
INORGANIC SUBSTANCES					
Arsenic (ppb)	0	10		ND - 1.9	Erosion of natural deposits. Most recent sampling date and data are from the most recent testing done in accordance with the regulations.
Nitrate (ppm)	10	10		0.19 - 3.33	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
SYNTHETIC ORGANIC SUBSTANCES					
PFOA (ppt)	NA	10			
PFOS (ppt)	NA	10			
PFHxS (ppt)	NA	65		ND	Runoff or leaching from firefighting foam; Industrial discharge; Landfills and wastewater treatment plants
PFNA (ppt)	NA	9			
PFAS (ppt)	NA	163		3.8 - 6.1	
VOLATILE ORGANIC SUBSTANCES					
Haloacetic Acids (ppb)	NA	60		ND	By-product of drinking water disinfection
Total Trihalomethanes (ppb)	NA	80		0.42 - 13.0	By-product of drinking water disinfection
OTHER MONITORED SUBSTANCES					
Chlorine Residual (ppm)	4 (MRDL)	4 (MRDL)	0.91	0.31 - 0.77	Measure of disinfectant added to water
Manganese (ppb)		50 (SMCL)		ND	Black to brown color; Black staining; Bitter metallic taste

UNIT DESCRIPTIONS

NA: Not applicable **ND:** Not detected **ppm:** parts per million, or milligrams per liter (mg/L) **ppb:** parts per billion, or micrograms per liter (µg/L) **ppt:** parts per trillion, or nanograms per liter (ng/L)

DEFINITIONS

MCL | Maximum Contaminant Level
The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG | Maximum Contaminant Level Goal
The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MRDL | Maximum Residual Disinfectant Level
The highest level of a disinfectant allowed in drinking water.

MRDLG | Maximum Residual Disinfectant Level Goal
The level of a drinking water disinfectant below which there is not known or expected risk to health.

SMCL | Secondary Maximum Contaminant Level
The secondary standards are set to guide public water systems in the removal of cosmetic or aesthetic chemicals or ions that are harmless but most people will find to be objectionable. They are non-mandatory and non-enforceable.

REQUIRED HEALTH INFORMATION FROM THE EPA

HEALTH ISSUES

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. Environmental Protection Agency (EPA)/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the EPA's Safe Water Drinking Hotline at **800-426-4791**.

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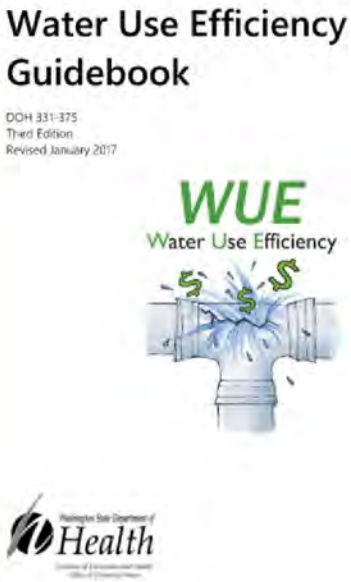
2024 WATER COMPREHENSIVE PLAN

Chapter 4 Water use Efficiency

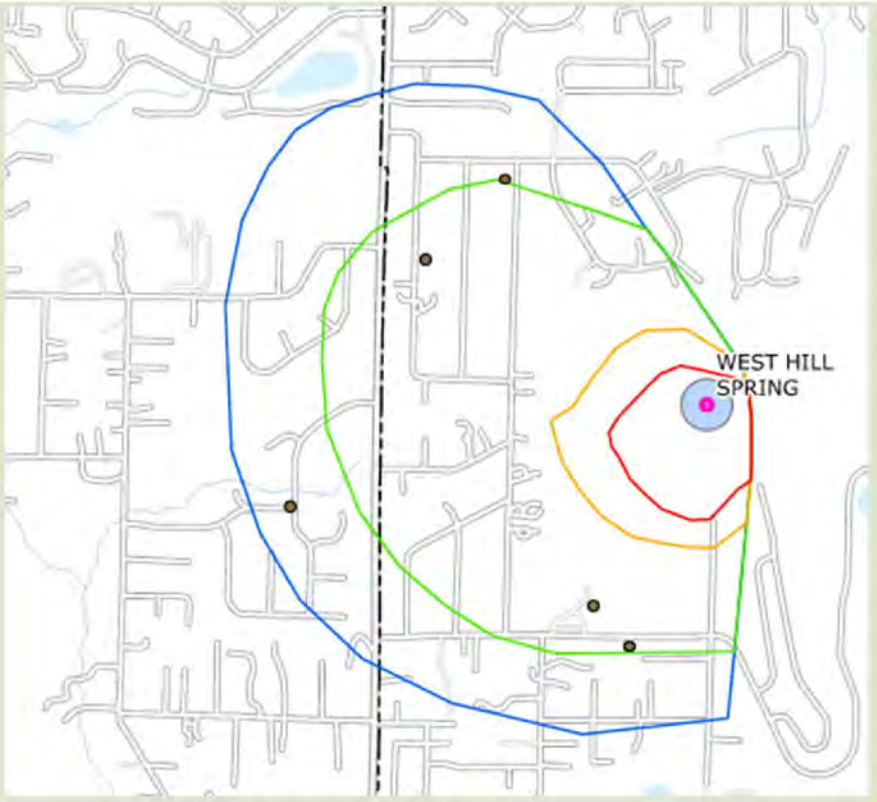
- Source and Service Metering
- Distribution System Leakage
- Water Use Efficiency Program
- Water Use Efficiency Savings
- Climate Change Resiliency



2024 WATER COMPREHENSIVE PLAN

Chapter 5 Source Water Protection

- **Sanitary Control Area**
- **Wellhead Protection Program**



2024 WATER COMPREHENSIVE PLAN

Chapter 6 Operation and Maintenance Program

- Water System Management and Personnel
- Operations and Preventive Maintenance
- Comprehensive Water Quality Monitoring
- Emergency Preparedness and Response
- Safety Procedures

2024 WATER COMPREHENSIVE PLAN

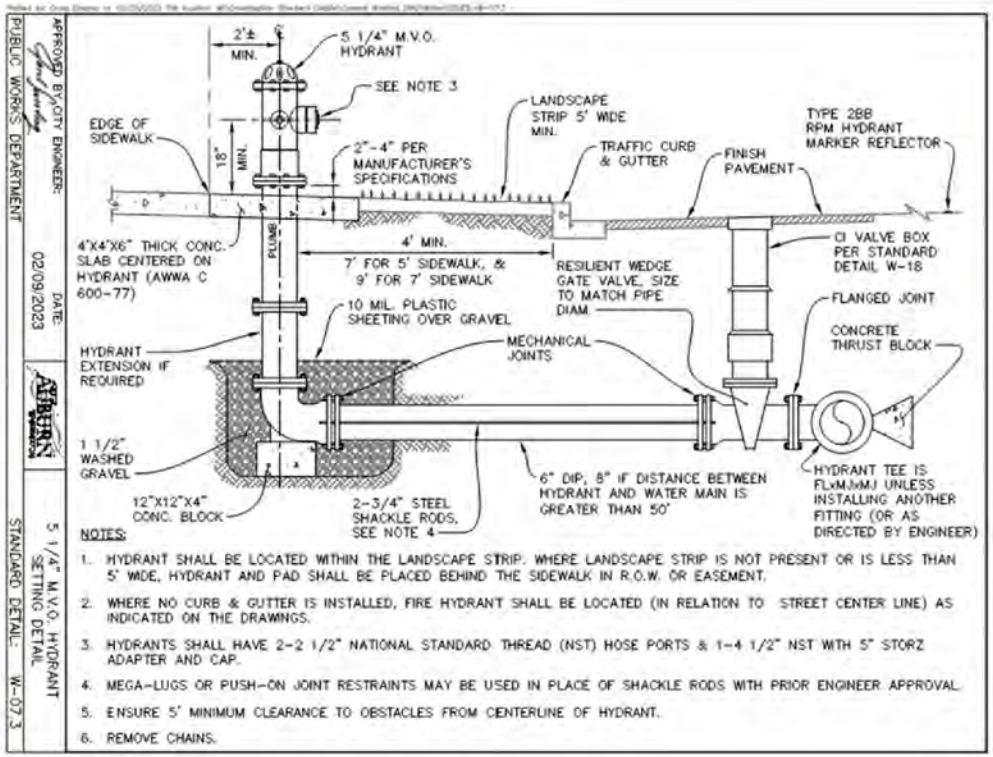
Chapter 6 Operation and Maintenance Program

- Cross Connection Control Program
- Sanitary Survey Findings
- Customer Complaint Response Program
- Recordkeeping and Reporting
- Summary of O&M Deficiencies and Recommended Improvements

2024 WATER COMPREHENSIVE PLAN

Chapter 7 Design and Construction Standards

- Project Review Procedures
- Policies and Requirements for Outside Parties
- Design and Construction Standards
- Construction Certification



2024 WATER COMPREHENSIVE PLAN

Chapter 8 Capital Improvements Plan

- **Prioritization**
- **Capital Improvement Program**
- **Capital Improvement Summary and Schedule**

2024 WATER COMPREHENSIVE PLAN

Type	Name	CIP or CFP ID	Total Project Cost	2024	2025	2026	2027
Active Projects (In Design or Construction)							
Distribution	104th Park Development (104th to 102nd Water Main Loop)	CP1619	$ 350,000	$ 350,000			
Distribution	104th Avenue SE PRV Replacement	CP2301	$ 390,475	$ 390,475			
Distribution	C St SW Preservation	CP2123	$ 1,802,075	$ 901,038	$ 901,038		
Distribution	Coal Creek Springs Transmission Main Replacement	CP1603	$ 4,450,422	$ 4,450,422			
Distribution	D St SE and 23rd Street SE Storm Improvements	CP2125	$ 2,285,677	$ 2,285,677			
Supply	Well 4 Facility Improvements	CP2021	$ 884,822	$ 884,822			
Supply	Well 4 Electrical Improvements	CP2403	$ 1,050,000	$ 200,000	$ 850,000		
Distribution	112th Pl SE Water Main Replacement	CP2410	$ 2,100,000	$ 255,000	$ 1,845,000		
Distribution	Auburn Way South - Hemlock St SE to Poplar St SE	CP1622	$ 2,398,000	$	$ 2,398,000		
Distribution	Garden Avenue Realignment	CP2022	$ 699,797	$ 699,797			
Distribution	M Street NE Widening	CP2210	$ 357,000	$ 37,000	$ -	$ 320,000	
Distribution	R Street SE Widening	CP2116	$ 1,762,488	$	$ 100,000	$ 1,662,488	
Distribution	R St SE and 21st St SE Roundabout	CP2308	$ 544,897	$ 61,897	$ 483,000		
Distribution	R St SE Preservation - 33rd St SE to 37th St SE	CP2315	$ 301,850	$ 301,850			
Distribution	Lea Hill Road/104th Ave SE Roundabout	CP2319	$ 850,000	$ 100,000		$ 150,000	$ 600,000
Storage	Reservoirs 4 and 8 Seismic Rehabilitation	CP2219	$ 1,733,871	$ 1,433,871			
Distribution	12th St SE and Auburn Way South Water R&R	CP2404	$ 636,000	$ 318,000	$ 318,000		
Distribution	2025 Local Street Preservation	CP2412	$ 725,000	$ 65,000	$ 660,000		
Distribution	2026 Local Street Preservation	CPXXXX	$ 1,073,000	$ 50,000	$ 150,000	$ 873,000	
Supply	Coal Creek Springs Flowmeter Replacement	CP2329	$ 375,017	$ 375,017			
Storage	Reservoir 2 Valves	CP2413	$ 2,268,750	$ 68,750	$ 2,200,000		

2024 WATER COMPREHENSIVE PLAN

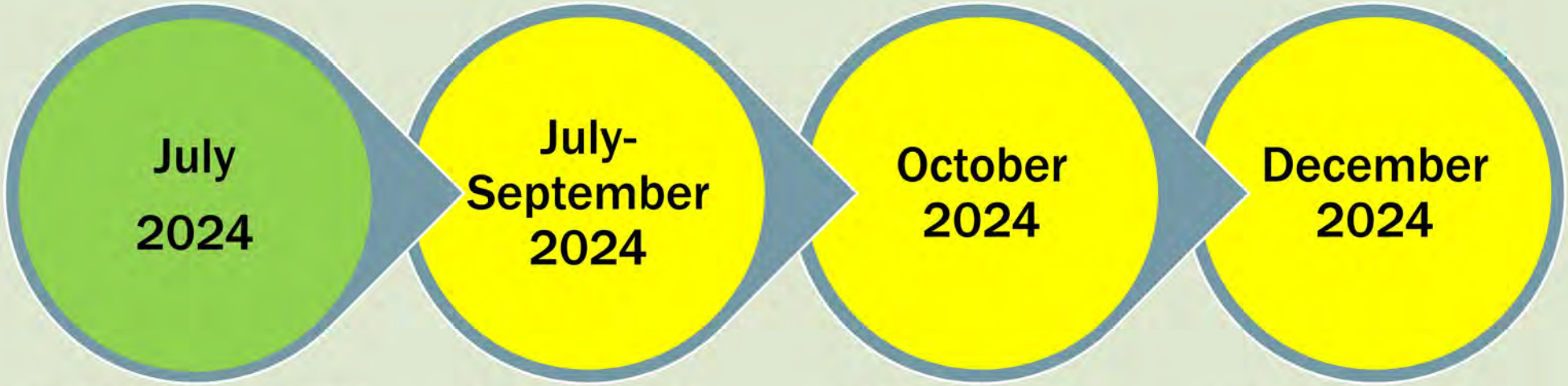
Type	Name	CIP or CFP ID	Total Project Cost	2024	2025	2026	2027	2028	2029	2030
Supply										
Supply	Coal Creek Springs Rehabilitation	S-08	$ 5,412,614	$ 75,614			$ 500,000	$ 1,000,000	$ 2,000,000	$ 1,837,000
Supply	On-Site Chlorine Generation Systems (OSEC) at Wells 1 and 4	S-05	$ 275,000			$ 100,000	$ 175,000			
Supply	Fulmer CCTF Replace On-Site Chlorine Generation System (OSEC)	S-06	$ 500,000			$ 150,000	$ 350,000			
Supply	Well 5/5A Upgrades	S-07	$ 2,715,000			$ 950,000	$ 265,000	$ 1,500,000		
Storage										
Storage	Reservoir Repair and Replacements	R-01	$ 1,392,000	$ 192,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000
Storage	Reservoir Painting (10-year Cycle)	R-02	$ 3,500,000		$ 250,000	$ 1,500,000				
Storage	Academy PRV Project	R-03	$ 470,000				$ 470,000			
Storage	Reservoir Capital Improvements	R-04	$ 470,000				$ 470,000			
Pump										
Pump Station	Intertie Booster Pump Station Improvements	PS-01	$ 2,325,000	$ 75,000	$ 250,000	$ 2,000,000				
Pump Station	Lea Hill Pump Station Replacement	PS-02	$ 6,365,000				$ 765,000	$ 3,000,000	$ 2,600,000	
Distribution										
Distribution	Annual Distribution System Improvements Program	D-01	$ 59,699,000		$ 400,000	$ 2,500,000	$ 2,500,000	$ 2,500,000	$ 2,500,000	$ 2,500,000
Distribution	Street Utility Improvements	D-02	$ 24,618,000		$ 601,000	$ 617,000	$ 1,300,000	$ 1,300,000	$ 1,300,000	$ 1,300,000
Distribution	Water Repair & Replacements	D-03	$ 11,950,000		$ 150,000	$ 450,000	$ 600,000	$ 600,000	$ 600,000	$ 600,000
Distribution	Water Trench Patches Program	D-04	$ 3,360,000	$ 160,000	$ 160,000	$ 160,000	$ 160,000	$ 160,000	$ 160,000	$ 160,000
Distribution	West Hill Springs Transmission Main Replacement	D-05	$ 1,401,000	$ 50,000		$ 200,000	$ 1,151,000			
Distribution	Lea Hill 648 Zoning Adjustment	D-06	$ 104,000				$ 104,000			

2024 WATER COMPREHENSIVE PLAN

Chapter 9 Financial Analysis

- Costs of Service
- Capital Improvement Funding Plan
- Maintaining Reserves
- Rate Evaluation

NEXT STEPS



- Planning Commission
- SEPA and Agency Reviews
- Draft Plan Discussion with Council
- Resolution for Adoption

2024 WATER COMPREHENSIVE PLAN

Any Questions?

Planning Commission
Regular Meeting
December 3, 2024 - 6:30 PM
City Hall Council Chambers

AGENDA

PUBLIC PARTICIPATION

A. Public Participation Information

The City of Auburn Planning Commission Meeting scheduled for Tuesday, December 3, 2024, at 6:30 p.m., will be held in-person and virtually. To attend the meeting virtually, please follow the webinar instructions below:

Join from a PC, Mac, iPad, iPhone or Android device
Please click this URL to join. https://us06web.zoom.us/j/84764578149
Or One tap mobile:
+12532158782,,84764578149# US (Tacoma)
+12532050468,,84764578149# US
Or join by phone:
Dial(for higher quality, dial a number based on your current location):
US: +1 253 215 8782 or +1 253 205 0468 or +1 720 707 2699 or +1 346 248 7799 or +1 669 444 9171 or +1 719 359 4580 or +1 309 205 3325 or +1 312 626 6799 or +1 360 209 5623 or +1 386 347 5053 or +1 507 473 4847 or +1 564 217 2000 or +1 646 558 8656 or +1 646 931 3860 or +1 689 278 1000 or +1 301 715 8592 or +1 305 224 1968 or 888 475 4499 (Toll Free) or 877 853 5257 (Toll Free)
Webinar ID: 847 6457 8149
International numbers available: https://us06web.zoom.us/u/ku8bw5pXS

CALL TO ORDER

ROLL CALL

PLEDGE OF ALLEGIANCE

AGENDA MODIFICATIONS

AUDIENCE PARTICIPATION

A. Comment from the audience on any proposal for action by the Commission. If the comment is related to an action subsequently listed here as a public hearing, the comment should be provided at the time of the public hearing.

The public can participate in-person or submit written comments in advance.

Participants can submit written comments via mail, fax, or email. All written comments must be received prior to 5:00 p.m. on the day before the scheduled meeting and must be 350 words or less.

Please mail written comments to:
City of Auburn
Attn: Tammy Gallier, Administrative Specialist
25 W Main St
Auburn, WA 98001

Please fax written comments to:
Attn: Tammy Gallier, Administrative Specialist
Fax number: 253-804-3114

Email written comments to: tgallier@auburnwa.gov

If an individual requires accommodation to allow for remote oral comment because of a difficulty attending a meeting of the governing body, the City requests notice of the need for accommodation by 5:00 p.m. on the day before the scheduled meeting. Participants can request accommodation to be able to provide a remote oral comment by contacting the Community Development Department in person, by phone (253) 931-3090 or by email (tgallier@auburnwa.gov).

APPROVAL OF MINUTES

A. October 8, 2024 Draft Minutes from the Regular Planning Commission Meeting

B. October 23, 2024 Draft Minutes from the Special Planning Commission Meeting

INTRODUCTION

A. 2024 Comprehensive Plan - Planning Commission (Teague)
Brief overview of tonight's agenda items.

PUBLIC HEARING

A. Water Plan (Vondrak)
Planning Commission deliberation and action on the proposed changes to the Capital Facilities Element

OTHER BUSINESS

A. Capital Facilities Element (Tatro)
Planning Commission deliberation and action on the proposed changes to the Capital Facilities Element

B. Utilities Element (Tatro)
Planning Commission deliberation and action on the proposed changes to the Utilities Element

C. Land Use and Housing Element (Tatro)
Planning Commission deliberation and action on the proposed changes to the Housing and Land Use Element

D. 2024 Period Comprehensive Plan Update Package 2 (Teague)
Planning Commission deliberation and action on the elements contained in package 2: Transportation Plan, Sewer Plan, Stormwater Plan, Water System Plan, PROS Plan, Parks Element, Capital Facilities Element, Utilities Element, Transportation Element

COMMUNITY DEVELOPMENT REPORT

ADJOURNMENT

The City of Auburn Planning Commission is a seven member advisory body that provides recommendations to the Auburn City Council on the preparation of and amendments to land use plans and related codes such as zoning. Planning Commissioners are appointed by the Mayor and confirmed by the City Council.

Actions taken by the Planning Commission, other than approvals or amendments to the Planning Commission Rules of Procedure, are not final decisions; they are in the form of recommendations to the City Council which must ultimately make the final decision.

City Council
Study Session
December 9, 2024 - 5:30 PM
City Hall Council Chambers

MINUTES

CALL TO ORDER

Acting Deputy Mayor Yolanda Trout-Manuel called the meeting to order at 5:30 p.m. in the Council Chambers of Auburn City Hall, 25 West Main Street.

PUBLIC PARTICIPATION

The Study Session Meeting was held in person and virutally.

ROLL CALL

Councilmembers present: Hanan Amer, Kate Baldwin, Cheryl Rakes, Clinton Taylor, Tracy Taylor, and Yolonda Trout-Manuel. Deputy Mayor Larry Brown was excused.

Mayor Nancy Backus and the following staff members present included: Assistant Chief of Police Samuel Betz, Deputy City Attorney Paul Byrne, Director of Human Resources and Risk Management Candis Martinson, Director of Finance Jamie Thomas, Director of Public Works Ingrid Gaub, Director of Community Development Jason Krum, Water Utility Engineer Senait Gebreeyesus, Planning Services Manager Alexandria Teague, Senior Planner Alyssa Tatro, and City Clerk Shawn Campbell.

AGENDA MODIFICATIONS

There were no modifications to the agenda.

ANNOUNCEMENTS, REPORTS, AND PRESENTATIONS

There were no announcements, reports, or presentations.

MUNICIPAL SERVICES DISCUSSION ITEMS

A. Municipal Court Study (Martinson) (30 Minutes)
Phase II Presentation by National Center for State Courts

Councilmember Rakes Chaired this portion of the meeting.

Director Martinson, Deputy Managing Director John Doerner and Abby Kuschel with National Center for State Courts provided Council with a presentation on the Phase II Municipal Court Study including the project overview, the King County District Court Interlocal Agreement, the Study Methodology for Phase 1 and Phase 2 of the Study, the initial reviews and analysis reviewed, the Comparison Cost Analysis for both Phase 1 and Phase 2, costs paid to King County for District Court Services, case filing overview and summary, court staffing, annual expenditure overview, estimated cost overview, and the pros and cons of establishing a City operated Municipal Court.

Director Martinson explained the scope of Phase 2 of the Study, and options for additional data.

Judge Robertson explained how Judges are assigned to the City of Auburn, improvements in relations between the City and the County, King Counties Priority Case Management System, and the Studies pros and cons list.

Council discussed the changes between King County Court and the City of Auburn, annual expenditure overview, accomplishments between King County and the City, requests for pros and cons for staying with King County District Court, impact on the community, cases on each calendar, and anticipated organizational changes.

AGENDA ITEMS FOR COUNCIL DISCUSSION

A. 3rd Quarter 2024 Financial Report (Thomas) (20 Minutes)

Mayor Backus informed the Council that anyone who wishes to make a statement prior to the Deputy Mayor election they will be be given that opportunity at the beginning of the meeting.

Director Thomas provided Council with an overview of the 2024 3rd Quarter Financial Report including the General Fund Revenue Overview, tax revenue, Licenses and Permits revenue, Intergovernmental revenues, Charges for Services, fines, penalties, interest and investment earnings, the General Fund expenditures, American Rescue Plan Act (ARPA) update, and the Non-General Fund highlights.

Council discussed the Real Estate Excise Tax (REET) revenue, and businesses out of compliance.

B. Comprehensive Water Plan (Gaub) (45 Minutes)

Engineer Gebreeyesus provided the Council with an overview and update of the 2024 Comprehensive Water Plan including an overview of the 2024 Water Plan, and development progress and milestones. She provided an overview of the Water Utility in the City of Auburn, the key Elements in the 2024 Water

Comprehensive Plan, and the Chapters within the Plan. She reviewed the key takeaways of the Plan, and the next steps for adoption.

Council discussed the languages the Plan is available in, language to cover wholesale customers, engagement with property owners, and volume of water in current and future resources.

C. Ordinance No. 6960 (Krum) (20 Minutes)
An Ordinance adopting the 2024 Periodic Comprehensive Plan

Manager Teague and Planner Tatro provided Council with a 2024 Comprehensive Plan Update including a list of the 2024 Periodic comprehensive Plan elements. They reviewed the Capital Facilities Element, Utilities Element, Parks Element, Transportation Element, Systems Plans, the Appendices and supporting documents within the Plan, Comprehensive Use and Zoning Maps, and the remaining process to complete the 2024 Comprehensive Plan.

Council thanked staff and the Planning Commission for their work on the 2024 Periodic Comprehensive Plan.

ADJOURNMENT

There being no further business to come before the Council, the meeting was adjourned at 7:55 p.m.

APPROVED this 16th day of December 2024.

Nancy Backus

FOLARRY BROWN, DEPUTY MAYOR

Shawn Campbell

Shawn Campbell, City Clerk

CITY OF AUBURN WASHINGTON

AGENDA BILL APPROVAL FORM

Agenda Subject:
Comprehensive Water Plan (Gaub) (45 Minutes)

Meeting Date:
December 9, 2024

Department:
Public Works

Attachments:
Presentation, AMENDED 2024 Comprehensive Water Plan, AMENDED 2024 Comprehensive Water Plan Appendices

Budget Impact:

Administrative Recommendation:
For discussion only.

Background for Motion:

Background Summary:
The Water Utility has completed an update to the City's Comprehensive Water Plan (CWP), a State-mandated update required by the Washington State Department of Health (DOH) to ensure compliance with water system regulations and planning standards. The CWP was previously updated and adopted in 2015 and provides a roadmap for the City's water utility operations, maintenance, and future infrastructure investments.

The Plan incorporates updated system data, population and employment projections, and a future water demand analysis over 10- and 20-year planning horizons. It also identifies key capital improvement projects to address system deficiencies, enhance water quality, and improve service reliability. These include storage tank rehabilitation, well capacity upgrades, and water main replacements.

In addition, the CWP emphasizes water use efficiency, climate resilience, and source water protection while integrating with the City's update to the City Comprehensive Plan to support citywide growth and development goals.

Council was first introduced to elements of the CWP at the April 10, 2023, Study Session in conjunction with a general overview of the City Comprehensive Plan Update. The draft policies contained within the CWP were then discussed with Council at the Study Session held on July 10, 2023, and a general overview of the CWP contents was discussed with Council at the Study Session held on April 1, 2024.

Staff also presented the CWP to the Planning Commission on July 2, 2024. Following public comments on the CWP, staff then presented certain updates made to the CWP to the Planning

Commission on December 3, 2024, which also served as the Public Hearing for the CWP. On December 3, 2024, the Planning Commission also recommended forwarding the Plan to the City Council for approval.

The next phase involves final adoption of the Plan by the City Council, scheduled for December 16, 2024. Following adoption, the Plan will be submitted to regulatory agencies, including DOH, King County, and Pierce County, for final approval.

The purpose of this discussion is to present the City Council with an overview of the CWP prior to the anticipated adoption of the Plan in conjunction with adoption of the 2024 City Comprehensive Plan.

Councilmember: Tracy Taylor **Staff:** Ingrid Gaub

ENGINEERING SERVICES

2024 COMPREHENSIVE WATER PLAN OVERVIEW AND UPDATE

SENAIT GEBREEYESUS
WATER UTILITY ENGINEER

CITY COUNCIL STUDY SESSION
DECEMBER 9, 2024

Public Works Department
Engineering Services • Airport Services • Maintenance & Operations Services

AUBURN VALUES

SERVICE
ENVIRONMENT
ECONOMY
CHARACTER
SUSTAINABILITY
WELLNESS
CELEBRATION

2024 COMPREHENSIVE WATER PLAN OVERVIEW AND UPDATE

- **Auburn Comprehensive Plan Elements**
  - Core Plan (Community Development)
  - Land Use Element (Community Development)
  - Housing Element (Community Development)
  - Historic Preservation (Community Development)
  - Climate Change – NEW (Community Development)
  - Economic Development (Community Development)
  - Capital Facilities Element (Public Works)
  - Transportation Element (Public Works)
  - **Utilities Element (Public Works)**
  - Parks and Recreation (Parks)

Citywide effort involving all departments coordinating together to create a cohesive, consistent, and forward-thinking Plan covering range of subject areas

PLAN DEVELOPMENT PROGRESS/MILESTONES

2024 WATER UTILITY INTRODUCTION

4 Water Service Areas

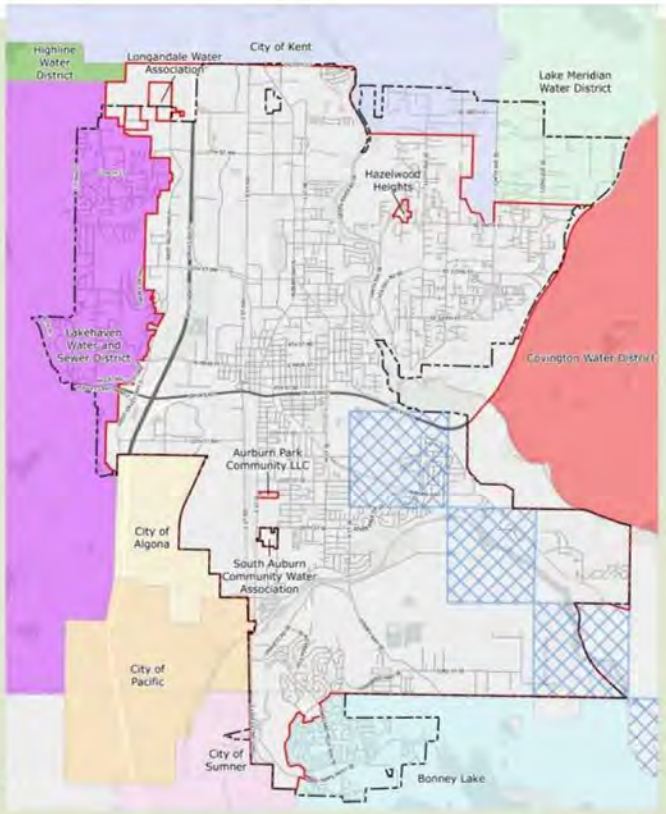
Academy, Lakeland Hills, Lea Hill & Valley

Sources of Water

6 active Wells, 2 Springs & 2 Interties (Tacoma)

≈ 306 miles Water Main

Over 15,000 Service Connections



Service Area & Adjacent Purveyors

2024 WATER UTILITY INTRODUCTION

Fulmer Treatment Facility

Academy Pump Station

- **8 Pump Stations**
  - 2 Treatment Facilities
- **8 Reservoirs**
- **Operate 1 Satellite System**
- **Provide Wholesale Water to Algona**
- **Produce ≈ 2.5 billion gallons of water per year**

2024 WATER COMPREHENSIVE PLAN

Key Elements

- Format updated to follow Department of Health (DOH) Guidebook
- Planning & Infrastructure sizing per DOH Design Manual
- 10-yr and 20-yr Planning Periods

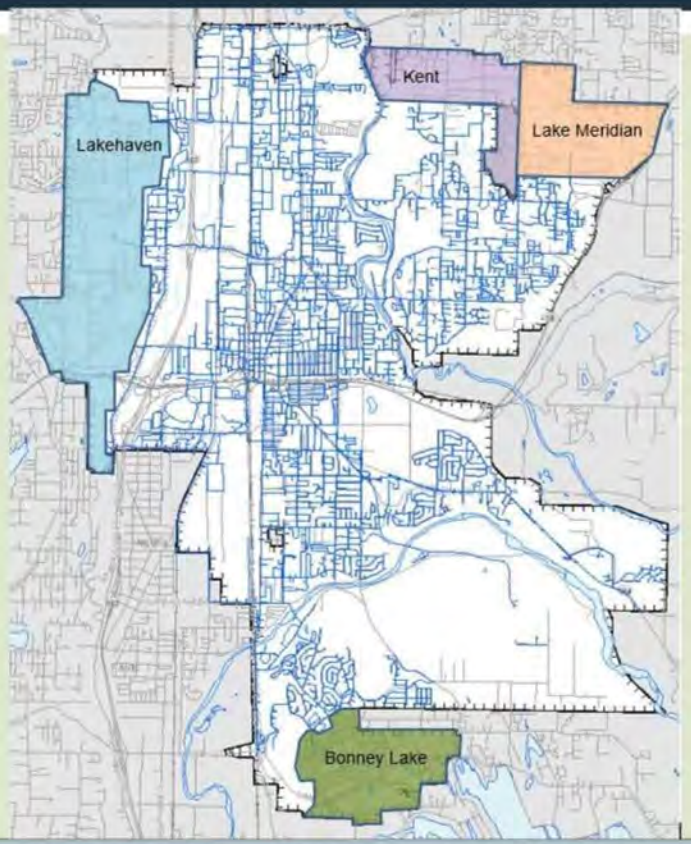
Water System Design Manual

Health

DOH Pub 331-123
Revised June 2020

CHAPTER 1: DESCRIPTION OF THE WATER SYSTEM

- Ownership & Management
- System History & Background
- Service Areas, Maps, & Land Uses
- System Policies
- Consistency



CHAPTER 1: DESCRIPTION OF THE WATER SYSTEM

Policies

- Business Practice
- Service Area
- Operations & Maintenance
- Financial
- Planning
- Environmental Stewardship
- Design & Construction

Goals

Broad statements indicating a general aim or purpose to be achieved.

Policies

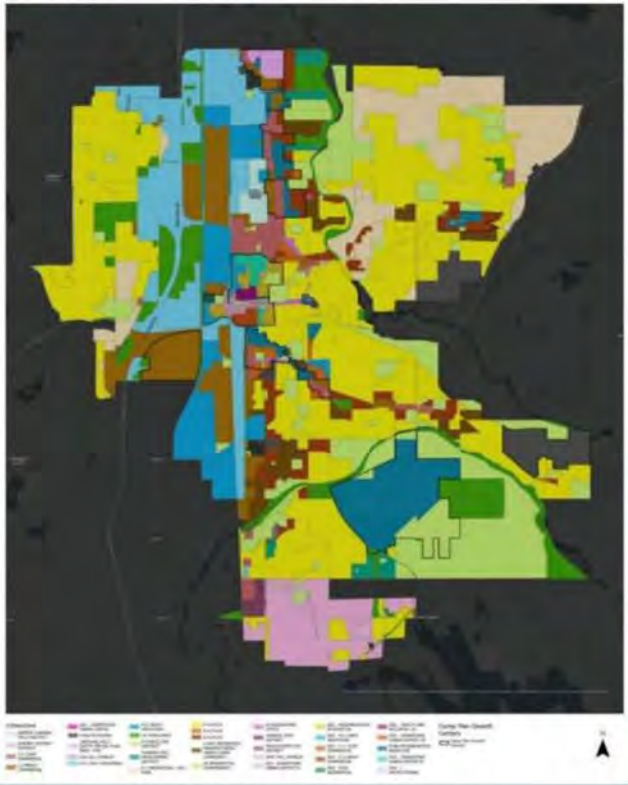
Topic-specific statement providing guidelines for current & future decision-making.

Indicates a clear commitment of the local legislative body.

CHAPTER 2: BASIC PLANNING DATA

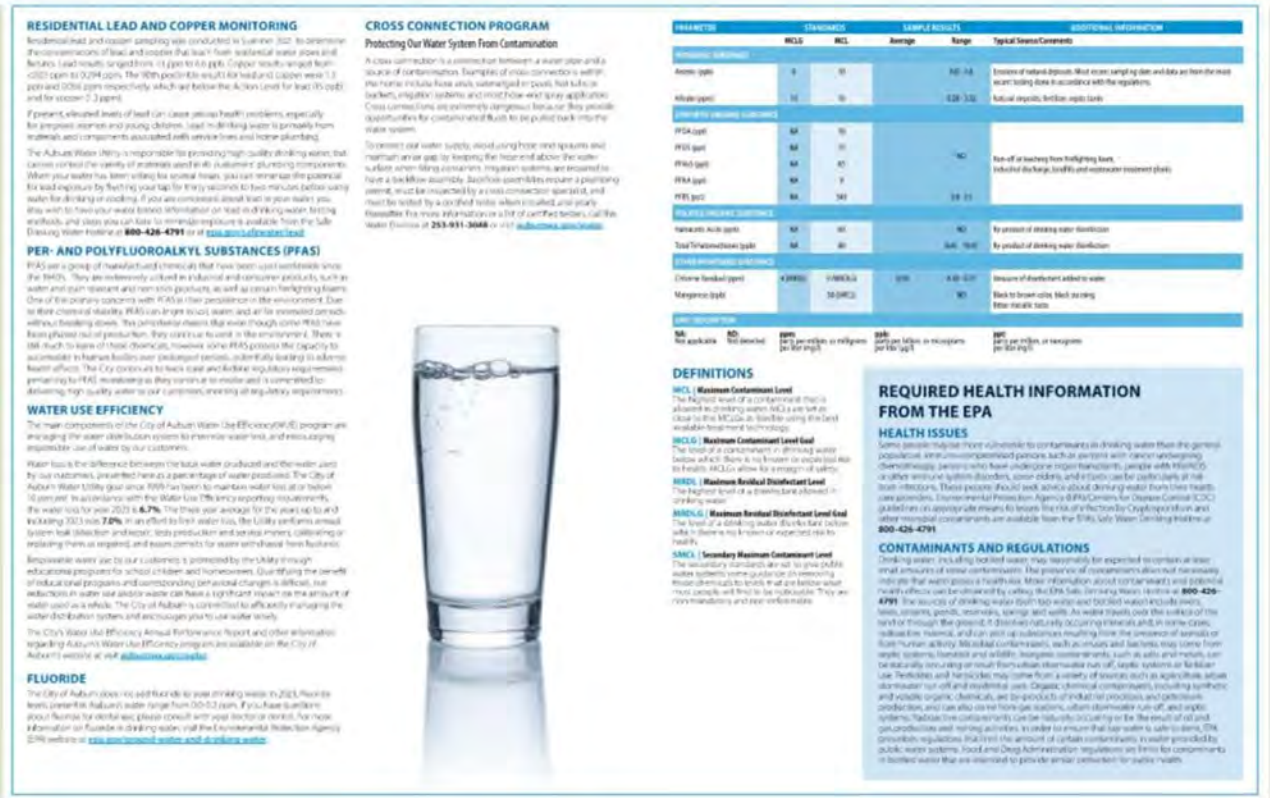
- Water Service Area Population
- Water Service Connections and Usage
- Water Supply and Production
- Distribution System Leakage
- Water Supply Characteristics
- Water Supply Reliability Evaluation
- Future Population Projections & Land Use
- Future Water Demand

Figure 2-5 | Comprehensive Future Land Use and Zoning Map



CHAPTER 3:
SYSTEM ANALYSIS & ASSET MANAGEMENT

- Asset Management – Inventory & Analysis
- Water Quality
- Design Standards
- Capacity Analysis
- Identify Deficiencies



RESIDENTIAL LEAD AND COPPER MONITORING

Residential lead and copper sampling was conducted in summer 2021 to determine the concentrations of lead and copper that leach from residential water pipes and fixtures. Lead results ranged from <1 ppb to 4.6 ppb. Copper results ranged from <0.01 ppm to 0.294 ppm. The 90th percentile results for lead and copper were 1.3 ppb and 0.066 ppm respectively, which are below the Action Level for lead (15 ppb) and for copper (1.3 ppm).

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing.

The Auburn Water Utility is responsible for providing high quality drinking water, but cannot control the variety of materials used in the customers' plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for thirty seconds to two minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at **800-426-4791** or at epa.gov/safewater/lead.

PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)

PFAS are a group of manufactured chemicals that have been used worldwide since the 1940's. They are extensively utilized in industrial and consumer products, such as water and stain resistant and non-stick products, as well as certain firefighting foams. One of the primary concerns with PFAS is their persistence in the environment. Due to their chemical stability, PFAS can linger in soil, water, and air for extended periods, without breaking down. This persistence means that even though some PFAS have been phased out of production, they continue to exist in the environment. There is still much to learn of these chemicals, however some PFAS possess the capacity to accumulate in human bodies over prolonged periods, potentially leading to adverse health effects. The City continues to track and define regulatory requirements pertaining to PFAS monitoring as they remain at or evolve and is committed to delivering high quality water to our customers, meeting all regulatory requirements.

WATER USE EFFICIENCY

The main components of the City of Auburn Water Use Efficiency (WUE) program are managing the water distribution system to minimize water loss, and encouraging responsible use of water by our customers.

Water loss is the difference between the total water produced and the water used by our customers, presented here as a percentage of water produced. The City of Auburn Water Utility goal since 1999 has been to maintain water loss at or below 10 percent. In accordance with the Water Use Efficiency reporting requirements, the water loss for year 2021 is **6.7%**. The three year average for the years up to and including 2021 was **7.0%**. In an effort to limit water loss, the Utility performs annual system leak detection and repair, tests production and service meters, calibrating or replacing them as required, and issues permits for water withdrawal from hydrants.

Responsible water use by our customers is promoted by the Utility through educational programs for school children and homeowners. Quantifying the benefit of educational programs and corresponding behavioral changes is difficult, but reductions in water use and/or waste can have a significant impact on the amount of water used as a whole. The City of Auburn is committed to efficiently managing the water distribution system and encourages you to use water wisely.

The City's Water Use Efficiency Annual Performance Report and other information regarding Auburn's Water Use Efficiency program are available on the City of Auburn's website at visit auburnwa.gov/water.

FLUORIDE

The City of Auburn does not add fluoride to your drinking water. In 2021, fluoride levels present in Auburn's water range from 0.0-0.3 ppm. If you have questions about fluoride for dental use, please consult with your doctor or dentist. For more information on fluoride in drinking water, visit the Environmental Protection Agency (EPA) website at epa.gov/ground-water-and-drinking-water.

CROSS CONNECTION PROGRAM

Protecting Our Water System From Contamination

A cross connection is a connection between a water plant and a source of contamination. Examples of cross connection is within the home include hose ends submerged in pools, hot tubs or buckets, irrigation systems and most hose-end spray applications. Cross connections are extremely dangerous because they provide opportunities for contaminated fluids to be pulled back into the water system.

To protect our water supply, avoid using hose-end sprayers and maintain an air gap by keeping the hose end above the water surface when filling containers. Irrigation systems are required to have a backflow assembly. Backflow assemblies ensure a plumbing permit, must be inspected by a cross connection specialist, and must be tested by a certified tester when installed and yearly thereafter. For more information or a list of certified testers, call the Water Division at **253-931-3048** or visit auburnwa.gov/water.

PARAMETER	STANDARDS MCLG	STANDARDS MCL	SAMPLE RESULTS Average	SAMPLE RESULTS Range	ADDITIONAL INFORMATION Typical Source/Comments
INORGANIC SUBSTANCES					
Arsenic (ppb)	0	10		ND-1.6	Erosion of natural deposits. Most recent sampling date and data are from the most recent testing done in accordance with the regulations.
Nitrate (ppm)	10	10		0.28-3.32	Natural deposits, fertilizer, septic tanks
UNREGULATED ORGANIC SUBSTANCES					
PFOA (ppt)	0#	70			
PFOS (ppt)	0#	70			
PFHxS (ppt)	0#	47		ND	Run-off or leaching from firefighting foam; industrial discharge, landfills and wastewater treatment plants
PFNA (ppt)	0#	9			
PFBS (ppt)	0#	345		3.8-3.5	
REGULATED ORGANIC SUBSTANCE					
Haloacetic Acids (ppb)	0#	60		ND	By-product of drinking water disinfection
Total Trihalomethanes (ppb)	0#	80		0.45-19.60	By-product of drinking water disinfection
DISINFECTANTS AND OTHERS					
Chlorine Residual (ppm)	4 (MRDL)	4 (MRDL)	0.99	0.30-0.97	Measure of disinfectant added to water
Manganese (ppb)		50 (SMCL)		ND	Black to brown color, black staining; Other metallic taste
UNIT DESCRIPTION					

NA: Not applicable **ND:** Not detected **ppm:** parts per million, or milligrams per liter (mg/l) **ppb:** parts per billion, or micrograms per liter (µg/l) **ppt:** parts per trillion, or nanograms per liter (ng/l)

DEFINITIONS

MCL | Maximum Contaminant Level
The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG | Maximum Contaminant Level Goal
The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MRDL | Maximum Residual Disinfectant Level
The highest level of a drinking bank allowed in drinking water.

MRDLG | Maximum Residual Disinfectant Level Goal
The level of a drinking water disinfectant below which there is no known or expected risk to health.

SMCL | Secondary Maximum Contaminant Level
The secondary standards are set to give public water systems some guidance on removing those chemicals to levels that are below what most people will find to be noticeable. They are non-mandatory and non-enforceable.

REQUIRED HEALTH INFORMATION FROM THE EPA

HEALTH ISSUES

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. Environmental Protection Agency (EPA)/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the EPA's Safe Water Drinking Hotline at **800-426-4791**.

CONTAMINANTS AND REGULATIONS

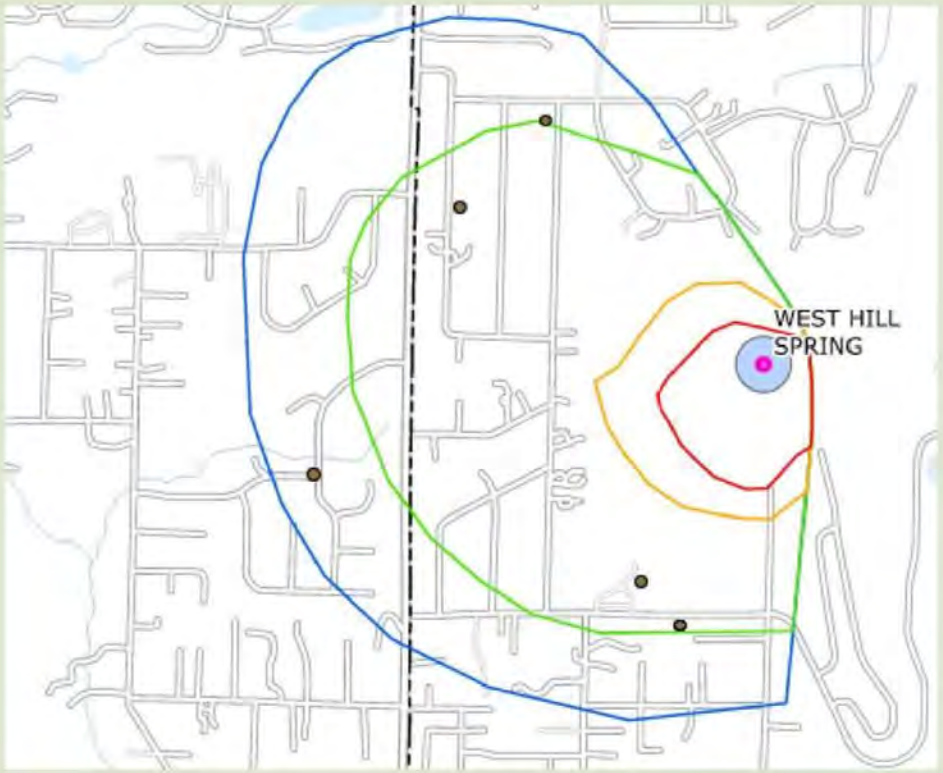
Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA Safe Drinking Water Hotline at **800-426-4791**. The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Microbial contaminants, such as viruses and bacteria, may come from septic systems, livestock and wildlife. Inorganic contaminants, such as salts and metals, can be naturally occurring or result from urban stormwater run-off, septic systems or fertilizer use. Pesticides and herbicides may come from a variety of sources such as agriculture, urban stormwater run-off and residential uses. Organic chemical contaminants, including synthetic and volatile organic chemicals, are by-products of industrial processes and petroleum production, and can also arise from gas stations, urban stormwater run-off, and septic systems. Radioactive contaminants can be naturally occurring or be the result of oil and gas production and mining activities. In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations set limits for contaminants in bottled water that are intended to provide similar protection for public health.

CHAPTER 4: WATER USE EFFICIENCY

- Source and Service Metering
- Distribution System Leakage
- Water Use Efficiency Program
- Water Use Efficiency Savings
- Climate Change Resiliency

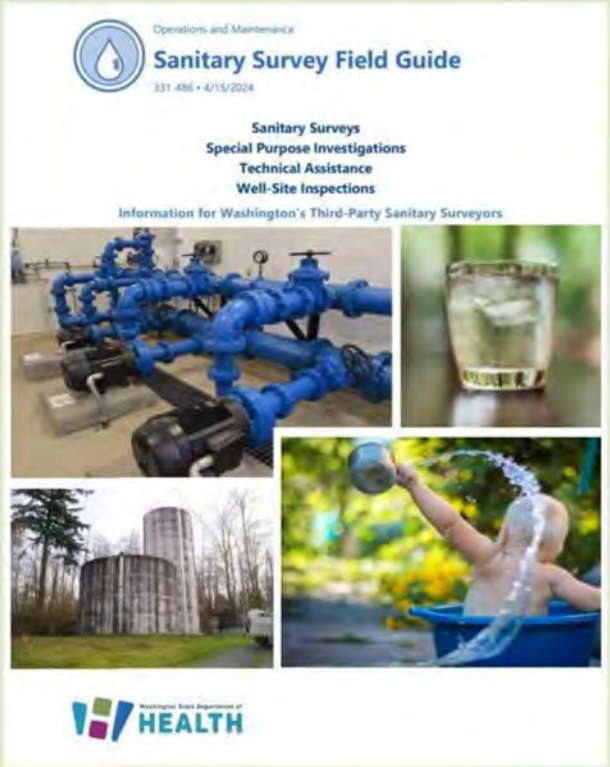
CHAPTER 5: SOURCE WATER PROTECTION

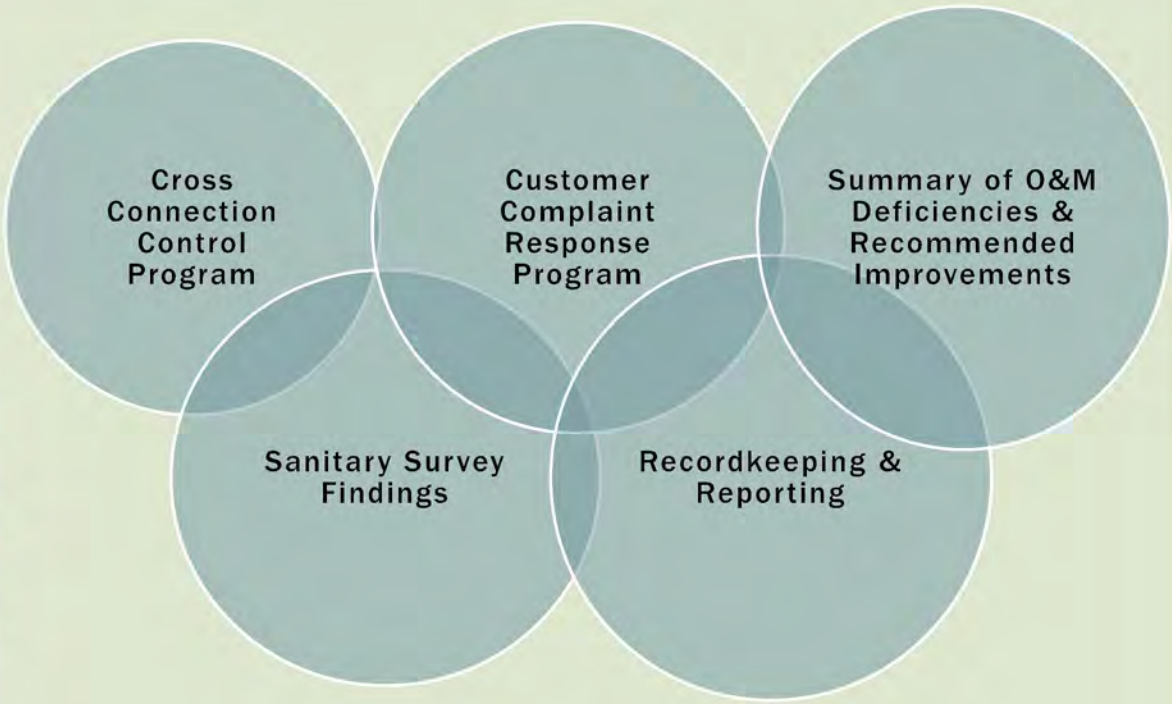
- Sanitary Control Area
- Wellhead Protection Program



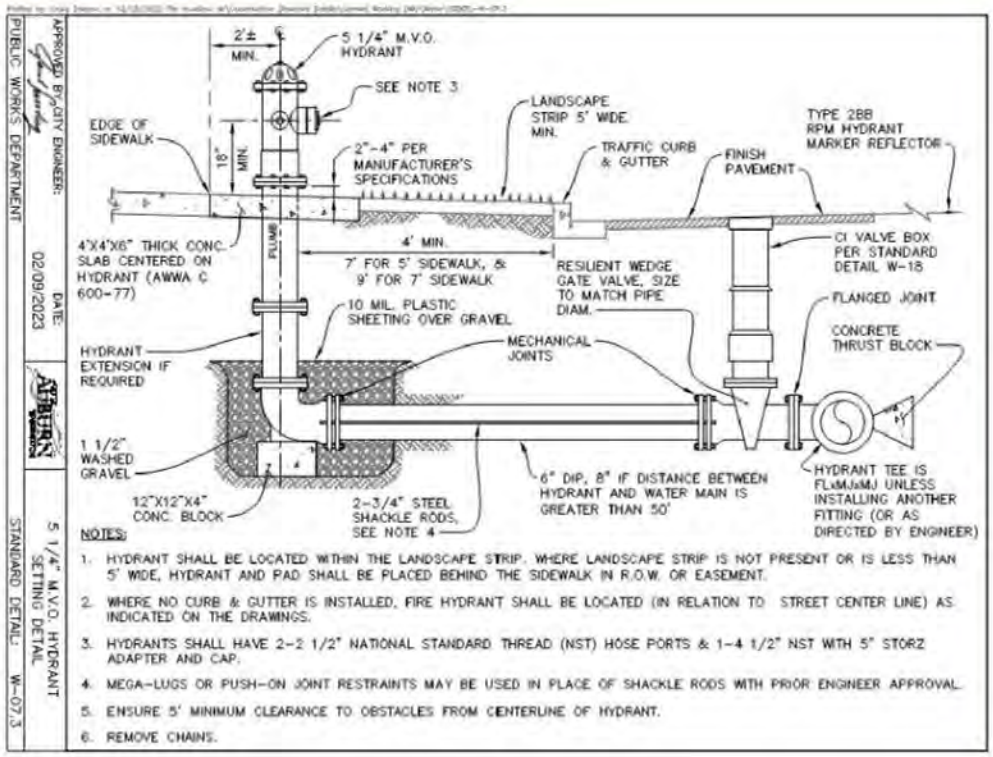
CHAPTER 6: OPERATION & MAINTENANCE PROGRAM

CHAPTER 6: OPERATION & MAINTENANCE PROGRAM





CHAPTER 7: DESIGN & CONSTRUCTION STANDARDS



- Project Review Procedures
- Policies and Requirements for Outside Parties
- Design and Construction Standards
- Construction Certification

CHAPTER 8: CAPITAL IMPROVEMENTS PLAN

Prioritization

Capital Improvement Program

Capital Improvement Summary and Schedule

Table 8-9 | Total CIP Cost by Project Category from 2024 through 2044

Category	Total CIP Cost Summary 2024 – 2044 (2024 USD)
Supply	$60,416,013
Storage	$21,579,621
Pump Stations	$9,230,000
Distribution	$121,858,681
General	$1,750,000
TOTAL	**$214,834,315**

CHAPTER 9: FINANCIAL ANALYSIS

- Costs of Service
- Capital Improvement Funding Plan
- Maintaining Reserves
- Rate Evaluation

NEXT STEPS

Council Adoption
Dec. 16, 2024
Submittal to DOH, King County & Pierce County
Final Approval

COAL CREEK SPRINGS TRANSMISSION MAIN REPLACEMENT

2024 WATER COMPREHENSIVE PLAN

City Council
Regular Meeting
December 16, 2024 - 7:00 PM
City Hall Council Chambers

AGENDA

CALL TO ORDER

LAND ACKNOWLEDGEMENT

We would like to acknowledge the Federally Recognized Muckleshoot Indian Tribe, the ancestral keepers of the land we are gathered on today. We thank them for their immense contributions to our state and local history, culture, economy, and identity as Washingtonians.

PUBLIC PARTICIPATION

A. The Auburn City Council Meeting scheduled for Monday, December 16, 2024, at 7:00 p.m. will be held in person and virtually.

Virtual Participation Link:
To view the meeting virtually please click the below link, or call into the meeting at the phone number listed below. The link to the Virtual Meeting is:
https://www.youtube.com/user/watchauburn/live/?nomobile=1

To listen to the meeting by phone or Zoom, please call the number below or click the link:

Telephone: 253 205 0468
Toll Free: 888 475 4499
Zoom: https://us06web.zoom.us/j/89411960852

PLEDGE OF ALLEGIANCE

ROLL CALL

ANNOUNCEMENTS, MAYOR'S PROCLAMATIONS, AND PRESENTATIONS

A. National Foundation of Women Legislators Woman of Excellence Award Presentation

AGENDA MODIFICATIONS

AUDIENCE PARTICIPATION

This is the place on the agenda where the public is invited to speak to the City Council on any issue.

A. The public can participate in-person or submit written comments in advance.

Participants can submit written comments via mail, fax, or email. All written comments

must be received prior to 5:00 p.m. on the day of the scheduled meeting and must be 350 words or less.
Please mail written comments to:
City of Auburn
Attn: Shawn Campbell, City Clerk
25 W Main St
Auburn, WA 98001

Please fax written comments to:
Attn: Shawn Campbell, City Clerk
Fax number: 253-804-3116

Email written comments to: publiccomment@auburnwa.gov

If an individual requires accommodation to allow for remote oral comment because of a difficulty attending a meeting of the governing body, the City requests notice of the need for accommodation by 5:00 p.m. on the day of the scheduled meeting. Participants can request accommodation to be able to provide a remote oral comment by contacting the City Clerk's Office in person, by phone (253) 931-3039, or by email (publiccomment@auburnwa.gov).

CORRESPONDENCE

CONSENT AGENDA

All matters listed on the Consent Agenda are considered by the City Council to be routine and will be enacted by one motion in the form listed.

A. Minutes of the December 2, 2024, Special City Council Meeting

B. Minutes of the November 25, 2024, and December 9, 2024, Study Session Meetings

C. Claims Vouchers (Thomas)
Claims voucher list dated December 11, 2024, which includes voucher numbers 478306 through voucher 478435, in the amount of $5,306,112.88, nine electronic fund transfers in the amount of $1,981.22 and nine wire transfers in the amount of $791,627.00

D. Payroll Voucher (Thomas)
Payroll check numbers 539627 through 539629 in the amount of $81,214.00, electronic deposit transmissions in the amount of $2,913,016.94, for a grand total of $2,994,230.94 for the period covering November 28, 2024, to December 11, 2024

E. Setting the date for the Public Hearing for City of Kent Franchise Agreement (Gaub)
City Council to set the date of the Public Hearing for Franchise Agreement No. FRN24-0003 for City of Kent

(RECOMMENDED ACTION: Move to approve the Consent Agenda.)

UNFINISHED BUSINESS

ORDINANCES

A. Ordinance No. 6959 (Krum)
An Ordinance relating to the Subdivision Code, Zoning Code, and the Comprehensive Plan, amending Chapters 14.22, 17.01, 17.04, 17.12, 17.14, 18.02, 18.04, 18.07, 18.09, 18.21, 18.23, 18.25, 18.29, 18.31, 18.32, 18.35, 18.49, 18.50, 18.52, 18.55, 18.56, 18.57, and creating new Chapter 17.27 of the Auburn City Code

(RECOMMENDED ACTION: Move to approve Ordinance No. 6959.)

B. Ordinance No. 6960 (Krum)
An Ordinance relating to completion of the 2024 Periodic Comprehensive Plan Update requirements under the Washington State Growth Management Act and adoption of the updated Elements, Appendices, Plans incorporated by reference, Land Use Map, and Zoning Map

(RECOMMENDED ACTION: Move to approve Ordinance No. 6960.)

RESOLUTIONS

A. Resolution No. 5801 (Gaub)
A Resolution authorizing the Mayor to execute and administer an agreement accepting Grants from the Washington State Transportation Improvement Board for the Auburn Way South Widening and Regional Growth Center Improvement Projects

(RECOMMENDED ACTION: Move to adopt Resolution No. 5801.)

NEW BUSINESS

A. Selection of Deputy Mayor (Council)

MAYOR AND COUNCILMEMBER REPORTS

At this time the Mayor and City Council may report on significant items associated with their appointed positions on federal, state, regional and local organizations.

A. From the Council

B. From the Mayor

ADJOURNMENT

Agendas and minutes are available to the public at the City Clerk's Office and on the City website (http://www.auburnwa.gov).

City Council
Study Session
Finance & Internal Services SFA
July 14, 2025 - 5:30 PM
City Hall Council Chambers

AGENDA

CALL TO ORDER

PUBLIC PARTICIPATION

A. The Auburn City Council Study Session Meeting scheduled for Monday, July 14, 2025 at 5:30 p.m. will be held in person and virtually.

Virtual Participation Link:
To view the meeting virtually please click the below link, or call into the meeting at the phone number listed below. The link to the Virtual Meeting is:
https://www.youtube.com/user/watchauburn/live/?nomobile=1

To listen to the meeting by phone or Zoom, please call the below number or click the link:

Telephone: 253 205 0468
Toll Free: 888 475 4499
Zoom: https://us06web.zoom.us/j/81633024648

ROLL CALL

AGENDA MODIFICATIONS

ANNOUNCEMENTS, REPORTS, AND PRESENTATIONS

A. King County Solid Waste Division Long-Term Disposal Presentation (Thomas) (30 Minutes)

FINANCE AND INTERNAL SERVICES DISCUSSION ITEMS

A. 1st Quarter 2025 Financial Report (Thomas) (20 minutes)
Financial Report through March 31, 2025

AGENDA ITEMS FOR COUNCIL DISCUSSION

A. General Speed Enforcement Locations with Automated Traffic Safety Cameras (Gaub) (30 Minutes)

B. Ordinance No. 6980 (Gaub) (15 Minutes)
An Ordinance adopting the City's Amended 2024 Comprehensive Water Plan

C. Discuss Council Support for Auburn School District Bond Levy (Council)

ADJOURNMENT

Agendas and minutes are available to the public at the City Clerk's Office and on the City website (http://www.auburnwa.gov).

City Council
Study Session
Finance & Internal Services SFA
July 14, 2025 - 5:30 PM
City Hall Council Chambers

MINUTES

CALL TO ORDER

Councilmember Kate Baldwin called the meeting to order at 5:30 p.m. in the Council Chambers of Auburn City Hall, 25 West Main Street.

PUBLIC PARTICIPATION

The Study Session Meeting was held in person and virtually.

ROLL CALL

Councilmembers present: Hanan Amer, Kate Baldwin, Lisa Stirgus, Clinton Taylor, Tracy Taylor, and Yolanda Trout-Manuel. Deputy Mayor Cheryl Rakes was excused.

Mayor Nancy Backus and the following staff members present included: Assistant Chief of Police Samuel Betz, Director of Public Works Ingrid Gaub, Assistant Director of Public Works Jacob Sweeting, Director of Parks, Arts, and Recreation Julie Krueger, Director of Finance Jamie Thomas, Utilities Engineering Manager Ryan Vondrak, Water Utility Engineer Senait Gebreeysus, and City Clerk Shawn Campbell.

AGENDA MODIFICATIONS

There were no modifications made to the agenda.

ANNOUNCEMENTS, REPORTS, AND PRESENTATIONS

A. King County Solid Waste Division Long-Term Disposal Presentation (Thomas) (30 Minutes)

John Walsh, with King County Solid Waste provided Council with a presentation on the Long-Term Disposal Study including the service areas, operation sites, and the purpose of the Long-Term Disposal Study, items that are beyond the scope of the study, the five options studied, Study Criteria, the three options that are not viable were Refuse-Derived Fuel, Gasification, and Pyrolysis, the two options that were viable are Mass Burn with (Water Exported by Rail) WEBR and WEBR only, and reviewed the next steps in the process.

Council discussed community impact on communities along the railroad, the final location if sent by rail, the location of the incinerator in Spokane, other locations they reviewed, importing waste, job elimination and creation, and population growth.

FINANCE AND INTERNAL SERVICES DISCUSSION ITEMS

A. 1st Quarter 2025 Financial Report (Thomas) (20 minutes)
Financial Report through March 31, 2025

Director Thomas provided Council with an overview of the 1st Quarter 2025 Financial Report including the General Fund Revenue and Expenditure Overview, Tax Revenue, Licenses and Permits, Intergovernmental Revenue, charges for services, fines and penalties, interest and investment earnings, expenditures by department, ARPA Fund Update, and Capital Funds including Real Estate Excise Tax revenue.

Council discussed Business and Occupation (B&O) Tax Projections for the full year, Collective Bargaining Agreement costs, Manufacturing Tax revenue, and Licenses and Permits types.

AGENDA ITEMS FOR COUNCIL DISCUSSION

A. General Speed Enforcement Locations with Automated Traffic Safety Cameras (Gaub) (30 Minutes)

Director Gaub and Assistant Sweeting provided Council with an overview of the Automated Traffic Safety Cameras, including the purpose of the safety cameras, Safety Vision and Goal, crash data, SAFE Systems Approach, School Speed Zone Camera Performance, automated traffic safety camera for general speed enforcement requirements, analysis and location identification process, equity analysis of the top 4 locations, traffic diversions, alternatives to photo enforcement analysis, and the recommended locations and next steps for implementation.

Council discussed the process for selection of locations, appreciation of the site selections, ability to change locations or expand the program, and communication with the public.

B. Ordinance No. 6980 (Gaub) (15 Minutes)
An Ordinance adopting the City's Amended 2024 Comprehensive Water Plan

Councilmember Baldwin adjourned the meeting at 7:14 p.m. for 5 minutes. She reconvened the meeting at 7:19 p.m.

Manager Vondrak and Engineer Gebreeyesus provided Council with an overview of the Amended 2024 Comprehensive Water Plan including required edits, edits to the notes for the Braunwood Water Rights, and the City of Algona's request for additional water storage. They also reviewed the analysis used to evaluate the City of Algona's request, the costs of a future Reservoir, and the City of Algona's participation costs.

Council discussed the likelihood of the City of Algona participating in the building of a future Reservoir, and the benefit of changing the language for Braunwood Water.

C. Discuss Council Support for Auburn School District Bond Levy (Council)

The Auburn School District Proposition 1 and Proposition 2 fact sheets were provided to Council.

Council discussed the differences between the Proposition before the voters in 2024 which failed, requesting a representative from the Auburn School District to attend a future meeting to present the materials to Council, and previous Capital Projects by the Auburn School District.

ADJOURNMENT

There being no further business to come before the Council, the meeting was adjourned at 7:42 p.m.

APPROVED this 21st day of July 2025.

Cheryl Rakes
CHERYL RAKES, DEPUTY MAYOR

Shawn Campbell
Shawn Campbell, City Clerk

ORDINANCE NO. 6980

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, ADOPTING THE CITY'S AMENDED 2024 COMPREHENSIVE WATER PLAN

WHEREAS, the City of Auburn operates a municipal water utility and provides drinking water to its water utility customers; and

WHEREAS, pursuant to RCW 70A.100.050, the City of Auburn is required to develop a Comprehensive Plan for its municipal water utility operations; and

WHEREAS, pursuant to WAC 246-290-100(2), the City must prepare and submit the Comprehensive Water Plan (CWP) for review and approval by the Washington State Department of Health, which has regulatory authority over drinking water systems; and

WHEREAS, the City's 2024 CWP is one of the functional plans incorporated by reference in the Auburn Comprehensive Plan adopted through Ordinance 6960 on December 16, 2024; and

WHEREAS, certain modifications were required to be made to the 2024 CWP to referenced tables describing the City's water right for the City's Braunwood satellite water system and updates to the City's water reservoir storage analysis following a request from the City of Algona to purchase additional storage from Auburn to meet their water system planning needs;

WHEREAS, the modifications to the 2024 CWP require the City Council to approve the amended Plan; and

WHEREAS, the 2024 CWP still requires final approval from the Washington State Department of Health; and

WHEREAS, following approval from the Washington State Department of Health, the amended 2024 CWP will be included by reference and incorporated into the amended City Comprehensive Plan that is scheduled to be approved by Council in December 2025.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, DO ORDAIN as follows:

Section 1. Adoption of Amended Comprehensive Water Plan. The City of Auburn Amended 2024 Comprehensive Water Plan is adopted and approved as set forth in Exhibit 'A' attached and incorporated by reference pending approval from the Washington State Department of Health. City staff is authorized to provide modifications to the approved amended 2024 Comprehensive Water Plan based on comments received from the Washington State Department of Health. Any modifications made to the Amended 2024 Comprehensive Water Plan to address Washington State Department of Health comments, shall remain in substantial conformity with the adopted and approved 2024 Comprehensive Water Plan as set forth in Exhibit 'A'.

Section 2. Implementation. The Mayor is authorized to implement those administrative procedures necessary to carry out the directives of this legislation.

Section 3. Severability. The provisions of this Ordinance are declared to be separate and severable. The invalidity of any clause, sentence, paragraph, subdivision, section, or portion of this Ordinance, or the invalidity of the application of it to any person or circumstance, will not affect the validity of the remainder of this Ordinance, or the validity of its application to other persons or circumstances.

Section 4. Effective date. This Ordinance will take effect and be in force five days from and after its passage, approval, and publication as provided by law.

INTRODUCED: JUL 21 2025

PASSED: JUL 21 2025

APPROVED: JUL 21 2025

Nancy Backus

NANCY BACKUS, MAYOR

ATTEST:

Shawn Campbell

Shawn Campbell, MMC, City Clerk

APPROVED AS TO FORM:

Jason Whalen, City Attorney

Published: _____

ORDINANCE NO. 6960

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, RELATING TO COMPLETION OF THE 2024 PERIODIC COMPREHENSIVE PLAN UPDATE REQUIREMENTS UNDER THE WASHINGTON STATE GROWTH MANAGEMENT ACT AND ADOPTION OF THE UPDATED ELEMENTS, APPENDICES, PLANS INCORPORATED BY REFERENCE, LAND USE MAP, AND ZONING MAP

WHEREAS, the Washington State Growth Management Act (Revised Code of Washington (RCW) 36.70A.130) requires that all cities and counties periodically take legislative action to review and, if needed, revise its comprehensive land use plan and development regulations to ensure the plan and regulations comply with the requirements of the Washington State Growth Management Act; and

WHEREAS, RCW 36.70A.70 describes required and optional Elements of the Comprehensive Plan (the Plan). The Plan shall be an internally consistent document, and all elements shall be consistent with a future land use map; and

WHEREAS, RCW 36.70A.140 indicates that a comprehensive plan shall be adopted and amended with public participation. Auburn City Code (ACC) 14.22.030 required early and continuous public participation in the comprehensive plan process; and

WHEREAS, ACC 14.22.010 provides a description of the purpose of the comprehensive plan. The city of Auburn comprehensive plan establishes the principles, goals, objectives and policies guiding future development of the city in compliance with Chapter 36.70A RCW, the Washington State Growth Management Act. The purpose of this chapter is to establish procedures and review criteria for amending the

comprehensive plan and to provide provisions for public participation in the planning process; and

WHEREAS, pursuant to Chapter 36.70A RCW, the Environmental Impact Statement (EIS) Scoping Notice was transmitted to the Washington State Department of Commerce on October 23, 2023; and

WHEREAS, Pursuant to Revised Code of Washington (RCW) 36.70A, the draft Comprehensive Plan was transmitted to the Washington State Department of Commerce on April 9, 2024. The 60-day notice period ended June 9, 2024; and

WHEREAS, pursuant to Chapter 36.70A RCW, the Draft Environmental Impact Statement (DEIS) was transmitted to the Washington State Department of Commerce on May 20, 2024; and

WHEREAS, Agencies, affected tribes, and members of the public were invited to comment on the proposed contents of the DEIS. Comments were accepted up to the 60-day notice period on 5:00 p.m. PST on June 19, 2024; and

WHEREAS, Pursuant to Chapter 36.70A RCW, the Final Environmental Impact Statement (FEIS) was transmitted to the Department of Commerce on October 18, 2024. The City did not act upon the FEIS until November 8, 2024; and

WHEREAS, the City of Auburn provided its draft Comprehensive Plan to the Puget Sound Regional Council (PSRC) on May 20, 2024 to provide comment on the draft Comprehensive Plan prior to PSCR's certification of the plan; and

WHEREAS, the City of Auburn also provided its draft Comprehensive Plan to the King County Affordable Housing Committee to provide comment on the draft Comprehensive Plan; and

WHEREAS, the City held an in-person public meeting on June 5, 2024 at 6:00 p.m. PST in City Council Chambers and a virtual meeting (or telephonically) meeting on June 6, 2024 at 6:00 p.m. PST to discuss the DEIS and draft Comprehensive Plan.

WHEREAS, the City of Auburn Planning Commission scheduled and held public meetings on April 2, 2024, April 16, 2024, April 30, 2024, May 21, 2024, June 4, 2024, June 18, 2024, July 2, 2024, April 30, 2024, September 17, 2024, October 8, 2024, December 3, 2024, for the purposes of staff presentations and discussion on the various components of the plan; and

WHEREAS, the Planning Commission scheduled and held public hearings on April 16, 2024, April 30, 2024, May 7, 2024, June 4, 2024, June 18, 2024, July 2, 2024, July 16, 2024, October 8, 2024, December 3, 2024, to receive public testimony on the proposed Plan; and

WHEREAS, the Auburn City Council finds it appropriate and in the best interest of the City to adopt the Auburn Comprehensive Plan, which includes the Land Use Element, the Housing Element, the Capital Facilities Element, the Utilities Element, the Transportation Element, the Economic Development Element, the Parks and Recreation Element, the Appendices listed within and the referenced functional plans listed in the Capital Facilities Element; and

WHEREAS, the Auburn City Council determines that the adoption of the Comprehensive Plan meets the criteria set forth in the Auburn City Code and all other applicable legal criteria; and

WHEREAS, the Auburn City Council determines that the Comprehensive Plan is consistent with the Growth Management Act, the King County and Pierce County

County-Wide Planning Policies, and the Puget Sound Regional Council Vision 2050; and

WHEREAS, by adoption of this ordinance, the City of Auburn has completed the mandatory periodic comprehensive plan review process that is set forth in RCW 36.70A.130.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, DO ORDAIN as follows:

Section 1. Adoption of Comprehensive Plan. The City of Auburn 2024 Comprehensive Plan, its updated Chapters of the Comprehensive Plan, updated Additional Documents of the Comprehensive Plan, that are incorporated by reference, and Supplementary Reports Documents of the Periodic Comprehensive Plan Update, set forth in Exhibits 1 through 24, is on file with the office of the City Clerk is adopted and is available for inspection therein.

Section 2. Implementation. The Mayor is authorized to implement those administrative procedures necessary to carry out the directives of this legislation.

Section 3. Severability. The provisions of this ordinance are declared to be separate and severable. The invalidity of any clause, sentence, paragraph, subdivision, section, or portion of this ordinance, or the invalidity of the application of it to any person or circumstance, will not affect the validity of the remainder of this ordinance, or the validity of its application to other persons or circumstances.

Section 4. Effective date. This Ordinance will take effect and be in force five days from and after its passage, approval, and publication as provided by law.

INTRODUCED: DEC 16 2024

PASSED: DEC 16 2024

APPROVED: DEC 16 2024

Nancy Backus

NANCY BACKUS, MAYOR

ATTEST:

Shawn Campbell

Shawn Campbell, MMC, City Clerk

APPROVED AS TO FORM:

Jason Whalen, City Attorney

Published: December 19, 2024, in the Seattle Times

The exhibit to this Ordinance is on our website at auburnwa.gov. Then click on City Hall up at the top and then Agendas and Minutes and scroll down to the Monday December 16, 2024 City Council Meeting.

State of Washington
DEPARTMENT OF HEALTH
NORTHWEST DRINKING WATER REGIONAL OPERATIONS
20425 72nd Avenue South, Suite 310 • Kent Washington 98032-2388

RECEIVED
AUG 27 2021
City of Auburn
Public Works Dept

August 24, 2021

SUSAN FENHOUS, PE
WATER UTILITY ENGINEER
CITY OF AUBURN PUBLIC WORKS DEPARTMENT
25 WEST MAIN STREET
AUBURN WA 98001

Subject: Auburn, City of (ID#03350)
King County
Lead & Copper Rule – (b)3 Status Accepted

Dear Susan Fenhous:

Thank you for submitting your request for a "(b)3 determination" per Title 40 CFR Chapter 1 part 141.81(b)(3). The letter dated August 11, 2021 was received in this office on August 17, 2021.

The summary of the two sets of distribution system tap samples for lead and copper collected in November 2020 and May 2021 demonstrates that the City meets the criteria in Title 40 CFR Chapter 1 part 141.81(b)(3). Therefore, the City of Auburn is not required to collect and report optimal water quality parameters, more specifically the representative distribution system sampling for pH. Future revisions in the rules may be more stringent and require further action.

Sincerely,

Brietta Carter

Brietta Carter, PE
Regional Engineer
NW Office of Drinking Water

cc: Public Health – Seattle & King County
Joshua Flanders, Water Manager, City of Auburn
Tom Nicaise, Water Operations Supervisor, City of Auburn

ecc: Steve Hulsman, Source Monitoring Program

Appendix G - Summary of Water Service Area, Interlocal and Wholesale Agreements

Agency	Type of Document	Date of Approval	COA Resolution #
City of Tacoma	Franchise Agreement	Sep-1969	2383
Water District #111 (Lake Meridian Water District)	Service Boundary Agreement	Dec-1978	931
Water District #87	Acquisition Agreement	Jul-1982	1341
Water District #124	Service Boundary Agreement	Oct-1989	1021
Braunwood Estates	Satellite Water System Management Agreement	Aug-1990	2114
City of Bonney Lake	Interlocal Agreement	Aug-1994	2551
Covington Water District, Water District #111 (Lake Meridian Water District)	Interlocal Agreement	Sep-1996	2721
King County	Franchise Agreement	Nov-1996	2782
Pierce County	Service Area Boundary Agreement	Sep-1997	2873
City of Bonney Lake	Settlement Agreement	Mar-1998	2925
Lakeland Company, Inc.	Amendment to Lakeland Annexation & Utilities	May-1998	2955
Pierce County	Franchise Agreement	Oct-1998	5163
City of Bonney Lake	Service Area Agreement	Dec-1998	3018
City of Bonney Lake	Emergency Fire Flow Protection Agreement	Dec-1998	3019
WA Dept. of Health	Amendment to Bilateral Compliance Agreement	Mar-2000	3190
City of Kent	Emergency Water System Intertie Agreement	Aug-2001	3374
South King Co. Regional Water	Joint Operating Agreement	Sep-2001	3383
City of Bonney Lake	Emergency Water System Intertie Agreement	Mar-2002	3434
Covington Water District, Water District #111 (Lake Meridian Water District)	Emergency Water System Intertie Agreement	Apr-2002	3444
Lakehaven Utility District (Lakehaven Water & Sewer District)	Emergency Water System Intertie Agreement	Apr-2002	3443
City of Bonney Lake	Franchise Agreement	May-2002	5592
Covington Water District, Water District #111 (Lake Meridian Water District)	Interim Water Sales Agreement	Jun-2002	3482
WA Dept. of Health	Amendment to Bilateral Compliance Agreement	Jul-2002	N/A
City of Algona	Revised Water System Intertie Agreement	Oct-2002	3534
Water District #111 (Lake Meridian Water District)	Emergency Water System Intertie Agreement	Jun-2003	3614
City of Tacoma, Water Division	Turnout Construction Agreement	Sep-2003	3637
City of Pacific	Annexation/Deannexation Agreement	Oct-2003	3644
Voice Stream PCS III Corporation	Lease Agreement	Dec-2003	3649
Lakehaven Utility District (Lakehaven Water & Sewer District)	Franchise Agreement	Feb-2004	3650
Lakehaven Utility District (Lakehaven Water & Sewer District)	Water Service Boundary Agreement	Feb-2004	3652
City of Bonney Lake	Interlocal Agreement	Feb-2005	3760
Covington Water District, Water District #111 (Lake Meridian Water District)	Interim Water Sales Agreement	Feb-2005	3817
Cingular Wireless PCS, LLC.	Lease Agreement	Sep-2005	3886
Cascade Water Alliance, Tacoma	Wholesale Water Agreement	Oct-2005	N/A
Lakehaven Utility District (Lakehaven Water & Sewer District)	Termination of Emergency Water Supply Intertie Agreement	Apr-2006	4008
Clearwire LLC.	Lease Agreement	May-2006	4018
WA Dept. of Ecology	Cost Reimbursements Agreement	Jun-2006	4039
City of Kent, Water District #111	Water Service Boundary Agreement	Sep-2006	3920
City of Bonney Lake, Buckley, Sumner and Cascade Water Alliance	Lake Tapps Area Water Resources Agreement	Jan-2010	4563
City of Bonney Lake	Emergency Water System Intertie Agreement	May-2010	4596
Bonneville Power Administration (BPA)	Easement Usage Agreement	Jun-2010	N/A
Lakehaven Utility District (Lakehaven Water & Sewer District)	Emergency Water System Intertie Agreement	Oct-2010	4649

City of Tacoma	Emergency Water System Intertie Agreement	Oct-2010	4648
Water District #111 (Lake Meridian Water District)	Interim Water Sales Agreement	Dec-2010	4660
Covington Water District, Water District #111 (Lake Meridian Water District)	Pipeline Purchase, Transfer and Acquisition Agreement	Jun-2011	4725
Bonneville Power Administration (BPA)	Easement Usage Agreement	Feb-2012	N/A
Tacoma Public Utilites (TPU)	Wholesale Water Agreement	Jul-2012	Unknown
Cascade Water Alliance	Agreement for Purchase & Sale of Permanent and Reserve Wholesale Water Credits	Sep-2013	4986
City of Bonney Lake	Bonney Lake Water System Leak Detection Project Area Map	Feb-2014	N/A
Valley Communications Center	Lease Agreement	Feb-2014	5033
City of Bonney Lake	Auburn-Bonney Lake Water Service Boundary Map	Mar-2014	N/A
City of Tacoma	Wholesale Water Agreement	Sep-2014	5102
Muckleshoot Indian Tribe (MIT)	Casino Master Meter Easement	Jun-2015	5153
Pierce County	Standard Service Area Agreement	Nov-2015	5182
Lakehaven Utility District (Lakehaven Water & Sewer District)	Ratifying Franchise Agreement adopted by Resolution No. 3650	Oct-2016	6624
Covington Water District, Water District #111 (Lake Meridian Water District)	Interlocal Agreement #2 Amendment	Nov-2017	5332
Other Washington Agencies	Interlocal Agreement (Receiving and providing Water/Wastewater Mutual Aid	Mar-2018	5357

ORDINANCE NO. 2383

AN ORDINANCE OF THE CITY OF AUBURN, WASHINGTON, GRANTING TO THE CITY OF TACOMA AND ITS ASSIGNS, THE RIGHT, PRIVILEGE AND AUTHORITY TO CONSTRUCT AND MAINTAIN A TRANSMISSION MAIN IN CERTAIN STREETS IN THE CITY OF AUBURN FOR THE TRANSMISSION OF FRESH WATER FOR MUNICIPAL PURPOSES.

THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, DO ORDAIN AS FOLLOWS:

Section 1. GRANT AND TERMS. That there be and is hereby granted to the City of Tacoma a municipal corporation and its assigns, the right, privilege, authority and franchise for a period of fifty (50) years from and after passage of this Ordinance to lay down, build, construct and maintain and operate, through and across certain streets of the City of Auburn, underground pipes and conduits for thepurpose of transmitting fresh water for municipal purposes.

Section 2. TRANSMISSION MAIN. For the purpose aforesaid, the grantee and its assigns are hereby granted the right, liberty and privilege of laying down, relaying, connecting, disconnecting, and repairing such transmission main through and under the avenues, streets, lanes, alleys andpublic highways, and public parks and grounds of the City of Auburn as may be necessary, proper and convenient for transmitting the fresh water supply of the grantee through the city limits of the grantor.

Section 3. PLANS AND SPECIFICATIONS. Before said grantee and assigns shall begin the construction of the transmission main underneath the said streets or places in the City of Auburn, it shall file with the City Engineer of the grantor detailed plans, specifications and profiles of the pipeline and shall show the place in said streets or places proposed to be used for and/or crossed by said pipeline, the size of the pipeline and its depth from the surface of the ground. The said plans, specifications and profiles shall be approved by the City Engineer of the grantee and a permit granted for the same before any excavation or the construction of said pipes shall be commenced, which approval shall not be unreasonably withheld. The grantee upon receiving such construction permit shall hasten the work of construction with all convenient speed and shall repair the pavement or surface in as good condition as it was before being disturbed by said grantee and repair it with the same kind of material as now laid on said streets or surface and subject to the approval of the City Engineer of the grantor, shall place an inspector upon the said street during the reconstruction of the pavement thereon and the salary of such inspector shall be paid by the grantee, and said street shall not be torn up in any event for a longer period than ninety (90) days after the said grantee shall begin the work of construction. If the grantee shall fail to build said street or surface in

as good condition as it was before or shall fail to rebuild it at all, the grantor may proceed to repair said street or surface and charge the expense thereof to the grantee. All excavations shall be carefully guarded so as to prevent accidents by reason thereof, and the grantee shall save the grantor free and harmless of and from all costs, damages and expenses of any kind whatsoever occasioned by such work or by the maintenance of such conduits and pipes through and across the street or place and should any final judgment be recovered against said city on account of any damages, said grantee shall forthwith pay the same, including grantor's reasonable attorney fees and costs, after having been notified in writing to do so by the grantor, and the failure of said grantee to make such payment within a period of sixty (60) days after such notice has been given shall operate as a forfeiture of the rights and privileges herein granted; provided, however, that the grantor shall in any suit brought against it on account of such damages and within twenty (20) days after service of process upon it give written notice to the grantee of the pendency of said suit, and thereon, grantee shall have the option of defending said litigation on behalf of the City at its own cost.

Section 4. NOT TO INTERFERE WITH OTHER PIPES. Said pipes shall be laid down in such manner as not to interfere with the sewer or water pipes or any other pipes in said streets and places and all pipes and conduits to be laid down by the grantee shall be of first quality material.

Section 5. FRANCHISE NOT EXCLUSIVE. Nothing in this Ordinance shall be construed as granting to the said grantee and assigns an exclusive right or prevent the granting to other companies or individuals a franchise for like purposes.

Section 6. SERVICE AVAILABILITY. In the event that the City has need for additional domestic water and the grantee determines that it can provide such water from the transmission line and at the rates it charges other consumers, similarly located, the grantee shall so make available points of distribution in order to provide the additional supply so determined.

Section 7. ACCEPTANCE. In order to claim the rights and privileges granted by this franchise, the grantee or assigns shall, within thirty (30) days after the approval of this Ordinance, file with the City Clerk of the grantor its acceptance in writing of the franchise granted by this Ordinance.

Section 8. EFFECTIVE DATE. That this Ordinance shall take effect five (5) days from and after its passage, approval and publication as provided by law.

INTRODUCED: SEPTEMBER 2, 1969

PASSED: SEPTEMBER 15, 1969

APPROVED: SEPTEMBER 15, 1969

Robert E Gaines
MAYOR

ATTEST:

Gene Williams
City Clerk

APPROVED AS TO FORM:

Robert L. Lee
City Attorney

PUBLISHED: In [illegible] News
Sept 7, 1969

RESOLUTION NO. 931

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR AND CITY CLERK OF THE CITY OF AUBURN, TO ENTER INTO AN AGREEMENT WITH KING COUNTY WATER DISTRICT NO. 111, FOR THE ESTABLISHMENT OF A BOUNDARY BETWEEN THE SERVICE AREAS OF THE PARTIES.

THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AT A REGULAR MEETING DULY ASSEMBLED, HEREWITH RESOLVES:

THAT the Mayor and City Clerk of the City of Auburn, are hereby authorized to enter into an agreement with King County Water District No. 111, for the establishment of a boundary between the service areas of the parties. A copy of said agreement is attached hereto, denominated as Exhibit "A" and made a part hereof as though set forth in full herein.

DATED and SIGNED this 4th day of December, 1978.

CITY OF AUBURN

Stanley P. Kerry
MAYOR

ATTEST:

Coralee A. McConnehey
City Clerk

Resolution No. 931
11-30-78

AGREEMENT ESTABLISHING USE AND

SERVICE AREAS OF THE PARTIES

AGREEMENT between King County Water District No. 111, a special purpose district of the state of Washington, hereinafter called "District," and the City of Auburn, a municipal corporation of the state of Washington, hereinafter called "City."

1. Purpose. The District and the City have previously informally agreed to the establishment of a boundary between the service areas of the two parties and are now desirous of confirming the previous understanding and agreement in writing.

2. Agreement. It is hereby agreed between the parties that the boundary between the areas served by each of the parties shall be as follows:

> Beginning at the intersection of a line which is 330 feet south of and parallel with the north line of Section 3, Township 21 North, Range 5 East, W.M. with the northwesterly margin of S.R. 18; thence west along a line which is 330 feet south of, and parallel with, the north line of Sections 3 and 4, to the west line of the northeast one quarter of said Section 4.

District shall serve the area lying generally north of said boundary line and City shall serve the area lying generally south of said boundary line.

DATED: 9 Nov, 1978.

KING COUNTY WATER DISTRICT NO. 111

By _____
Gary G. Cline, Commissioner

By _____
Robert R. Sparks, Commissioner

By _____
Charles E. Wilson, Commissioner

CITY OF AUBURN

By _____
Mayor

By _____
Clerk

RESOLUTION NO. 1341

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR OF THE CITY OF AUBURN, TO EXECUTE AN AGREEMENT BETWEEN THE CITY OF AUBURN AND KING COUNTY WATER DISTRICT NO. 87 CONCERNING THE TRANSFER OF KING COUNTY WATER DISTRICT NO. 87'S WATER SYSTEM TO THE CITY OF AUBURN.

THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, IN A REGULAR MEETING DULY ASSEMBLED, HEREWITH RESOLVES THAT:

THE Mayor of the City of Auburn, Washington, is herewith authorized and directed to execute an Agreement between the City of Auburn and King County Water District No. 87 concerning the transfer of King County Water District No. 87's water system. A copy of said Agreement is attached hereto, denominated as Exhibit "A" and made a part hereof as though set forth in full herein.

THE Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directions of this legislation.

DATED and SIGNED this 6th day of July, 1982.

CITY OF AUBURN

Bob Baegner

MAYOR

ATTEST:

Coralee McConnehey

City Clerk

Resolution No. 1341
7/6/82

AGREEMENT CONCERNING TRANSFER OF KING COUNTY
WATER DISTRICT NO. 87'S WATER SYSTEM TO THE
CITIES OF AUBURN AND KENT

April 1, 1982

IT IS AGREED by and between WATER DISTRICT 87, King County, a Washington Municipal Corporation ("WD 87"); and the Cities of AUBURN ("Auburn") and KENT, ("Kent") Washington, collectively, "the cities") as follows:

1. Authority

This agreement is entered into pursuant to RCW 35A.13.070, which authorizes one or more cities and water districts to contract regarding ownership of property, providing or water service, and operation of facilities.

2. Transfer of Water System

The ownership of WD 87's entire "water system" shall, as of the above date, be transferred and conveyed to Auburn and Kent, in the manner provided below.

The term "water system" shall include, but not be limited to, all WD 87 water mains and appurtenances; hydrants; easements; licenses; franchises; permits and facilities, rights and assets of any kind or nature whatsoever.

Said transfer is subject to the cities' performance of all of the terms and conditions of this agreement.

The cities hereby accept their respective portions of the water system on the terms of this agreement.

3. Division of System

The entire WD 87 water system lying southerly of the following described line will become the property of the Auburn and the remaining portion of the water system (lying northerly of the following described line) shall become the property of Kent:

> Starting at a point of intersection on the westerly boundary line of WD #87 which is the easterly margin of the Chicago Milwaukee and St Paul Railroad right-of-way with the southerly right-of-way line of S. 277th street and projecting easterly therefrom along said southerly right-of-way line to an intersection point with the easterly margin of the Burlington Northern Railroad right-of-way thence northerly therefrom along said easterly line to an intersection point with the northerly right-of-way line of S. 277th street thence projecting easterly therefrom along said northerly right-of-way line to the easterly boundary line of WD #87 which is the westerly line of S.S. Highway #5 (aka) East Valley Highway.

WD 87's customer records will be divided between the cities, according to the above division of the water system and any temporary services.

The limited hand tools and miscellaneous personal property owned by WD 87 will be transferred to Auburn.

4. Connection to Auburn System

The cost of inter-connecting the WD 87 water system to Auburn's water system shall be paid for from monies presently in the WD 87 maintenance fund.

The City of Kent is presently connected to the WD 87 water system, and no further connections are presently needed.

5. Costs and Expenses/WD 87 Money

The following shall be paid from WD 87 money, in the following order of priority:

WD 87 routine debts and expenses.

WD 87's attorney's fees for drafting of this agreement, and related work.

Any attorney's fees and/or costs in obtaining boundary review board or other governmental approvals (per paragraph 10 hereof).

Cost of inter-conecting the WD 87 system to Auburn's water system (per paragraph 4 hereof).

To the extent that any WD 87 money remains after payment of the above, the same shall be divided evenly between the cities proportionate to the number of WD 87 customers to be served permanently by the cities.

To the extent that the WD 87 funds are inadequate to pay all of the above, then the City of Auburn shall bear any remaining cost of inter-connecting the water systems. If there is insufficient WD 87 money to pay all of the other above-listed items in full (other than WD debts), then any amount remaining due shall be borne by the cities according to the same permanent customer ratio as above.

6. Service Interruptions

The cities each agree that transfer of the water system will not result in any interruption of water service to any WD 87 customer other than that normally experienced in the day-to-day operation of the respective water systems.

7. Water Rates

The cities each agree that former WD 87 customers shall, following transfer and in the future, be charged for water service, and pay the same connection and other charges, as the cities charge in each case, its other customers in the same class of service. Sevice shall also be of the same quality as that received by other customers in the same class.

8. Temporary Service

Auburn and Kent recognize, and agree, that until their respective water systems are readily available within the present WD 87 service area, each will have to extend temporary water service to existing customers on the opposite side from them on the above described boundary line. During such temporary service, the customers shall pay the serving city's rates and charges, and the serving city will maintain the water mains, hydrants and meters serving those temporary customers.

The city temporarily serving such customers will turn over the customers to the other city on request. Both cities agree to cooperate in the transition of these customers from one city to the other and agree that water service to the customers will not be interrupted unnecessarily during the transition.

No property temporarily served by one of the cities shall be assessed, or otherwise required to pay, for new water mains or facilities in order to transfer their services over to the other city unless said property is specifically benefitted beyond the availability of the existing service.

No new water services including five hydrants and five service lines will be connected to a water main owned by one city but temporarily being utilized to serve the above said customers (property), without the written consent of the other city.

9. Preferential Employment

The employees of WD 87 shall be entitled to offers of comparable full-time employment from both Auburn and Kent, in accordance with RCW 35.13A.090.

10. Governmental Approvals

If, in the opinion of either city, it is necessary to so obtain approval of this agreement by the King County Boundary Review Board, King County Council, and/or any other governmental body, then that city shall so notify the other parties to this agreement prior to transfer of WD 87's remaining monies to the cities.

The cities shall determine, between themselves, which city (or WD 87) shall obtain such approval(s). Regardless of who obtains the approval(s), the cost thereof shall be paid from WD 87 funds to the extent available.

11. Financial Records

WD 87's financial and other records are available on request, for inspection and copying by either of the cities.

12. WD 87 Indebtedness

WD 87 shall, as above, pay all of its debts from its present funds. WD 87 warrants that on the effective date of this agreement it will have no debts. Further WD 87 has no bonds, warrants or similar oblications outstanding, and will not issue any in the future. WD 87 also warrants that it does not have any ULID or other assessments receivable, and will not form any improvement districts in the future.

WD 87 warrants that, to the best of its knowledge and the knowlege of its Water Commissioners, there are no pending, asserted or threatened claims, suits or liens against it or any of its water system, monies or other assets. IF WD 87 or any its commissioners should receive notice or knowledge of any such claim, suit or lien prior to the effective date of this agreement, WD 87 will immediately notify other cities. The Water Commissioners of WD 87 shall not be personally liable for the foregoing warranties; and shall not be personally liable for performance of any of the terms of this agreement unless they shall, by Board of Water Commissioners's action, vote or otherwise cause te breach of this agreement.

13. WD 87 Continuing Authority.

Following the effective date of this agreement, WD 87 shall remain a municipal corporation, and its commissioners shall remain in office for at least their present terms of office, unless WD 87 is sooner dissolved as set forth below. During the continued existence of WD 87, its commissioner shall not exercise any rights, privileges, powers or functions provided by law to WD 87, except at the request of one or both of the cities. If such request is made by only one of the parties, then such actions shall be taken only with respect to that city's portion of the WD 87 water system. The WD 87 Commissioners shall not be obliged to undertake any action unless it is necessary to implement, clarify or carry out this agreement and, in such case, the other city(ies) requesting the action shall thereby agree to save the WD 87 Commissioners harmless from any liability in respect to the same.

14. Dissolution of WD 87.

Any one or more of the parties to this agreement, or anyone else having standing to do so, may petition and/or take such steps having standing to do so, may petition and/or take such steps as are necessary to dissolve WD 87 under any available statutory authority and procedure. In the event that WD 87 has not been dissolved within five (5) years of the effective date of this agreement, then the cities agree that they will immediately thereafter petition for the dissolution of WD 87 pursuant of RCW 57.90 governing the disincorporation of special districts that have not actively carried out any of the district's purposes or functions for a period of

five years, or any similar or other statutes then in effect. The cost of such disincorporation shall be borne by the cities in the same proportion as other expenses are provided for in this agreement.

15. Approval by Parties

This agreement shall be submitted to the governing bodies of each of the parties and approved by City Ordinance and Water District Resolution. Certified copies of said ordinances and resolution shall be furnished each of the parties to this agreement. Adoption of said ordinances and resolution shall serve in lieu of signature to this agreement. Notwithstanding the effective date set forth as the beginning of this agreement, this agreement shall be effective 45 days after it is approved by all three (3) parties.

DATED as of the date set forth hereinabove.

CITY OF AUBURN

CITY OF KENT

WATER DISTRICT NO. 87, KING COUNTY

RECEIVED BY
FINANCE DEPT.

OCT 0 9 1989

RESOLUTION NO. 1021

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR OF THE CITY OF AUBURN TO ENTER INTO A SERVICE AREA BOUNDARY AGREEMENT BETWEEN THE CITY OF AUBURN AND WATER DISTRICT NO. 124.

THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AT A REGULAR MEETING DULY ASSEMBLED HEREWITH RESOLVES THAT:

THE Mayor of the City of Auburn is herewith authorized to enter into a Service Area Boundary Agreement between the City of Auburn and Water District No. 124. A copy of said agreement is attached hereto, denominated as Exhibit "A" and made a part hereof as though set forth in full herein.

DATED and SIGNED this 15th day of October, 1979.

CITY OF AUBURN

Stanley P. Kersey
MAYOR

ATTEST:

Coralee A. McConnehey
City Clerk

RECEIVED THIS DAY
AUG 24 3 17 PM '89
BY THE DIVISION OF
RECORDS & ELECTIONS
KING COUNTY

8908240972

89/08/24 #0972 A
RECD F 9.00
RECFEE 2.00
CASHSL ***11.00
55

SERVICE AREA BOUNDARY AGREEMENT

THIS AGREEMENT made and entered into this 20th day of November, 1979 by and between City of Auburn, a municipal corporation located in King County, Washington, hereinafter referred to as "City", and WATER DISTRICT NO. 124, a municipal corporation located in King County, Washington, hereinafter referred to as "District 124":

W I T N E S S E T H :

1. That the purpose of this Agreement is:

A) To define current service area boundaries, and

B) To establish a method for altering those boundaries in order to provide for:

1) Maximum efficient use of existing and future facilities.

2) Maximum flexibility between the service areas in order to allow the continued and future existence of interties between the parties herein.

3) Maximum public water system coordination.

4) Orderly and efficient public water system planning.

2. That the current service area boundary between the City and the District 124 is as is set forth on Exhibit "A" attached hereto and incorporated herein by reference.

3. That in the event either the City or District 124 desire to change the existing boundary such a change shall be by mutual agreement.

4. That provisions for looped systems and interties are to be encouraged so as to provide:

A) For the most efficient use of current and future facilities.

B) For maximum service to consumers at the lowest possible cost.

C) For mutual aid between the City and District 124 in the event of an emergency.

D) For maximum public water system coordination.

5. That both the City and District 124 recognize that they are "Purveyors" as defined in R.C.W. 70.116.030(4) and hereby acknowledge their duties under R.C.W. 70.116 and the regulations promulgated thereunder and adhere to the purposes described therein.

DATED this 20 TH day of NOVEMBER, 19 79.

CITY OF AUBURN
King County, Washington

Stanley R. Kinsey

WATER DISTRICT NO. 124
King County, Washington

President and Commissioner

Commissioner

Secretary and Commissioner

EXHIBIT "A"

LEGAL DESCRIPTION OF SERVICE AREA BOUNDARY LINE BETWEEN CITY OF AUBURN AND KING COUNTY WATER DISTRICT #124

COMMENCING AT THE NORTHEAST CORNER OF LOT 5, BLOCK 39, JOVITA HEIGHTS, LOCATED IN THE SOUTHWEST QUARTER, SECTION 23, T. 21 N., R 4 E., W.M.;

THENCE NORTHWESTERLY TO A POINT ON THE NORTH LINE OF LOT 8, LOCATED 400' EAST OF THE NORTHWEST CORNER OF LOT 8, BLOCK 25, OF SAID JOVITA HEIGHTS, WHEREIN SAID LINE CROSSES THE EXISTING AUBURN CITY LIMITS LOCATED ON IOWA DRIVE;

THENCE NORTHERLY ALONG A LINE 400' EAST OF AND PARALLEL TO THE WEST LINE OF LOT 7 THROUGH LOT 1 OF BLOCK 25, JOVITA HEIGHTS, TO A POINT ON THE NORTH LINE OF SAID LOT 1;

THENCE EASTERLY 50'± ALONG THE NORTH LINE OF SAID LOT 1 TO THE SOUTHERLY EXTENSION OF THE EASTERLY RIGHT OF WAY LINE OF 58TH AVENUE SOUTH (PENNSYLVANIA AVENUE);

THENCE NORTHERLY ALONG SAID RIGHT OF WAY LINE TO THE SOUTH LINE OF SECTION 14, T. 21 N., R 4 E., W.M.;

THENCE EAST ALONG THE SOUTH LINE OF SECTION 14 TO THE SOUTH 1/4 CORNER OF SAID SECTION 14;

THENCE NORTH ALONG THE CENTERLINE OF SAID SECTION 14 TO THE INTERSECTION OF SAID CENTERLINE WITH THE CENTERLINE OF MOUNTAIN VIEW DRIVE (331ST STREET OR OLD CEMETARY HILL ROAD);

THENCE MEANDERING EASTERLY AND NORTHERLY ALONG THE CENTERLINE OF MOUNTAIN VIEW DRIVE TO THE INTERSECTION OF SAID STREET CENTERLINE WITH THE E-W CENTERLINE OF SECTION 14;

THENCE NORTHERLY ALONG THE SOUTHERLY EXTENSION OF HI-CREST DRIVE TO THE SOUTH LINE OF HI-CREST ADDITION NO. 2, LOCATED IN SECTION 14, T.21N., R. 4 E., W.M.;

THENCE WESTERLY ALONG SAID SOUTH LINE TO THE SOUTHWESTERLY CORNER OF SAID ADDITION (S.W. CORNER OF LOT 9);

THENCE NORTHEASTERLY ALONG THE WESTERLY LINE OF SAID HI-CREST ADDITION #2 TO THE NORTHWESTERLY CORNER OF SAID PLAT, WHICH IS ALSO THE SOUTHWEST CORNER OF KNICKERBOCKER HEIGHTS ADDITION;

THENCE NORTH ALONG THE WEST BOUNDARY OF SAID KNICKERBOCKER HEIGHTS ADDITION AND ALSO THE WEST BOUNDARY OF ABBY'S FIRST ADDITION TO A POINT ON THE SOUTH LINE OF SECTION 11, T. 21 N., R. 4 E., W.M.;

THENCE NORTHERLY ALONG THE WEST LINE OF THE E 1/2, E 1/2, SECTIONS 11 AND 2, T 21 N R. 4 E., W.M., TO A POINT 329' NORTH OF THE SOUTH LINE OF SAID SECTION 2;

THENCE NORTHEASTERLY A DISTANCE OF 2,150' MORE OR LESS, TO A POINT ON THE EAST LINE OF SAID SECTION 2, WHICH POINT IS LOCATED 655' SOUTH OF THE EAST 1/4 CORNER OF SECTION 2, T. 21 N., R 4 E., W.M.;

THENCE NORTH ALONG THE EAST LINE OF SAID SECTION 2 TO A POINT 836' NORTH OF THE EAST 1/4 CORNER OF SAID SECTION 2;

THENCE WEST TO THE WEST LINE OF THE E 1/2, E 1/2, SECTION 2, T.21N., R4E., W.M.;

THENCE NORTH ALONG SAID WEST LINE TO A POINT 351' SOUTH OF THE NORTH LINE OF SAID SECTION 2;

THENCE WESTERLY AND PARALLEL TO AND 351' SOUTH OF THE NORTH LINE OF SECTION 2, TO A POINT ON THE N-S CENTERLINE OF SAID SECTION 2;

THENCE SOUTHERLY 60' ALONG SAID N-S CENTERLINE;

THENCE WESTERLY AND NORTHERLY ALONG THE APRIL, 1979 BOUNDARY TO THE WEST 1/4 CORNER OF SECTION 35, T. 22 N., R 4 E., W.M., WHICH IS THE TERMINAL POINT OF THIS BOUNDARY DESCRIPTION:

LEGEND
SERVICE AREA BOUNDRY
170' CONTOUR (ELEVATION)
BOUNDARY
Quarry
Creek
BM 38
276TH ST
Thomas
Thomas Sch
PACIFIC AND ST PAUL
Meredith
BM 46
MILWAUKEE
Christopher
Creek
CHICAGO NORTHERN
BURLINGTON
Sewage Disposal
Auburn Municipal Airport
Mill
296TH ST
Water
55TH AVE S
66TH AVE S
66TH PL S
Pearsall Rd
Canyon
Mill
Auburn
UP
CONSTRUCTION
UC
UNDER
AUBURN
MIL
RES
Park
Terminal
Park
Sch
12TH AVE N
Cem
181
167
18
164

RESOLUTION NO. 2 1 1 4

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR AND CITY CLERK TO EXECUTE A SATELLITE WATER SYSTEM SERVICE CONTRACT FOR BRAUNWOOD ESTATES (PREVIOUSLY SALTMARK ESTATES)

THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, IN A REGULAR MEETING DULY ASSEMBLED, HEREWITH RESOLVES THAT:

Section 1. AUTHORIZATION. The Mayor and City Clerk of the City of Auburn are herewith authorized to execute a Satellite Water System Service Contract for Braunwood Estates (previously Saltmark Estates). A copy of said Contract is attached hereto and denominated Exhibit "A".

Section 2. AUTHORITY. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

DATED and SIGNED this 6th day of August, 1990.

CITY OF AUBURN

MAYOR

ATTEST:

Robin Wohlhueter, City Clerk

APPROVED AS TO FORM:

Michael J. Reynolds,
Acting City Attorney

CITY OF AUBURN

WATER DEPARTMENT

SATELLITE WATER SYSTEM SERVICE CONTRACT

FOR BRAUNWOOD ESTATES (PREVIOUSLY SALTMARK ESTATES)

IT IS AGREED by and between the CITY OF AUBURN ("the City") and the undersigned ("the Owners") as follows:

1. **Parties.** The City is a municipal corporation organized under and existing by virtue of Chapter 57 of the Revised Code of Washington. The Owners are, collectively, the owners of property provided water service by a water source and distribution system which is independent of and unconnected to another public or private water system (the "satellite system").

2. **Legal Description.** The property presently served, and to be served in the future, by the satellite system is located in King County, Washington and is legally described as follows:

> THE SW 1/4 OF THE NE 1/4 OF SECTION 33, TWP 21 N., R. 5 E., W.M. AND THE W 1/2 OF THE SE 1/4 OF THE NE 1/4 OF SECTION 33, TWP 21 N., R. 5 E., W.M.

The above property is inside the City's service area under the South King County Coordinated Water Supply Plan.

3. **City Services.** The City will provide services to the satellite system, as identified below:

* Operation and management of the satellite system from the tail piece on the house side of the meters to the well source.

* Routine inspection, maintenance and repair of the satellite system in accordance with reasonable and accepted standards and practices for public water systems.

* Emergency repairs, within a reasonable time after the owners have notified the City.

* Preparation and filing of reports and other data (including water sample testing) as required.

4. **City Charges.** The property owners within the plat of Braunwood Estates agree to pay the following to the City:

A. Services charges. The City will charge for the above-identified services at a rate equivalent to that

applied in the Auburn City Code, Title 13, Chapter 13.04.

B. Connection Charge. All persons connecting to the City's water system are obliged to pay a standard service installation charge as identified in the Auburn City Code, Title 13, Chapter 13.04.

C. Reserve Account. All parcels within said plat, upon connection to the City's water system, shall pay to the City one thousand dollars ($1,000) per parcel as a reserve account.

The reserve account can be utilized for water system repair, replacement or maintenance at the City's discretion, upon completion of the one (1) year maintenance period, as set out in the Developers Extension Agreement.

The property owners are not entitled to return of the reserve account money or interest on the reserve account, and the money in the account may be co-mingled with other Water Department funds.

5. **Terms and Conditions.** This Agreement includes all of the terms and conditions in the Auburn City Code as applicable and as amended in the future.

Without limiting the foregoing, it is agreed as follows:

A. The City owns the satellite water system and will provide service as set forth above, performed in accordance with accepted public utility practices.

B. The property owners hereby agree to limit the total number of connections irrigating their property at any one time to seven (7). The restrictive irrigation requirements shall be conducted by address on an odd and even number basis. The even numbered addresses shall be permitted to irrigate on even numbered calendar days, while the odd numbered addresses shall be permitted to irrigate on the odd numbered calendar days. The design of private irrigation systems shall be limited to a maximum of ten (10) gallons per minute total consumption for each lot.

C. The property owners hereby agree in the event that the satellite system water source is interrupted, due to unpredictable conditions, such as severe volume reductions, contaminated water or any other unforeseen condition, the City at its discretion may utilize the alternate well site as described on the development plan or any other reasonable measure to ensure a source of water.

D. The property owners will not be assessed a System Development Charge (SDC) as allowed for in the Auburn City Code, unless there is a failure of the existing system as described in paragraph 5. C. above and it is deemed necessary by the City in the event a suitable and reliable source of water cannot be developed and the City must utilize Water Department funds beyond the reserve account to provide an alternate water source.

E. The designed, approved and constructed satellite water system shall be limited to a maximum of thirteen (13) total single-family residential connections.

F. All customers must be connected to the satellite system via a meter supplied by the City, after property owner application. The service must be in accordance with the City of Auburn standards and the City's standard meter charge must be paid in advance of the City providing service.

6. **Source Interruption Responsibility.** Because a satellite system will receive water from a single well or aquifer and may be so located that no emergency water service is reasonably available, the City will not, under any circumstances, undertake liability for emergency or supplemental supply in the event of diminution in, loss of, or contamination of the satellite system's water supply.

7. **Waiver of Right to Protest Formation of a U.L.I.D.** The property owners waive any and all rights granted by statute or otherwise, to object to or protest against formation by the City of a Utility Local Improvement District for the purpose of constructing water improvements extending the City's system to provide City water to the properties. The foregoing does not waive the property owners' right to object to the amount of the property owners' assessment, in the manner provided by statute.

8. **Future Connection to City System.** If the City's water system were extended to provide City water in lieu of the present satellite system source, the present and future owners of the property agree to connect to the City's system, at their expense, in accordance with the terms and conditions of the Auburn City Code valid at the time of connection.

9. **Duration.** This Agreement shall remain in full force and effect until the City's basic system is extended to serve the satellite system area. Neither party may terminate this Agreement until that time.

10. **Integration.** This Agreement constitutes the entire agreement between the parties. There are no other verbal or written agreements or representations which modify or affect this Agreement.

11. **Covenant Running with the Property.** It is agreed that this Contract is a covenant running with the property described in Paragraph 2 above and any other properties receiving water in the future from the satellite system, and shall be binding on the owners of all such property, their heirs and successors and it shall be recorded as an encumbrance against each of the thirteen (13) land parcels.

Terra Belle, Inc.

Authorized signature

CITY OF AUBURN

MAYOR

ATTEST:

Robin Wohlhueter, City Clerk

APPROVED AS TO FORM:

City Attorney

Res 2114

STATE OF WASHINGTON)
) ss.
COUNTY OF KING)

On this 20th day of July, 1990, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared Alan Bart and Joanne Bart to me known to be the _____ President and _____ Secretary, respectively, of Tahoe Bart, Inc. the corporation that executed the foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that they are authorized to execute the said instrument and that the seal affixed in the corporate seal of said corporation.

Witness my hand and official seal hereto affixed the day and year first above written.

Barbara Hill
NOTARY PUBLIC IN AND FOR THE STATE OF WASHINGTON, RESIDING AT Kent

STATE OF WASHINGTON)
) ss.
COUNTY OF KING)

On this ____ day of _____, 19___, before me undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared _____, to me known to be the Mayor and City Clerk, respectively, of the City of Auburn, a municipal corporation, and the corporation that executed the foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that they are authorized to execute the said instrument and that the seal affixed is the corporate seal of said corporation.

WITNESS my hand and official seal hereto affixed the day and year first above written.

_____
NOTARY PUBLIC IN AND FOR THE STATE OF WASHINGTON, RESIDING AT _____

REF. FAC0694/E90-669

RESOLUTION NO. 2551

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR AND CITY CLERK TO EXECUTE AN INTERLOCAL AGREEMENT BETWEEN THE CITY OF AUBURN AND THE CITY OF BONNEY LAKE FOR OPERATING AND MAINTAINING A PUBLIC WATER SYSTEM.

WHEREAS, the cities of Auburn and Bonney Lake are responsible for operating and maintaining a public water system in accordance with federal, state and local laws and regulations; and

WHEREAS, the parties recognize the responsibility of public water utilities to provide for the highest quality of water and reliability of service to their customers at reasonable cost; and

WHEREAS, the parties further recognize that water resources are finite and vulnerable, and the prudent use and management of these resources requires cooperation among utilities;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, DULY ASSEMBLED, HEREWITH RESOLVES THAT:

Section 1. The Mayor and City Clerk of the City of Auburn are herewith authorized to execute an Interlocal Agreement between the City of Auburn and the City of Bonney Lake for operating and maintaining a public water system in accordance with federal, state and local laws and regulations.

CITY ATTORNEY
City of Auburn
25 W. Main
Auburn, WA 98001
(206) 931-3030

A copy of said Agreement is attached hereto, designated as Exhibit "A" and incorporated by reference in this Resolution.

Section 2. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

DATED and SIGNED this 15th day of August, 1994.

CITY OF AUBURN

Charles A. Booth
MAYOR

ATTEST:

Robin Wohlhueter
Robin Wohlhueter,
City Clerk

APPROVED AS TO FORM:

Michael J. Reynolds,
Acting City Attorney

CITY ATTORNEY
City of Auburn
25 W. Main
Auburn, WA 98001
(206) 931-3030

INTERLOCAL AGREEMENT BETWEEN THE CITY OF BONNEY LAKE AND THE CITY OF AUBURN

ORIGINAL

This agreement made and entered into this 15th day of August, 1994, by and between the City of Auburn (hereinafter referred to as "Auburn"), and the City of Bonney Lake (hereinafter referred to as "Bonney Lake"), WITNESSETH THAT:

WHEREAS, Auburn and Bonney Lake are responsible for operating and maintaining a public water system in accordance with federal, state and local laws and regulations, and

WHEREAS, the parties recognize the responsibility of public water utilities to provide for the highest quality of water and reliability of service to their customers at reasonable cost, and

WHEREAS, The parties further recognize that water resources are finite and vulnerable, and the prudent use and management of these resources requires cooperation among utilities, and

NOW, THEREFORE, the City of Bonney Lake and the City of Auburn enter into the following agreement.

A. RECITALS

1. Bonney Lake will sell water to Auburn for the purpose of serving a maximum of two rural-residential domestic service connections for lots that abut the Pierce/King County (Auburn City Limits) line, in vicinity of Kersey Way S. E.

2. City of Auburn would install their own meters to individual services and one of these services would be to tax lot 9056 on Kersey Way S. E., adjacent to the county line.

3. The meter shall be in the Bonney Lake water service area. (Pierce County) The City of Auburn shall pay the connection charge plus the actual cost of the meter installation. The City of Bonney Lake shall own the meter.

4. The size of the meter shall be determined by the City of Auburn.

5. All the properties served within the City of Auburn water service area will be the responsibility of the City of Auburn.

6. Bonney Lake will sell water to the City of Auburn at the standard Outside the City rates. Per Bonney Lake Municipal Code Section 13.04.100(C).

7. Bonney Lake shall only furnish domestic needs for the two (2) rural residential connections. Bonney Lake is not responsible for fire flow.

RES No. 2551
Exhibit "A"

8. The City of Auburn will require new service connections from this supply to be protected by a residential fire sprinkler system in accordance with Auburn Fire Department ordinance.

9. This agreement shall become null and void at the time Auburn has water available through it's own system to serve these properties.

10. The City of Bonney Lake shall use reasonable effort to provide a regular uninterrupted supply of water to Auburn. Bonney Lake shall not be liable for any shortage or interruption in delivery of water. In addition Bonney Lake shall not be liable for any failure, interruption or shortage of water or any loss or damage resulting therefrom, occasioned by any cause beyond the control of the City of Bonney Lake

11. Auburn shall be a customer of Bonney Lake and shall be given the same consideration as any other customer under the ~~City~~ Bonney Lake's rules, regulations, and Municipal Codes, for domestic service only.

12. This Agreement to provide water services by Bonney Lake shall continue from year to year on the anniversary date of the later approval date shown below, unless notice of intent not to renew this Agreement is provided by the Mayor of the City of Bonney Lake in writing to the Mayor of the City of Auburn on or before the anniversary date.

CITY OF AUBURN

Charles A. Booth
MAYOR

DATED: 8-15-94

ATTEST:
Robin Wohlhueter
City Clerk, City of Auburn

CITY OF BONNEY LAKE

Rex Sulfrez
MAYOR

DATED: 6-28-94

ATTEST:
Kathleen L. Clayton

APPROVED AS TO FORM:
Craig M. Mills
BONNEY LAKE CITY ATTORNEY

APPROVED AS TO FORM:
Acting City Attorney, City of Auburn

RES No. 2551
Exhibit "A"

RESOLUTION NO. 2721

A RESOLUTION OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR AND CITY CLERK OF THE CITY OF AUBURN, TO EXECUTE INTERLOCAL AGREEMENT NO. 2 FOR THE LEA HILL INTERTIE PROJECT BETWEEN THE COVINGTON WATER DISTRICT, KING COUNTY WATER DISTRICT #111 AND THE CITY OF AUBURN.

THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, IN A REGULAR MEETING DULY ASSEMBLED, HEREBY RESOLVES THAT:

SECTION 1. The Mayor and City Clerk of the City of Auburn, Washington, are hereby authorized to execute Interlocal Agreement No. 2 for the Lea Hill Intertie Project between the Covington Water District, King County Water District #111 and the City of Auburn. A copy of said Agreement is attached hereto, denominated as Exhibit "A" and made a part hereof as though set forth in full herein.

SECTION 2. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

CITY ATTORNEY
City of Auburn
25 W. Main
Auburn, WA 98001
(206) 931-3030

Interlocal Agreement 2
for the
Lea Hill Intertie Project
between
Covington Water District,
King County Water District #111,
and the
City of Auburn

I. Project Title: Lea Hill Intertie, consisting of construction and operation of piping, pump stations, meters, and source facilities for a water supply intertie between the City of Auburn (Auburn), Covington Water District (CWD) and King County Water District #111 (WD111), jointly termed the Participants. The project facilities are as shown on Exhibit A - Facilities Plan.

II. General:

A. This Interlocal Agreement 2 (IA2) is consistent with the Joint Operating Agreement (JOA) of the South King County Regional Water Association (SKCRWA) dated 26 July 1995.

B. There is an immediate need to provide for additional water supply to meet the needs of CWD and WD111, and meet the emergency needs of Auburn.

C. Performance by Auburn under IA2 shall be subject to its pre-existing contractual and/or water supply obligations to Algona, Kent, Muckleshoot Indian Tribe, and Pacific. Future Interlocal Agreements shall be subject to the terms and conditions of IA2. It is the intent of Auburn to create a first in time, first in service approach to wholesale of water within the limitations of Auburn's water rights and/or supply capacity.

D. Auburn has the necessary water system capacity to meet a portion of the near term, interruptable, public water supply needs of CWD and WD111. CWD and WD111 have the necessary system capacity to meet a portion of the emergency needs of Auburn.

E. Each Participant desires to develop firm supplies to meet long term, continuing needs.

F. Each Participant hereby identifies its authorized representative as the "General Manager" of CWD, the "General Manager" of WD111, and as the "City Engineer" of Auburn.

G. For wholesale water purposes per Section 4. C. of the JOA, the following interties exist or are expected to exist in the near future for the Participants to IA2:

EXHIBIT "A"
CITY OF AUBURN
RESOLUTION NO. 2721
ADOPTED 09/03/96

1. CWD
   a) Auburn (future)
   b) Black Diamond (future)
   c) Tacoma (future)
   d) King County Water District 94 (future)
   e) WD111, and
   f) Cedar River Water and Sewer District.

2. WD111
   a) Auburn,
   b) CWD,
   c) Kent, and
   d) Soos Creek Water and Sewer District.

3. Auburn
   a) Algona,
   b) Kent,
   c) WD111,
   d) Pacific,
   e) Bonney Lake,
   f) Lakehaven Utility District (future),
   g) Muckleshoot Indian Tribe (future), and
   g) CWD (future).

H. Interlocal Agreement No. 1, 132nd Avenue Interim Intertie Project, dated 7 November 1995, is terminated by mutual agreement of the WD111 and Auburn upon completion of the improvements described in Exhibit B of this IA2.

III. Description of Project:

A. The project facilities are generally described in the Engineering Report prepared by EES, dated September 1995, and any subsequent amendments thereto.

B. The project includes design, construction, and operation of facilities to provide water as follows:

Year	Auburn Maximum Day Demand (mgd)	CWD Maximum Day Demand (mgd)	WD111 Maximum Day Demand (mgd)	Total Maximum Day Demand (mgd)
1998	2.0	1.0	2.0	5.0
2000	2.0	1.5	2.5	6.0
2002	2.0	2.5	2.5	7.0
2005	2.0	2.5	2.5	7.0
2010	2.0	2.5	2.5	7.0

EXHIBIT "A"
CITY OF AUBURN
RESOLUTION NO. 2721
ADOPTED 09/03/96

Additional water may be available as mutually agreed to by the Auburn City Council and the Board of Commissioners of either District. Water is to be provided from the Auburn system to the Lea Hill Reservoir Site, and then to the pipeline on 132nd SE running north to the Districts. The project will provide for flow control facilities as necessary and a master meter which will be used to measure the water supplied. The reverse order is used for water to be provided from the Districts to Auburn.

C. Respective Facility Ownership, Capacity Rights, and responsibility for operation, maintenance, and renewal and/or replacement (r/r) are as described in Exhibit B. Operational parameters shall be as defined in Exhibit C - Project Criteria.

D. Auburn will design, construct and maintain the facilities constructed under IA2 in accordance with reasonably accepted water utility standards for similar municipal water utilities. Facilities will be designed in compliance with the City's adopted design standards as described in the 1995 Comprehensive Water Plan.

E. The participants agree that an independent Value Engineering Analysis will be done at the 75 percent design level.

IV. Project Costs:

A. The project costs are estimated as shown on Exhibit D - Project Cost. Final project costs shall be reviewed and approved by the Participants. The Participants shall maintain individual cost records on their expenses for the project. Auburn will retain a consultant to maintain total cost records for the project.

B. Costs associated with the development of new water sources will be shared based on the basis quantity of water each Participant is allocated from the sources.

V. Project Financing: The Participants shall fully finance and pay for their proportionate share as shown in Exhibit D - Project Cost. The Districts shall deposit funds with Auburn to perform the project work for the proposed facilities in accordance with the schedule shown in Exhibit E - Project Schedule.

VI. Service Charges:

A. Auburn has prepared a Cost of Service Study to determine the cost of service to its customers. A customer classification for "wholesale" has been created, and rates for service charges shall be based on a rate study for the wholesale customer classification. Auburn will regularly update the cost of service analysis. Wholesale water rates will be based on costs of providing the service. Cost of developing the initial Cost of Service Study and Rate Study will be included within the project costs.

EXHIBIT "A"
CITY OF AUBURN
RESOLUTION NO. 2721
ADOPTED 09/03/96

B. WD111 and CWD shall provide a rate to Auburn to be applied for emergency service charges. Such rate shall be based on costs of providing the service, or, in the interim until a Cost of Service / Rate Study is completed, shall be equal to or less than Auburn's current wholesale rate.

C. Adjustments to the service charges will be made in accordance with Section 4.H. of the JOA.

VII. Project Coordination:

A. The Participants shall meet monthly for project coordination, or more frequently as needed.

B. Auburn will retain a consultant to be the overall Project Coordinator. Assignment of responsibilities to the Project Coordinator shall be by agreement of the Participants' authorized representatives.

C. The Participants shall be responsible for design, construction management, and commissioning of facilities to be constructed in conformity to facility ownership. Responsibilities may be assigned otherwise by agreement of the Participants' authorized representatives.

VIII. Conditions of Service:

A. Auburn does not presently have the necessary capacity (i.e., water supply and/or water rights) to guarantee delivery of firm uninterruptible water. It is acknowledged and agreed that in the event Auburn experiences any failure or decreased capacity for any reason or increased demand within its retail service area, the supply to the Districts may be immediately reduced or stopped under such conditions at the sole discretion of Auburn. The Districts agree that Auburn may take such action irrespective of any cost, investment in capacity, or other reliance which may have been placed upon the intertie facilities and interruptible water supply referenced in this IA2.

B. The Districts specifically acknowledge and agree that failure of Auburn to obtain additional primary water rights in excess of Auburn needs shall be cause for not bringing the Districts on a par with Auburn customers. For purposes of this IA2, on par shall mean: Upon receiving new primary water rights for additional water sources in the amount of at least 7 mgd the quantities of water described in paragraph III. B., the Districts will be served on the same basis and with the same reliability as service is provided to Auburn's retail customers, and Auburn will include the maximum total quantity of water cited in paragraph III. B. in all of its water system planning as if the quantity was served to direct service customers and any curtailment, restrictions or limitations on delivery would be on the same basis as curtailment, restrictions, or limitations on delivery to retail customers.

EXHIBIT "A"
CITY OF AUBURN
RESOLUTION NO. 2721
ADOPTED 09/03/96

C. The Participants will proceed with development and implementation of projects in accordance with the project schedule shown in Exhibit E to increase firm system capacity and a wholesale supply capacity as described in paragraph III. B., designed to ensure service to the Districts. It is anticipated the necessary projects required to provide firm supply will be proposed wells numbers 6 and 7 described in the City's 1995 Comprehensive Water Plan. The City has obtained Supplemental Water Rights for the proposed wells numbers 6 and 7. It is the intent of the Auburn to obtain Primary Water Rights for wells number 6 and 7 and additional new wells, if required, sufficient to provide the quantities of water described in paragraph III. B. which shall bring the Districts on a par with Auburn customers.

D. It is the intent of Auburn to provide the water described in paragraph III. B. whenever it is available subject to the limitations described in paragraphs VIII. A. and B. Auburn shall use reasonable diligence and best efforts to provide immediate notice in the event it becomes aware that it may not be able to fulfill the requirements of paragraph III. B. for any reason.

IX. Term of Duration of Agreement: This IA2 shall remain in full force unless terminated by mutual agreement of the Participants.

X. Amendments:

A. This IA2 may be amended only in writing by agreement signed by the Participants.

B. The authorized representatives shall have authority to update exhibits attached hereto. The exhibits shall be updated and/or revised only upon written agreement signed by the Participants' authorized representatives. Updates must be ratified by Auburn's City Council.

XI. Dispute Resolution:

A. Should a dispute arise between the participants regarding the technical aspects of the planning, design, construction, funding, or operation of the facilities contemplated under IA2, the authorized representatives of the participants, as defined in paragraph II. E., shall meet and select two persons who, along with the authorized representatives of the participants, will form a dispute resolution panel to resolve the dispute. Should the dispute resolution panel not be able to reach a mutually satisfactory resolution the dispute will be resolved as described below.

B. Legal disputes between the participants to IA2 shall be resolved through the use of mediation by a mediator mutually acceptable to the participants with each participant agreeing to equally share the cost of the mediator. Should the participants not be able to satisfactorily resolve the dispute through mediation, the forum for resolution shall be King County Superior Court. The substantially prevailing party will be entitled to attorney fees and costs.

EXHIBIT "A"
CITY OF AUBURN
RESOLUTION NO. 2721
ADOPTED 09/03/96

XII. Hold Harmless: Each Participant agrees to indemnify and hold harmless the other participant from and against any loss, cost, damage, or expense of any kind and nature arising out of injury to person or damage to property in any manner caused by the negligent act or omission of the indemnified individual participant in the performance of its work pursuant to or in connection with this IA2.

XIII. Severability: If any provision of this IA2 is invalid or unenforceable the remaining provisions shall remain in force and effect.

IN WITNESS WHEREOF, the Participants hereto have caused this IA2 to be executed by their proper Officers on the 2nd day of October, 1996.

City of Auburn

By: Charles A. Booth

Title: MAYOR

Attest:

By: Robin Warkentin

Approved as to Form:

By: Michael Reynolds

Covington Water District

By: Lyn Hornsby

Title: President, Board of Commissioners

Date: 10/2/96

King County Water District #111

By: G. L. Randall

Title: PRES BD OF COMM

Date: 9/26/96

EXHIBIT "A"
CITY OF AUBURN
RESOLUTION NO. 2721
ADOPTED 09/03/96

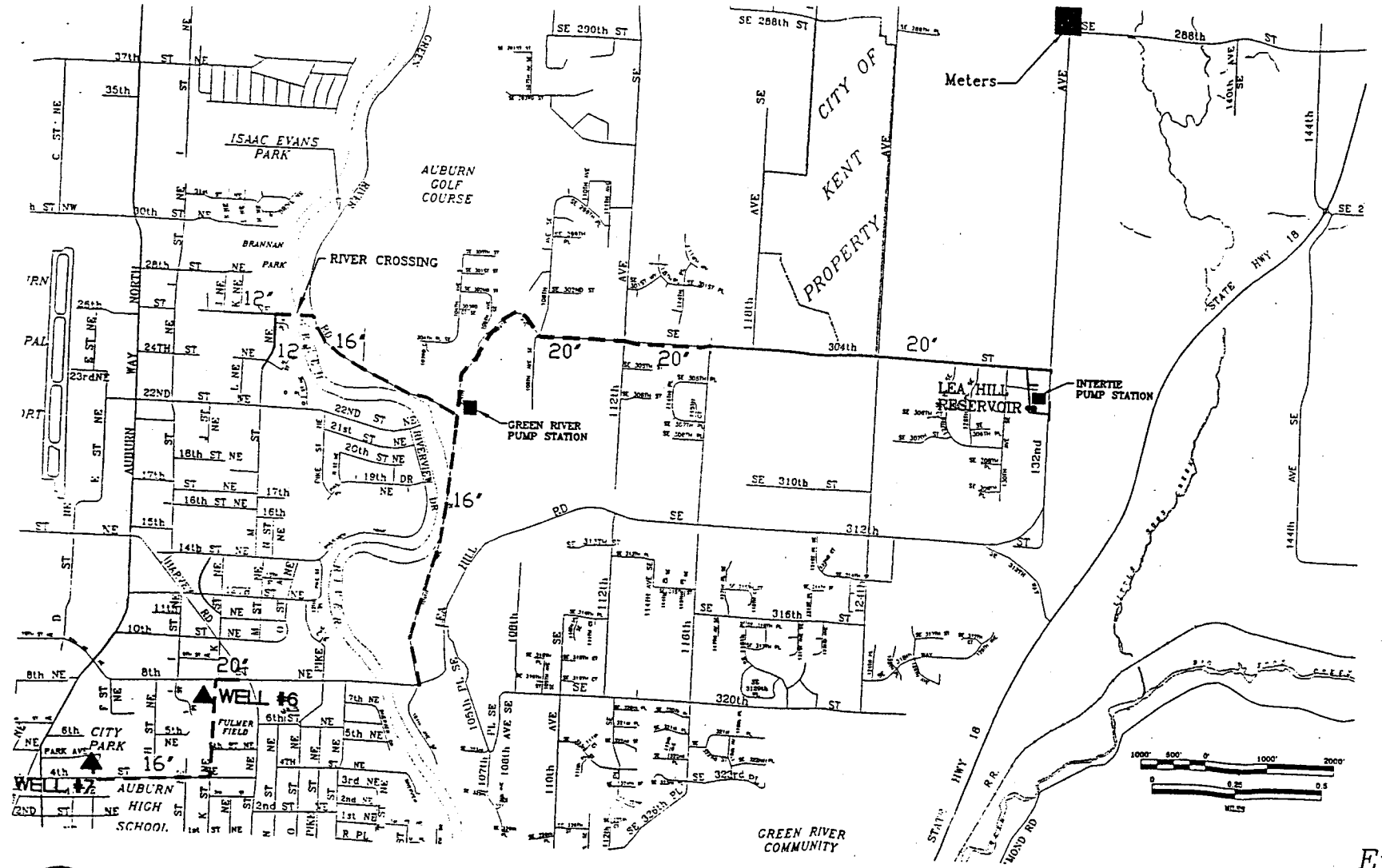


Exhibit A
Facilities Plan

to

Interlocal Agreement 2

for

Lea Hill Intertie Project

Exhibit A
Facilities Plan
(Continued)

Exhibit A
Update Approval

Auburn: _____, Dated: 11-10-97

CWD: _____, Dated: 10-09-97

WD111: _____, Dated: 11/6/97

Auburn: _____, Dated: _____

CWD: _____, Dated: _____

WD111: _____, Dated: _____

Auburn: _____, Dated: _____

CWD: _____, Dated: _____

WD111: _____, Dated: _____

Exhibit B
Facility Ownership, Capacity Rights, Operation, Maintenance, and Renewal and Replacement Responsibilities

to

Interlocal Agreement 2

for

Lea Hill Intertie Project

Facility	Location	Facility Ownership	Capacity Rights	Operation, Maintenance, & Renewal/Replacement Responsibility
New Lea Hill Pump Station	Green River Road & 104th SE	Auburn	WD111 2.5 MGD CWD 2.5 MGD	Auburn
Lea Hill Booster Pump Station	Lea Hill Reservoir Site	Auburn	WD111 and CWD 95% Auburn 5% (note 2)	Auburn
Flow Control, Telemetry	Lea Hill Reservoir Site	Auburn	WD111 and CWD 95% Auburn 5% (note 2)	Auburn
Meter Station	Intersection of 132nd SE and SE 288th Street	Auburn	WD111 and CWD 95% Auburn 5% (note 2)	Auburn
16-inch Waterline	Green River Road 26nd NE to 104th SE	Auburn	Note 3	Auburn
16-inch Green River crossing	Under Green River at 26nd NE	Auburn	Note 3	Auburn
16-inch Waterline	104th SE, NE 8th to Green River Road	Auburn	Note 3	Auburn
20-inch Waterline	SE 304th, New Lea Hill Pump Station to 116th SE	Auburn	Note 3	Auburn
Well #6	City	Auburn	Note 3	Auburn
Well #7	City	Auburn	Note 3	Auburn
16-inch Waterline & PRV	K Street SE, 22nd Street SE to 21st Street SE	Auburn	Note 3	Auburn
12-inch Waterline	M Street SE, Well 1 to 6th Street SE	Auburn	Note 3	Auburn
12-inch Waterline	6th Street SE, M Street SE to F Street SE	Auburn	Note 3	Auburn
12-inch Waterline	F Street SE, 6th Street SE to 2nd Street SE	Auburn	Note 3	Auburn

Note 2: Auburn capacity right is in recognition of the emergency capability of the facility.
Note 3: Capacity right is not specific to facility, however participation in constructing the facility provides capacity right to 5 MGD from Auburn's water system.

EXHIBIT "A"
CITY OF AUBURN
RESOLUTION NO. 2721
ADOPTED 09/03/96

Exhibit B
Facility Ownership, Capacity Rights, Operation, Maintenance, and Renewal and Replacement Responsibilities
(Continued)

Exhibit B
Update Approval

1. Auburn: _____, Dated: _____

   CWD: _____, Dated: _____

   WD111: _____, Dated: _____

2. Auburn: _____, Dated: _____

   CWD: _____, Dated: _____

   WD111: _____, Dated: _____

3. Auburn: _____, Dated: _____

   CWD: _____, Dated: _____

   WD111: _____, Dated: _____

EXHIBIT "A"
CITY OF AUBURN
RESOLUTION NO. 2721
ADOPTED 09/03/96

Exhibit C
Project Criteria
to
Interlocal Agreement 2
for
Lea Hill Intertie Project

Project Criteria:

- Waterlines shall be sized as shown on Exhibit A.
- No storage shall be included in the project. All storage required to enable the Districts to optimally use facilities constructed shall be provided by the Districts.
- Pumping Facilities shall be constructed to provide flow rates as described in paragraph III. B.
- The New Lea Hill Pump Station is to operate at design capacity with one pump in stand-by mode.
- The Lea Hill Booster Pump Station is to operate at design capacity with one pump in stand-by mode.
- Pump Stations to be designed with single speed pumps.
- Emergency Power not provided at pump stations.
- Flow rates to the Districts from Auburn through the facilities shall be set for constant flow for full 24 hour periods, subject to reasonable hydraulic and mechanical tolerances.
- The Districts will notify Auburn by 9:00 AM if the District requests adjustment of the desired pumping rate for the following day, except in case of an emergency.
- In the event Auburn desires emergency water from the Districts, the Districts will provide Auburn a daily estimate of the volume of water which will likely be available during the following 24 hour period.

Exhibit C
Update Approval

1. Auburn: _____, Dated: _____

   CWD: _____, Dated: _____

   WD111: _____, Dated: _____

2. Auburn: _____, Dated: _____

   CWD: _____, Dated: _____

   WD111: _____, Dated: _____

EXHIBIT "A"
CITY OF AUBURN
RESOLUTION NO. 2721
ADOPTED 09/03/96

Exhibit D
Project Costs
to
Interlocal Agreement No. 2
for
Lea Hill Intertie Project

Description	Total Est. Cost	Auburn Cost Percent	Auburn Cost	WD111 Cost Percent	WD111 Cost	CWD Cost Percent	CWD Cost
INSIDE AUBURN							
PIPING							
20" along 304th from Pump Station to 116th Ave SE (WS-105,106)	$570,000	10%	$57,000	45%	$256,500	45%	$256,500
16" on approx 26th from "M" to Pump Station (under Green R., incl crossing) (WS-102,103)	$395,000	20%	$79,000	40%	$158,000	40%	$158,000
16" east of Green River from 8th St. to Pump Station (WS-101)	$335,000	20%	$67,000	40%	$134,000	40%	$134,000
Meter Station @ 132nd SE and SE 288th	$35,000	5%	$1,750	47.5%	$16,625	47.5%	$16,625
12" M Street from Well 1 to 6th Street SE (WS-110)	$120,000	5%	$6,000	47.5%	$57,000	47.5%	$57,000
12' 6th Street SE from M Street to F Street (WS-111,WS-112)	$140,000	5%	$7,000	47.5%	$66,500	47.5%	$66,500
12" F Street from 6th Street to 2nd Street SE (WS-113)	$85,000	5%	$4,250	47.5%	$40,375	47.5%	$40,375
K Street Parallel pipeline and PRV (WS-114)	$65,000	5%	$3,250	47.5%	$30,875	47.5%	$30,875
PIPING SUBTOTAL	$1,745,000		$225,250		$759,875		$759,875
PUMP STATIONS							
Green River Pump Station (WS-104)	$350,000	10%	$35,000	45%	$157,500	45%	$157,500
Intertie Pump Station (WS-107)	$245,000	5%	$12,250	47.5%	$116,375	47.5%	$116,375
PUMP STATIONS SUBTOTAL	$595,000		$47,250		$273,875		$273,875
NEW SUPPLY FACILITIES							
Drill and Develop Well #6 and Well #7 (7 mgd) (S-106,S-108,S-109,S-110)	$1,250,000	28.6%	$357,143	35.7%	$446,429	35.7%	$446,429
TOTAL ESTIMATED CONSTRUCTION COST	$3,590,000	17.5%	$629,643	41.2%	$1,480,179	41.2%	$1,480,179
PRELIMINARY PROJECT COSTS							
Cost of Service Study / Rate Study Consultant Srevices (Jan 91 to Dec 94)	$41,000	62.2%	$25,502	18.9%	$7,749	18.9%	$7,749
Feasibility Studies and Water Rights Analysis	$41,522	33.3%	$13,841	33.3%	$13,841	33.3%	$13,841
Development of Interlocal Agreement	$9,406	33.3%	$3,135	33.3%	$3,135	33.3%	$3,135
Final Engineering Report	$7,198	17.5%	$1,262	41.2%	$2,968	41.2%	$2,968
PRELIMINARY PROJECT COSTS SUBTOTAL	$99,126		$43,740		$27,693		$27,693
AILLIED COST							
Contingency (15.0%)	$538,500	17.5%	$94,446	41.2%	$222,027	41.2%	$222,027
State Sales Tax (8.2%)	$294,380	17.5%	$51,631	41.2%	$121,375	41.2%	$121,375
Engineering Design (6.5%)	$233,350	17.5%	$40,927	41.2%	$96,212	41.2%	$96,212
Construction Engineering (7.5%)	$269,250	17.5%	$47,223	41.2%	$111,013	41.2%	$111,013
Legal (1.0%)	$35,900	17.5%	$6,296	41.2%	$14,802	41.2%	$14,802
Fiscal (1.0%)	$35,900	17.5%	$6,296	41.2%	$14,802	41.2%	$14,802
Administration (2.0%)	$71,800	17.5%	$12,593	41.2%	$29,604	41.2%	$29,604
Permits, Agency Approvals (3.0%)	$107,700	17.5%	$18,889	41.2%	$44,405	41.2%	$44,405
Engineering Surveys (2.5%)	$89,750	17.5%	$15,741	41.2%	$37,004	41.2%	$37,004
Land/ROW (3.3%)	$118,470	17.5%	$20,778	41.2%	$48,846	41.2%	$48,846
TOTAL ALLIED COST (50.0%)	$1,795,000		$314,821		$740,089		$740,089
TOTAL PROJECT COST	$5,484,126		$988,205		$2,247,960		$2,247,960

Exhibit D - Update approval

1. Auburn: _____; Dated: _____
   CWD: _____; Dated: _____
   WD111: _____; Dated: _____

2. Auburn: _____ Dated: _____
   CWD: _____ Dated: _____
   WD111: _____ Dated: _____

EXHIBIT "A"
CITY OF AUBURN
RESOLUTION NO. 2721
ADOPTED 09/03/96

Exhibit D
Project Costs
to
Interlocal Agreement No. 2
for
Lea Hill Intertie Project

revised 29 August 1997

DESCRIPTION	PR Numbers	Original Estimates		Revised 29-Aug-97		Auburn Cost Percent	Auburn Cost	WD111 Cost Percent	WD111 Cost	CWD Cost Percent	CWD Cost
CURRENT PROJECTS											
PIPING INSIDE AUBURN											
20" along 304th from Pump Station to 116th Ave SE (WS-105,106)	PR609	$570,000		$644,000		10%	$64,400	45%	$289,800	45%	$289,800
Sewer Line installed in same area for Auburn				$200,000		100%	$200,000	0%		0%	
16" on approx 26th from "M" to Pump Station	PR610	$395,000									
Green River Road (WS-103)				$265,000		20%	$53,000	40%	$106,000	40%	$106,000
Green River Crossing (WS-102)	PR615			$800,000		20%	$160,000	40%	$320,000	40%	$320,000
16" east of Green River from 8th St	PR611	$335,000		$379,000		20%	$75,800	40%	$151,600	40%	$151,600
to Pump Station (WS-101)											
Meter Stations		$35,000									
Covington Water District Meter	Covington P.O.					5%	$0	47.5%	$0	47.5%	$0
Water District #111 Meter	W.D.#111 P.O.			$22,000		5%	$1,100			95.0%	$20,900
PIPING SUBTOTAL		$1,335,000		$22,000		5%	$1,100	95.0%	$20,900		
				$2,332,000		23.8%	$555,400	38.1%	$888,300	38.1%	$888,300
PUMP STATIONS											
Green River Pump Station (WS-104)	PR612	$350,000		$660,000		10%	$66,000	45%	$297,000	45%	$297,000
Intertie Pump Station (WS-107)	PR613	$245,000		$570,000		5%	$28,500	47.5%	$270,750	47.5%	$270,750
PUMP STATIONS SUBTOTAL		$595,000		$1,230,000		7.7%	$94,500	46.2%	$567,750	46.2%	$567,750
NEW SUPPLY FACILITIES											
Well #6 (S-106, S-108)	PR585	$625,000									
Drill and Develop				$190,000		28.6%	$54,286	35.7%	$67,857	35.7%	$67,857
Conveyance Line				$0		28.6%	$0	35.7%	$0	35.7%	$0
Pump Station				$612,000		28.6%	$174,857	35.7%	$218,571	35.7%	$218,571
Well #6 Total		$625,000		$802,000			$229,143		$286,429		$286,429
Well #7 (S-109, S-110)	PR591	$625,000									
Drill and Develop				$190,000		28.6%	$54,340	35.7%	$67,830	35.7%	$67,830
Conveyance Line				$479,000		28.6%	$136,994	35.7%	$171,003	35.7%	$171,003
Pump Station				$630,000		28.6%	$180,180	35.7%	$224,910	35.7%	$224,910
Conservation Garden/Parks				$59,000		100.0%	$59,000	0.0%		0.0%	
Well #7 Total		$625,000		$1,358,000			$430,514		$463,743		$463,743
NEW SUPPLY FACILITIES SUBTOTAL		$1,250,000		$2,160,000		30.5%	$659,657	34.7%	$750,172	34.7%	$750,172
TOTAL ESTIMATED CONSTRUCTION COST		$3,180,000		$5,722,000		22.9%	$1,309,557	38.6%	$2,206,222	38.6%	$2,206,222
ALLIED COSTS											
Contingency		$477,000	15.0%	$572,200	10.0%	22.9%	$130,956	38.6%	$220,622	38.6%	$220,622
State Sales Tax		$260,760	8.2%	$492,092	8.6%	22.9%	$112,622	38.6%	$189,735	38.6%	$189,735
Water Supply Program *	PR616			$538,944		50.9%	$274,237	24.6%	$132,354	24.6%	$132,354
Engineering Design		$206,700	6.5%								
Portico Group				*$69,755*		*22.9%*	*$15,964*	*38.6%*	*$26,895*	*38.6%*	*$26,895*
MBEI				*$292,113*		*22.9%*	*$66,854*	*38.6%*	*$112,630*	*38.6%*	*$112,630*
S & B				*$22,500*		*22.9%*	*$5,149*	*38.6%*	*$8,675*	*38.6%*	*$8,675*
CH2M & Hill -- IA#2				*$247,093*		*22.9%*	*$56,551*	*38.6%*	*$95,271*	*38.6%*	*$95,271*
CH2M & Hill -- Horizontal Direction Drilling				*$135,000*		*20.0%*	*$27,000*	*40.0%*	*$54,000*	*40.0%*	*$54,000*
PGG -- Wells				*$48,420*		*22.9%*	*$11,082*	*38.6%*	*$18,669*	*38.6%*	*$18,669*
HDR				*$15,000*		*22.9%*	*$3,433*	*38.6%*	*$5,784*	*38.6%*	*$5,784*
Auburn				*$50,000*		*22.9%*	*$11,443*	*38.6%*	*$19,278*	*38.6%*	*$19,278*
Subtotal				$879,882		22.4%	$197,476	38.8%	$341,203	38.8%	$341,203
Engineering Construction		$238,500	7.5%								
Portico Group				*$7,751*		*22.9%*	*$1,774*	*38.6%*	*$2,988*	*38.6%*	*$2,988*
MBEI				*$32,457*		*22.9%*	*$7,428*	*38.6%*	*$12,514*	*38.6%*	*$12,514*
S & B				*$2,500*		*22.9%*	*$572*	*38.6%*	*$964*	*38.6%*	*$964*
CH2M & Hill -- IA#2				*$30,077*		*22.9%*	*$6,884*	*38.6%*	*$11,597*	*38.6%*	*$11,597*
PGG -- Wells				*$48,420*		*22.9%*	*$11,082*	*38.6%*	*$18,669*	*38.6%*	*$18,669*
Auburn Daily Inspection				*$350,000*		*22.9%*	*$80,102*	*38.6%*	*$134,949*	*38.6%*	*$134,949*
Subtotal				$471,205		22.9%	$107,842	38.6%	$181,682	38.6%	$181,682
Legal		$31,800	1.0%	$35,000		22.9%	$8,010	38.6%	$13,495	38.6%	$13,495
Fiscal		$31,800	1.0%								
CCA, Inc.				*$25,000*		*22.9%*	*$5,722*	*38.6%*	*$9,639*	*38.6%*	*$9,639*
Auburn				*$75,000*		*22.9%*	*$17,165*	*38.6%*	*$28,918*	*38.6%*	*$28,918*
Subtotal				$100,000		22.9%	$22,886	38.6%	$38,557	38.6%	$38,557
Administration	PR616	$63,600	2.0%								
Auburn				*$55,000*		*22.9%*	*$12,587*	*38.6%*	*$21,206*	*38.6%*	*$21,206*
HCWL				*$71,496*		*22.9%*	*$16,363*	*38.6%*	*$27,567*	*38.6%*	*$27,567*
Subtotal				$126,496		22.9%	$28,950	38.6%	$48,773	38.6%	$48,773
Permits, Agency Approvals		$95,400	3.0%	$75,000		22.9%	$17,165	38.6%	$28,918	38.6%	$28,918
Engineering Surveys		$79,500	2.5%	$60,000		22.9%	$13,732	38.6%	$23,134	38.6%	$23,134
Land Purchase/Use		$104,940	3.3%								
Green River Pump Station				*$50,000*		*22.9%*	*$11,443*	*38.6%*	*$19,278*	*38.6%*	*$19,278*
Well #6				*$50,000*		*22.9%*	*$11,443*	*38.6%*	*$19,278*	*38.6%*	*$19,278*
Well #7				*$50,000*		*22.9%*	*$11,443*	*38.6%*	*$19,278*	*38.6%*	*$19,278*
Subtotal				$150,000		22.9%	$34,330	38.6%	$57,835	38.6%	$57,835
TOTAL ALLIED COST		$1,590,000	50.0%	$3,500,819	61.2%	27.1%	$948,205	36.5%	$1,276,307	36.5%	$1,276,307
PRELIMINARY PROJECT COSTS											
Cost of Service Study / Rate Study *	Fully Complete	$41,000		$41,000		62.2%	$25,502	18.9%	$7,749	18.9%	$7,749
Consultant Services											
Feasibility Studies and Water Rights Analysis	Covington	$41,522		$41,522		33.3%	$13,841	33.3%	$13,841	33.3%	$13,841
Development of Joint Operating Agreement	and WD#111	$9,406		$16,652		37.5%	$6,244	25.0%	$4,163	37.5%	$6,245
Final Engineering Report	P.O.'s	$7,198		$7,198		22.9%	$1,647	38.6%	$2,775	38.6%	$2,775
PRELIMINARY PROJECT COSTS SUBTOTAL		$99,126		$106,372		44.4%	$47,234	26.8%	$28,528	26.8%	$30,610
TOTAL COSTS -- CURRENT PROJECTS		$4,869,126		$9,329,190		24.7%	$2,304,996	37.6%	$3,511,056	37.7%	$3,513,138
FUTURE PROJECTS											
12" M Street from Well 1 to 6th Street SE (WS-110)		$120,000		$120,000		5%	$6,000	47.5%	$57,000	47.5%	$57,000
12" 6th Street SE from M Street to F Street (WS-111,WS-112)		$140,000		$140,000		5%	$7,000	47.5%	$66,500	47.5%	$66,500
12" F Street from 6th Street to 2nd Street SE (WS-113)		$85,000		$85,000		5%	$4,250	47.5%	$40,375	47.5%	$40,375
K Street Parallel pipeline and PRV (WS-114)		$65,000		$65,000		5%	$3,250	47.5%	$30,875	47.5%	$30,875
TOTAL ESTIMATED CONSTRUCTION COSTS		$410,000		$410,000		5.0%	$20,500	47.5%	$194,750	47.5%	$194,750
TOTAL ALLIED COSTS		$205,000	50.0%	$205,000	50.0%	5.0%	$10,250	47.5%	$97,375	47.5%	$97,375
TOTAL COSTS -- FUTURE PROJECTS		$615,000		$615,000		5.0%	$30,750	47.5%	$292,125	47.5%	$292,125
Total Lea Hill Intertie Project Costs		$5,484,126		$9,944,190		23.5%	$2,335,746	38.2%	$3,803,181	38.3%	$3,805,263

Exhibit D - Update approval

1. Auburn: _____ Date: 11-10-97
CWD: _____ Date: 10-09-97
WD111: _____ Date: 11-6-97

2. Auburn: _____ Date: _____
CWD: _____ Date: _____
WD111: _____ Date: _____

Exhibit E - Project Schedule

to

Interlocal Agreement 2

for

Lea Hill Intertie Project

Activity	Date
Execute IA2	September 3, 1996
Rates for service charges provided	September 15, 1996
CWD and WD111 each to provide $200,000 deposit to Auburn	October 15, 1996
CWD and WD111 each to provide $200,000 deposit to Auburn	January 10, 1997
CWD and WD111 each to provide $400,000 deposit to Auburn	April 25, 1997
CWD and WD111 each to provide $500,000 deposit to Auburn	July 6, 1997
CWD and WD111 each to provide $500,000 deposit to Auburn	January 5, 1998
Complete Construction of Wells 6 and 7	January 15, 1998
CWD and WD111 each to provide $600,000 deposit to Auburn	April 6, 1998
Complete River Crossing	July 6, 1998
CWD and WD111 each to provide $500,000 deposit to Auburn	July 6, 1998
CWD and WD111 each to provide $350,000 deposit to Auburn	October 5, 1998
CWD and WD111 each to provide $350,000 deposit to Auburn	May 7, 1999
Complete Construction of Waterlines and Pump Stations	May 14, 1999
Commissioning	May 28, 1999

Exhibit E - Project Schedule
(Continued)

Activity	Date
Interim Project Cost Accounting	June 30, 1999
CWD and WD111 each to provide $200,000 deposit to Auburn	July 5, 1999
Balancing Payment per Interim Accounting	July 26, 1999
Obtain Primary Water Rights for Wells 6 and 7	January 3, 2000
Final project Cost Accounting	March 17, 2000
Final CWD and WD111 Balancing Payment to Auburn	April 17, 2000

Exhibit E
Update Approval

1. Auburn: _____, Dated: 11-10-97
   CWD: _____, Dated: 10-09-97
   WD111: _____, Dated: 11/6/97
2. Auburn: _____, Dated: _____
   CWD: _____, Dated: _____
   WD111: _____, Dated: _____
3. Auburn: _____, Dated: _____
   CWD: _____, Dated: _____
   WD111: _____, Dated: _____

REF. H:\PROJ\PR616-17\E97-954

ORIGINAL

RESOLUTION NO. 2782

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR TO EXECUTE A NEW FRANCHISE AGREEMENT BETWEEN THE CITY OF AUBURN AND KING COUNTY TO CONSTRUCT, OPERATE AND MAINTAIN A WATER SYSTEM IN COUNCIL DISTRICTS 7, 9 AND 13, UNTIL YEAR 2021, AND A SHORT TERM FRANCHISE TO CONSTRUCT, OPERATE AND MAINTAIN A SEWER SYSTEM IN COUNCIL DISTRICT 7, 9 AND 13 UNTIL MARCH, 1998.

THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, IN A REGULAR MEETING DULY ASSEMBLE, HEREWITH RESOLVES THAT:

SECTION 1. AGREEMENT The Mayor of the City of Auburn is herewith authorized to execute a Franchise Agreement between the City of Auburn and King County to construct, operate and maintain a water system in Council Districts 7, 9 and 13, until year 2021, and a short term franchise to construct, operate and maintain a sewer system in Council Districts 7,9, and 13 until March, 1998. A copy of said Agreement is attached hereto, denominated as Exhibit "A", and a copy of King County Ordinance No. 12473 approving the franchise is

attached hereto denominated as Exhibit "B", and made a part hereof as though set forth in full herein.

SECTION 2. AUTHORIZATION. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

DATED and SIGNED this 18th day of November, 1996.

CITY OF AUBURN

Charles A. Booth

CHARLES A. BOOTH
MAYOR

ATTEST:

Robin Wohlhueter

Robin Wohlhueter
City Clerk

APPROVED AS TO FORM:

Michael J. Reynolds,
City Attorney

12473

FRANCHISE NO.____

In the matter of the application for a franchise to operate, maintain, repair, and construct water mains and service lines, and appurtenances in, over, along, and under County roads and rights-of-way in King County, Washington.

The application of the CITY OF AUBURN for a franchise to operate, maintain, repair and construct water mains and service lines, and appurtenances in, over, along, and under County roads and rights-of-way located within the area described in attached Exhibit "A" has been heard on this 30th day of September, 1996. All of the property described in Exhibit "A" lies outside the limits of any incorporated Town or City.

Legal notice of the franchise application and of the hearing has been given as is required by law.

The King County Council, having considered the interests proposed and advanced, and finding that the granting of this franchise is in the public interest, ORDERS that a franchise be granted to the CITY OF AUBURN, the Grantee, subject to the conditions set forth in Exhibit "B" attached hereto, this franchise and Ordinance No. 12473. This franchise grants the right, privilege, authority and franchise to operate, maintain, repair and construct mains and service lines and appurtenances as a part of its distribution system in, over, along, and under County roads and rights-of-way located within the area described in Exhibit "A".

12473

This franchise is granted subject to all of the terms and conditions contained herein, within Ordinance No. 12473 and Exhibit "B", and shall expire in twenty-five years on 9/30, 2021.

Dated this 14th day of October, 1996.

KING COUNTY, WASHINGTON

BY Gary Locke

TITLE King County Executive

The undersigned accepts all the rights, privileges, and duties of this franchise subject to all terms, conditions, stipulations, and obligations contained herein, within Ordinance 12473 and Exhibit "B".

CITY OF AUBURN
GRANTEE

BY Charles A. Booth

TITLE Mayor

Dated this 26th day of November, 1996.

Exhibit "A"

Beginning at the northwest corner of the George E King Donation Land Claim No. 40 situate in Section 31, Township 22 North, Range 5 East, W.M. also known as the southeast corner of the R H Beatty Donation Land Claim No. 37 and No. 44 situate in Section 31, Township 22 North, Range 5 East, W.M. and in Section 36, Township 22 North, Range 4 East, W.M.; Thence westerly along the south boundary of said R H Beatty Donation Land Claim No. 37 and 44 and the south boundary of the John M. Thomas Donation Land Claim No. 42 situate in Section 36, Township 22 North, Range 4 East, W.M. to the easterly boundary of the corporate city limits of the City of Auburn as described in the City of Auburn annexation Ordinance No. 4770; Thence northerly along said easterly boundary of the corporate city limits, 49.5 feet; thence easterly along a line parallel with said south boundary of the John M Thomas Donation Land Claim No. 42 an the south boundary of said R H Beatty Donation Land Claim No. 37 and 44 to the east boundary of said R H Beatty Donation Land Claim No 37 and 44; Thence easterly along a line parallel with and 49.5 feet north, measured at right angles of the north boundary of said George E King Donation Land Claim No. 40, and along said parallel line extended easterly, to the thread of the Green River; Thence southerly along said thread of the Green River to the north boundary of said George E King Donation Land Claim No. 40, extended easterly; thence westerly to the point of beginning.

Together with:

Beginning with the northwest corner of Section 5, Township 21 North, Range 5 East, W.M. Thence easterly along the north boundary of said Section 5 to the thread of the Green River as described in the City of Auburn Annexation Ordinance No. 2511; Thence southerly along said thread of the Green River to the south boundary of Government No. 4, situate in Section 5, Township 21 North, Range 5 East, W.M., extended westerly; Thence easterly along said south boundary to the easterly margin of the Green River Road and the westerly boundary of the City of Auburn Annexation No. 4710; Thence northerly along said westerly boundary of the City of Auburn Annexation No. 4710 to the north boundary of the south 30.00 feet of Section 32, Township 22 North, Range 5 East, W.M.; Thence westerly along said north boundary to said thread of the Green River as described in the City of Auburn Annexation Ordinance No. 2511; Thence southerly along said thread of the Green River to said north boundary of Section 5.

Together with:

Beginning at the southwest corner of the S E 1/4 of the S W 1/4 of Section of Section 32, Township 22 North, Range 5 East, W.M.; Thence northerly along the west boundary of said S E 1/4 of the S W 1/4 of Section 32 to the north boundary of the South 30.00 feet of said Section 32; Thence easterly along said north boundary of Section 32 and along the north boundary of the south 30.00 feet of Section 33, Township 22 North, Range 5 East, W.M. to the west boundary of the east 285 feet of the S W 1/4 of said Section 33 as measured along the south boundary of said Section 33; Thence southerly along said west boundary to said south boundary of Section 33; Thence southerly along a line parallel with the east boundary of the West 1/2 of Section 4, Township 21 North, Range 5 East, W.M.; Thence easterly parallel with the north boundary of said Section 4, a distance of 100 feet; Thence southerly parallel with said east boundary of the West 1/2 of Section 4, a distance of 114.00 feet; Thence easterly parallel with said north boundary of Section 4, a distance of 155.00 feet to the west boundary of the east 30.00 feet of said West 1/2 of Section 4; Thence southerly along said west boundary of the east 30.00 feet to the south boundary of the North 1/2 of the South 1/2 of said Section 4; Thence easterly along said south boundary and along the south boundary of the North 1/2 of the South 1/2 of Section 3, Township 21 North, Range 5 East, W.M. to the northwesterly margin of Primary State Highway No. 2, also known as State Route 18; Thence southerly and westerly along said northwesterly margin to the easterly corporate

city limits of the City of Auburn; Thence northerly and westerly along said easterly corporate city limits of the City of Auburn to the south boundary of Government Lot No. 4 in Section 5, Township 21 North, Range 5 East, W.M. extended westerly; Thence easterly to the southeast corner of said Government Lot No 4; Thence northerly to the point of beginning.

Together with:

Beginning at the southwest corner of the N E 1/4 of the S W 1/4 of Section 21, Township 21 North, Range 5 East, W.M., said point located on the easterly corporate city limits of the City of Auburn; Thence northerly along said corporate city limits of the City of Auburn to the southeasterly margin of said Primary State Highway No. 2, also known as State Route No. 18; Thence northeasterly along said southeasterly margin to the thread of the Green River; Thence southeasterly along said thread of the Green River to the east boundary of Section 26, Township 21 North, Range 5 East, W.M.; Thence southerly along said east boundary of Section 26 and southerly along the east boundary of Section 35, Township 21 North, Range 5 East, W.M. to the southeast corner of said Section 35; Thence westerly along the south boundary of said Section 35 to the thread of the White River and the easterly corporate city limits of the City of Auburn; Thence north and westerly along said easterly corporate city limits of the City of Auburn to the point of beginning.

Together with:

Beginning at the southwest corner of Section 36, Township 22 North, Range 4 East, W.M.; Thence northerly along the westerly boundary of said Section 36 to the northerly margin of South 277th Street, also known as 52nd Street N W, which is the southerly corporate limits of the City of Kent; Thence easterly along said northerly margin of South 277th Street and along the southerly corporate limits of the City of Kent and along the northerly corporate limits of the City of Auburn to the westerly margin of Auburn Way North; Thence southeasterly along said westerly margin 2100 feet, more or less, to the westerly corporate city limits of the City of Auburn as described in the City of Auburn Ordinance No. 2511; Thence southerly along said westerly corporate city limits to the southerly boundary of the W A Cox Donation Land Claim No. 38 and 41; Thence westerly along said southerly boundary to the easterly boundary of the Plat of White River Valley Home Tracts as recorded in Volume 13 of Plats, Page 17, records of King County, Washington; Thence northerly along said easterly boundary of the Plat of White River Valley Home Tracts to the northeast corner of Tract 20 of said Plat of White River Valley Home Tracts; Thence westerly along the north boundary of said Tract 20 to the westerly margin of 80th Avenue South; Thence southerly along said westerly margin of 80th Avenue South to the southerly boundary of Section 36, Township 22 North, Range 4 East, W.M. Thence westerly to the point of beginning.

Less that portion of the above described franchise areas lying within the corporate city limits of the City of Auburn, Washington and less that portion of the above described franchise areas lying within the corporate city limits of the City of Kent, Washington.

EXHIBIT "B"

TERMS AND CONDITIONS APPLICABLE TO

UTILITIES FRANCHISES GRANTED BY KING COUNTY

THIS FRANCHISE is subject to the following terms and conditions:

1. DEFINITIONS

References to any County official or office also refers to any office that succeeds to any or all of the responsibilities of the named office or official. References to laws or "applicable laws" include federal, state, and local laws and regulations adopted pursuant to those laws; unless otherwise stated, references to laws include laws now in effect, as the same may be amended from time to time during the operation of this franchise. In addition, the following definitions shall apply:

Cable Services. The term "Cable Services" is used as defined in 47 United States Code 522 (5), as amended.

Cable System. The term "Cable System" is used as defined in 47 United States Code 522 (6), and King County Code 6.a.010 (J) as amended.

County Road Rights-of-Way. The term "County Road Rights-of-Way" includes any road, street, avenue, or alley located within the area described in the attached Exhibit "A", it does not include recreational or nature trails except where the trails intersect or are within roads, streets, avenues or alleys.

Director. The term "Director" refers to the chief executive of the King County Department of Transportation.

Grantee. The term "Grantee" refers to the CITY OF AUBURN its successors and those assignees approved pursuant to paragraph 16 herein.

Utility. The term "utility" refers either to the Grantee or, depending on the context, to any other person, firm, or corporation, public or private, which may hold a franchise to maintain and operate similar facilities in, under, over, across, and along any of the County property described in Exhibit "A".

Council. The term "Council" refers to the King County Council, acting in its official capacity.
Other Governing Body. The term "Other Governing Body" refers to any public official or other public board or body as may have the power and jurisdiction to permit or regulate the installation and maintenance of utilities and other facilities in, under, over, across, and along any of the county property described in Exhibit "A".

2. ACCEPTANCE BY GRANTEES OF TERMS AND CONDITIONS

The full acceptance of this franchise and all of its terms and conditions shall be filed with the Clerk of the Council within forty-five (45) days from _____, 19____, by the Grantee. Full acceptance of this franchise is a condition precedent to its taking effect, and unless this franchise is accepted within the time specified, this grant will be null and void and have no force or effect.

3. NON-EXCLUSIVE FRANCHISE

This franchise is not exclusive. It does not prohibit King County from granting franchises for other public or private utilities, in, under, over, across, and along any County property, including County road rights-of-way.

This franchise does not prevent or prohibit King County from constructing, altering, maintaining or using any County road rights-of-way covered by this franchise. King County retains full power to make all changes, relocations, repair, maintenance, etc. as it may deem fit.

4. JURISDICTION

This franchise is intended to convey limited rights and interest only as to those roads and rights- of-way in which King County has an actual interest. It is not a warranty of title or of interest in County road rights-of-way.

Whenever any of the County road rights-of-way as designated in this franchise, by reason of the subsequent incorporation of any Town or City or extension of the limits of any Town or City, shall later fall within the City or Town limits, this franchise shall continue in force and effect until such time as the incorporation and/or annexation is complete according to applicable State law, after which time the County will no longer have any responsibility for maintenance of any County roads, rights-of-way or other County property within the area of annexation/incorporation.

None of the rights granted to the Grantee shall affect the jurisdiction of King County over County road rights-of-way or the County's power to perform work upon its roadways, rights-of-way or appurtenant drainage facilities including by constructing, altering, renewing, paving, widening, grading, blasting or excavating.

All of the rights herein granted shall be subject to and governed by this franchise; provided, however, that nothing in this franchise may be construed in any way as limiting King County's rights to adopt ordinances which are necessary to protect the health, safety and welfare of the general public.

5. REGULATION OF USE AND CONTROL

This franchise does not deprive King County of any powers, rights, or privileges it now has or may later acquire in the future to regulate the use of and to control the County road rights-of-way covered by this franchise.

This franchise authorizes the use of County rights-of-way solely for the delivery by the Grantee of natural gas to it customers. Additional uses of County rights-of-way by the Grantee, including for cable communication services, shall first require a separate franchise from King County which conforms to the requirements of K.C.C. 6.27 as amended, or K.C.C. 6.27A as amended, and other applicable law.

Any use of the Grantee's equipment of facilities in County rights-of-way by others, including for telecommunication or cable communication services, is prohibited unless separately authorized and approved in writing by King County. The Grantee agrees that prior to authorizing any person to use the Grantee's equipment or facilities located in County rights-of-way, the Grantee will require the user to provide the Grantee with an affidavit that it has obtained the necessary franchise or other approval from the County to operate and provide the proposed service in County rights-of-way. At least thirty (30) day prior to executing any agreement with a potential user for the use of the Grantee's equipment or facilities, the Grantee shall fax the affidavit to the King County Office of Cable Communication at 206-296-0842.

6. EMINENT DOMAIN

This franchise and the limited rights and interests for the operation, maintenance, repair, and construction of Grantee's transmission and service lines and appurtenances are subject to the exercise of eminent domain. In the event of an exercise of eminent domain by King County, the value to be attributed to all the rights and interests granted under this franchise shall not exceed the actual amount the Grantee paid to King County in obtaining this franchise.

7. ENFORCEMENT

Failure of King County, on one or more occasions to exercise a right or to require compliance or performance under this franchise or any applicable law, shall not be deemed to constitute a waiver of such right or a waiver of compliance or performance, unless such right has been specifically waived in writing. Failure of King County to enforce or exercise its rights under any provision of this franchise or applicable law does not constitute a waiver of its rights to enforce or exercise a right in any other provision of this franchise or applicable law.

8. INDEMNITY AND HOLD HARMLESS

The Grantee agrees to indemnify and hold harmless King County as provided herein to the maximum extent possible under law. Accordingly, the Grantee agrees for itself, its successors, and assigns to defend, indemnify and hold harmless King County, its appointed and elected officials, and employees from and against liability for all claims, demands, suits, and judgments, including costs of defense thereof, for injury to persons, death, or property damage which is caused by, arises out of, or is incidental to Grantee's exercise of rights and privileges granted by this franchise. The Grantee's obligations under this section shall include:

(a) Indemnification for such claims whether or not they arise from the sole negligence of the Grantee, the concurrent negligence of both parties, or the negligence of one or more third parties.

(b) The duty to promptly accept tender of defense and provide defense to the County at the Grantee's own expense.

(c) Indemnification of claims made by the Grantee's own employees or agents.

(d) Waiver of the Grantee's immunity under the industrial insurance provisions of Title 51 RCW, which waiver has been mutually negotiated by the parties.

In the event it is necessary for the County to incur attorney's fees, legal expenses, or other costs to enforce the provisions of this section, all such fees, expenses and costs shall be recoverable from the Grantee.

In the event it is determined that RCW 4.24.115 applies to this franchise agreement, the Grantee agrees to defend, hold harmless and indemnify King County to the maximum extent permitted thereunder, and specifically for its negligence concurrent with that of King County to the full extent of Grantee's negligence. Grantee agrees to defend, indemnify and hold harmless the County for claims by Grantee's employees and agrees to waiver of its immunity under Title 51 RCW, which waiver has been mutually negotiated by the parties.

King County shall give the Grantee timely written notice of the making of any claim or of the commencement of any such action, suit, or other proceeding covered by the indemnity in this section. In the event any such claim arises, the County or any other indemnified party shall tender the defense thereof to the Grantee and the Grantee shall have the duty to defend, settle, or compromise any claims arising hereunder and the County shall cooperate fully therein.

Notwithstanding the above, the County shall have no obligation to tender a defense as a condition of the indemnity where there is a material conflict between the interests of the Grantee and King County.

9. VACATION

If at any time King County vacates any County road rights-of-way covered by this franchise, King County will not be held liable for any damages or loss to the Grantee by reason of such vacation. King County may, after giving thirty (30) days written notice to the Grantee, terminate this franchise with respect to any County road rights-of-way vacated.

10. REPAIR, REMOVAL OR RELOCATION

The Grantee hereby covenants, at its own expense, to repair, remove, or relocate existing facilities including all appurtenant facilities and service lines connecting its system to users, within King County road rights-of-way if such repair, removal, or relocation is required by King County for any County road purpose. Such repair, removal, or relocation shall not be unreasonably required.

The grantee shall, at no expense to the County, adjust, remove or relocate existing facilities within County road rights-of-way, including all appurtenant facilities and service lines connecting its system to users, if the County determines such adjustment, removal or relocation is reasonably necessary to allow for an improvement or alteration planned by the County in such road right-of-way. The County shall give the Grantee written notice of such requirement as soon as practicable, at the beginning of the pre-design stage for projects that are part of the County's capital improvement program, including such available information as is reasonably necessary for the Grantee to plan for such adjustment, removal or relocation.

For projects that are a part of the County's capital improvement program, in addition to any other notice given to the Grantee, the County shall provide a vertical and horizontal profile of the roadway and drainage facilities within it, both existing and as proposed by the County, and the proposed construction schedule; notwithstanding any permit conditions that may later be applied to the County project, this initial design information shall be given at least 180 days before construction is scheduled to begin, except in cases of urgent construction or emergencies. The Grantee shall respond to this notice, and to any later notices of revised designs based on permit conditions, within no more than thirty (30) days by providing to the County the best available information as to the location of all of the Grantee's facilities, including all appurtenant facilities and service lines connecting its system to users and all facilities that it has abandoned, within the area proposed for the public works project.

The County shall offer the Grantee the opportunity to participate in the preparation of bid documents for the selection of a contractor to perform the public works project as well as all required adjustments, removals or relocations of the Grantee's facilities. Such bid documents shall provide for an appropriate cost allocation between the parties. The County shall have sole authority to choose the contractor to perform such work. The Grantee and the County may negotiate an agreement for the Grantee to pay the County for its allocation of costs, but neither party shall be bound to enter into such an agreement. Under such an agreement, in addition to the Grantee's allocation of contractor costs, the Grantee shall reimburse the County for cost, such as for inspections or soils testing, related to the Grantee's work and reasonably incurred by the County in the administration of such joint construction contracts. Such costs shall be calculated as the direct salary cost of the time of County professional and technical personnel spent productively engaged in such work, plus overhead costs at the standard rate charged by the County on other similar projects, including joint projects with other County agencies.

11. REQUIREMENT OF CONSTRUCTION PERMITS

The Grantee, its successors or assigns, has the right, privilege, and authority to enter the County road rights-of-way for the purpose of operating, maintaining, repairing or construction its transmission and service lines and appurtenances on the condition that it obtains permits approved by the Director and Property Services Division and, when applicable, by the Department of Development and Environmental Services. Applications for work permits shall be presented to the Property Services Division which may require copies of plans, blueprints, cross-sections, or further detailing of work to be done. In the event of an emergency, the Grantee may immediately commence the necessary work and shall apply the next business day for the work permit. Any work done, whether by Grantee, its contractors, or third parties will include necessary paving, patching, grading and any other reasonably necessary repair or restoration to the County road rights-of-way. All work shall be done to the satisfaction of the Director.

All equipment, lines and appurtenances which are used in the operation, maintenance, repair or construction of the Grantee's service and which are located within the County road rights-of-way shall be considered to be part of the Grantee's system and shall be the responsibility of the Grantee. All permits for the operation, maintenance, repair or construction of said system shall be applied for and given in the name of the Grantee, who will be responsible for all work done under the permit. The Grantee remains responsible whether the work is done by the Grantee, its contractors, or by third parties.

The Grantee shall, at no expense to the County, assume the following obligations with respect to the facilities connected to its system that are within County road rights-of-way and which it does not own, including appurtenant facilities and service lines connecting its system to users:

(a) The Grantee shall apply for, upon request and on behalf of the owner of the facilities, a County right-of-way construction permit for any repairs required for such facilities; provided such owner agrees to reimburse the Grantee for all costs incurred by the Grantee and any other reasonable conditions the Grantee requires as a precondition to applying for the permit. All work to be performed in the County right-of-way shall comply with all conditions of the County permit and all applicable County requirements. The Grantee may at its option perform any part of the repair with its own forces or require the owner to employ a contractor for that purpose, provided such contractor is approved by the County;

(b) In the event that the County determines emergency repair of such facilities is necessary to halt or prevent significant damage to County road rights-of-way or significant threats to the health, safety and welfare of parties other than the owner or the occupants of the building served by such facilities, the Grantee shall take prompt remedial action to correct the emergency to the County's approval, which the County shall not unreasonably withhold;

(c) When the County or its contractor provides notice to the Grantee, pursuant to RCW 19.122, of its intent to excavate within County road rights-of-way, the Grantee shall provide to the County or its contractor the best information available from the Grantee's records or, where reasonable, from the use of locating equipment as to the location of such facilities, including surface markings where these would reasonably be of use in the excavation. If the Grantee fails to make good faith efforts to provide the above information within the deadlines provided by RCW 19.122, the Grantee shall hold the County harmless for all reasonable costs that result from damage to such facilities if such damage occurs as a result of the failure to provide such information. Nothing in this subsection is intended or shall be construed to create any rights in any third party or to form the basis for any obligation or liability on the part of the County or the Grantee toward any third party, nor is anything in this subsection intended to be construed to alter the rights and responsibilities of the parties under RCW 19.122, as amended.

12. RESTORATION OF COUNTY ROAD RIGHTS-OF-WAY

After work on, under or adjacent to County road rights-of-way, the Grantee is responsible for and will leave all County road rights-of-way in as good a condition as they were in before any work was done. In the event that the Grantee, its contractors, or third parties working under permit should fail to restore County road rights-of-way to the satisfaction of the Director, King County may make such repairs or restorations as are necessary to return the County road rights-of-way to its pre-work condition. Upon presentation of an itemized bill for repairs or restorations, including the costs of labor and equipment, the Grantee will pay the bill within thirty (30) days. If suit is brought upon the Grantee's failure to pay for repair and restoration, and if judgment in such a suit is entered in favor of King County, then the Grantee shall pay all of the actual costs, including interest from the date the bill was presented, disbursements, and attorney's fees and litigation related costs incurred.

13. PERFORMANCE OF WORK

The Grantee covenants that in consideration for the rights and privileges granted by this franchise, all work performed by the Grantee on County road rights-of-way shall conform to all County requirements including, but not limited to, the requirements of the current edition of the County Road Standards in force when the work is performed and all traffic control shall also conform to the current edition of the Manual of Uniform Traffic Control Devices in force when the work is performed.

14. BLASTING REQUIREMENTS

The right to operate, maintain, repair and construct Grantee's distribution and service lines and appurtenances granted by this franchise does not preclude King County, its agents or contractors from blasting, grading, or doing other road work to the Grantee's lines and appurtenances. Except in the case of an emergency, the Grantee will be given ten (10) business days written notice of any blasting so that the Grantee may protect its lines and appurtenances. If the Grantee notifies the County within ten (10) business days that the facilities will have to be relocated to protect them from blasting, the County will defer the blasting for up to ninety (90) days from the date of the original notice. In no event will the Grantee be given less than two (2) business days written notice of any blasting. Notification of any excavation shall be provided through the One-Call System as provided by RCW 19.122, as hereinafter amended.

15. SURVEY MARKERS AND MONUMENTS

It shall be the responsibility of the Grantee performing any construction work in the County road rights-of-way to restore any survey markers or monuments disturbed by such construction in accordance with RCW 58.09.130, and as hereinafter amended.

16. ASSIGNMENT

The Grantee shall not have the right to assign this franchise without the consent of the Metropolitan King County Council given by Ordinance. No assignment shall be effective unless an acceptance by the assignee of all rights, conditions, terms, provisions, and responsibilities contained within the franchise, as well as surety bonds which the Council deems necessary to be posted are received. Council approval of the assignment may be made subject to the assignee's acceptance of new or modified terms of the franchise.

17. EXPIRATION AND RENEWAL

To the extent described in Exhibit "A", all rights granted by this franchise to County road rights-of-way outside incorporated Towns and Cities apply to all existing County road rights-of-Way improved and unimproved and to all County road rights-of-way acquired by King County during the term of this franchise.

If the Grantee has initiated a renewal of this franchise before it expires, the County may, at its sole discretion, extend the term of the franchise on a month to month basis for up to one year. Should the County elect to extend the franchise, written notice shall be provided to the Grantee before the franchise expiration date.

If the Grantee has not applied for a renewal of this franchise before it expires, King County has the right to remove or relocate any lines and appurtenances of the Grantee as is reasonably necessary for the public's health, welfare, safety, or convenience including, but not limited to, the safe operation of County roads, franchise holders, or for the construction, renewing, altering, or improving of any County road right-of-way, or for the installation of lines and/or facilities of other franchise holders. Grantee shall be liable for the costs incurred in any removal or relocation of its lines and appurtenances under this section. Costs include the expense of labor and equipment.

Upon expiration of this franchise, the Grantee shall continue to be responsible for the operation and maintenance of existing facilities in the County road rights-of-way until removed, assigned to another franchised utility or abandoned; however, the Grantee shall not have the right to provide additional services or construct new facilities. King County will issue permits required for the repair and maintenance of the existing facilities in accordance with K.C.C. 14.44.055 as amended and Section 11 of this franchise. This section and sections 8, 10-13 and 15 of this franchise shall continue in force until such time as the lines are removed from County road rights-of-way, assigned to another franchised utility, or abandoned in place with the approval of the Manager of the Department of Transportation, Road Services Division.

18. RESERVATION OF RIGHTS

King County specifically reserves for itself the right to impose a utility tax on the Grantee if such taxing authority is granted by State of Washington and the local option is exercised by the King County Council.

King County also specifically reserves the right to exercise authority it has or may acquire in the future to secure and receive fair market compensation for the use of its property, pursuant to an ordinance. If King County elects to exercise such authority, the fair market compensation requirement for Grantee shall be imposed by ordinance not less than one hundred eighty (180) days after written notice ("Compensation Notice") is delivered to the Grantee, said Compensation Notice identifying with specificity the definition, terms and/or formula to be used in determining such fair market compensation. Acceptance of King County's definition terms and/or formula identified in the Compensation Notice will occur if the Grantee accepts in writing within thirty (30) days of receipt of the Compensation Notice; or, if Grantee takes no action in writing within thirty (30) days of receipt of the Compensation Notice; in which case the applicable ordinance that the King County Council passes will be determinative.

Nothing in this section shall be construed as an agreement by the Grantee of King County's right to exercise authority it has or may acquire in the future to secure and receive fair market compensation for the use of property. Nothing in this section shall be construed to prohibit the Grantee from challenging, in King County Superior Court or a court of competent jurisdiction, the legality of such right.

Grantee's rejection of the definition, terms, and/or formula identified in the Compensation Notice will only occur if such rejection is in written form, identifying with specificity the grounds for such rejection, and delivered to King County within thirty (30) days after receipt of the Compensation Notice, in which case the below identified arbitration terms will apply:

(a) The Grantee and King County will select one arbitrator each, and the two selected arbitrators will select a third arbitrator. If the two arbitrators have not selected a third arbitrator within thirty (30) days after the selection of the last selection of the two, either the Grantee or King County may apply to the presiding judge of the King County Superior Court for the appointment of a third arbitrator. The three arbitrators will determine the method for determining the fair market compensation for the County property used by the Grantee. The arbitration procedure employed shall be consistent with the rules and procedures of the American Arbitration Association. The decision of a majority of the arbitrators will bind both the Grantee and King County. At the conclusion of the arbitration, the arbitrators will submit written reports to the Grantee and King County which shall contain all pertinent evidence that led to their conclusion together with an explanation of their reasoning for such conclusion.

(b) The fees of the arbitrators selected by each party shall be paid by that party, and the fees of the third arbitrator shall be paid one-half by the County and the Grantee. The other costs of the proceeding shall be shared equally by the County and the Grantee.

(c) In event that the question of fair market compensation is not resolved prior to the effective date specified by the ordinance authorizing said compensation, the arbitration decision will be applied retroactively to the effective date in the ordinance. The Grantee will pay the retroactive sum plus interest in the amount of twelve percent (12%) per annum.

Nothing in this franchise may be construed to limit the exercise of authority now or later possessed by the County or any other governing body having competent jurisdiction to fix just, reasonable and compensatory rates or other requirements for services under this franchise. Nothing in this section shall be construed to prohibit the Grantee from challenging, in King County Superior Court or a court of competent jurisdiction, the authority of the County or any other governing body to fix rates or other requirements for services.

19. COMPLIANCE WITH LAWS

Grantee shall conform to all applicable federal, state and local laws and regulations including, but not limited to, the State Environmental Policy Act and King County environmental standards and ordinances.

20. NON-DISCRIMINATION CLAUSE

In all hiring or employment made possible or resulting from this franchise agreement, there shall be no discrimination against any employee or applicant for employment because of sex, sexual orientation, age, race, color, creed, national origin, marital status or the presence of any sensory, mental, or physical handicap, unless based upon a bona fide occupational qualification, and this requirement shall apply to but not be limited to the following: employment, advertising, lay-off or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship.

No person shall be denied, or subjected to discrimination in receipt of the benefit of any services or activities made possible by or resulting from this agreement on the grounds of sex, sexual orientation, race, color, creed, national origin, age except minimum age and retirement provisions, marital status, or the presence of any sensory, mental or physical handicap.

Any violation of this provision shall be considered a violation of a material provision of this agreement and shall be grounds for cancellation, termination or suspension in whole or in part, of the agreement by the County and may result in ineligibility for further County agreements.

The Grantee shall make the best efforts to make opportunities for employment and/or contracting services available to women and minority persons. The Grantee recognizes that King County has a policy of promoting affirmative action, equal opportunity and has resources available to assist Grantee in these efforts.

21. PENALTY FOR VIOLATION OF CONDITIONS

If the Grantee shall violate or fail to comply with any of the material terms, conditions, or responsibilities of this franchise through neglect or failure to obey or comply with any notice given the Grantee under the provisions of this franchise or if the Grantee abandons its franchise, the Council may revoke this franchise. King County shall give written notice of its intent to revoke this franchise. A public hearing shall be scheduled within forty-five (45) days following the notification. The decision to revoke this franchise will become effective ninety (90) days following the public hearing if the County, by ordinance, finds:

A. That the Grantee has not substantially cured the violation or failure to comply which was the basis of the notice; or

B. that the violation or failure to comply which was the basis of the notice is incapable of cure; or

C. that the Grantee has repeatedly violated or failed to comply with any of the material terms, conditions, or responsibilities of the franchise, even though the individual violations have been cured; and

D. that the revocation of the franchise is in the public interest.

During the forty-five (45) days following the notification, the Grantee shall have the opportunity to remedy the failure to comply.

22. RIGHT OF APPEAL

Decisions, requirements, or approvals of the Director are binding on the parties to this document. Appeals from the Director's determinations will be made by filing a complaint with the King County Superior Court.

23. SEVERANCE

This franchise gives effect to purposes and uses which are consistent with economical and efficient services rendered in the public interest. If any provision of this franchise, or its application is determined to be invalid by a court of law, then the remaining provisions of this franchise shall continue and remain valid unless the dominant purpose of the franchise would be prevented or the public interest is no longer served.

Revised 07/25/96

12473

FRANCHISE EXTENSION AGREEMENT

RECITALS

WHEREAS, the City of Auburn currently holds water and sewer Franchise 7543 granted by King County, Washington for the operation of its sewer and water system in unincorporated King County; and

WHEREAS, the City of Auburn franchise expired on November 30, 1994; and

WHEREAS, the City of Auburn has requested a renewal of said franchise; and

WHEREAS, a water and sewer franchise was approved by the Council under Ordinance 7543 on May 22, 1989. This extension is for the sewer portion only; and

WHEREAS, the water franchise for that portion of the water system will be incorporated in the franchise for proposed Ordinance No. 96-682, which consolidates all of the City of Auburn water franchises into one franchise agreement; and

WHEREAS, the City of Auburn, King County and the Utilities Technical Review Committee recommend that said franchise be extended until March 1, 1998 to give the City the opportunity to complete and obtain approval of its updated sewer comprehensive plan; and

WHEREAS, no objections have been raised to the granting of this request; and

WHEREAS, King County has approved the extension of this franchise until March 1, 1998 through the passage of Ordinance No. 12473 subject to the conditions contained in the ordinance and this agreement.

NOW, THEREFORE, King County, Washington and the City of Auburn, agree as follows:

1. The terms of King County Water and Sewer Franchise 7543 is hereby approved and extended so that it will now expire on March 1, 1998.

2. All other conditions of King County Water and Sewer Franchise 7543 shall remain in full force and effect and are not modified or amended by this agreement or Ordinance No. _____.

THIS AGREEMENT entered into this 26th day of November, 1996.

CITY OF AUBURN, WASHINGTON

BY: Charles A. Booth

TITLE: Mayor

DATE: 11-26-96

KING COUNTY, WASHINGTON

BY: [signature]

TITLE: _____

DATE: October 17, 1996

09/06/96
AUBRNSB2.96/MMc

CHRISTOPHER VANCE
Introduced By: Brian Derdowski
Proposed No: 96-682

ORDINANCE NO. 12473

AN ORDINANCE approving a franchise for the City of Auburn to construct, operate and maintain water system in Council Districts 7, 9 and 13, and a short term franchise to construct, operate and maintain a sewer system in Council Districts 7, 9 and 13, and authorizing the Executive to execute the franchise agreements.

STATEMENT OF FACTS:

1. The City of Auburn has filed an application for franchises in council districts 7, 9 and 13 to construct, operate and maintain water and sewer systems to serve residential, multi-family and commercial areas in accordance with R.C.W. 36.55.010 and K.C.C. 6.27.

2. The city's comprehensive plan for water was approved on June 17, 1996, by King County Ordinance 12342.

3. The city's sewer plan was approved in 1982. K.C.C. 13.24.110 requires that the sewer plan be updated by the end of 1996, and further, that it be updated every 6 years or that a demonstration be made that the plan is consistent with the 1994 King County Comprehensive Plan. There is no documentation offered to show that such a demonstration has been made.

4. The existing franchises expired in May of this year.

5. The application has been referred to the relevant county departments for review.

6. The King County executive has recommended approval of the franchise.

7. The Utilities Technical Review Committee reviewed and approved the district's franchise, legal description and map on April 26, 1995.

BE IT ORDAINED BY THE COUNCIL OF KING COUNTY:

SECTION 1. The granting of a franchise to the City of Auburn to construct, operate and maintain a water system within King County is hereby approved for a period of twenty-five years. The granting of a franchise extension to the City of Auburn to construct, operate and maintain a sewer system within King County until March 1, 1998 is hereby approved. The extension period is provided to allow time for the City to demonstrate its compliance with K.C.C. 13.24.110. The King County executive is authorized to enter into and execute the water system franchise and the sewer franchise extension for the terms specified, which by this reference is fully incorporated herein. Said franchises shall

RS 2782 Exhibit B

include all of the general and special conditions required by the county.

SECTION 2. If within 45 days after the granting of this franchise, the applicant shall have failed to sign the written acceptance incorporated herein, then the rights and privileges granted herein shall be forfeited and said franchise shall be null and void.

INTRODUCED AND READ for the first time this 19th day of August, 1996.

PASSED by a vote of 12 to 0 this 30th day of September, 1996.

KING COUNTY, COUNCIL
KING COUNTY, WASHINGTON

Jane Hague
Chair

ATTEST:

Gerald A. Peterson
Clerk of the Council

APPROVED this 14th day of October, 1996.

King County Executive

Attachments:
A. Franchise Agreement for Water
B. Franchise Extension for Sewer

Res 2782 Exhibit B

ORIGINAL

RESOLUTION NO. 2873

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR AND CITY CLERK TO EXECUTE A SERVICE AGREEMENT ESTABLISHING WATER UTILITY SERVICE AREA BOUNDARIES BETWEEN THE CITY OF AUBURN AND THE CITY OF AUBURN AND PIERCE COUNTY.

WHEREAS, service area agreements are required by WAC 246-293-250 to help assure that water reserved for public water supply purposes with Pierce County will be utilized in the future in an efficient and planned manner.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, IN A REGULAR MEETING DULY ASSEMBLED, HEREWITH RESOLVES AS FOLLOWS:

Section 1. The Mayor and City Clerk of the City of Auburn are herewith authorized to execute a Service Agreement establishing water utility service area boundaries between the City of Auburn and Pierce County. A copy of said Agreement is attached hereto and denominated as Exhibit "A" and incorporated herein by reference.

ORIGINAL

STANDARD SERVICE AGREEMENT
ESTABLISHING WATER UTILITY
SERVICE AREA BOUNDARIES

PREAMBLE

THIS AGREEMENT establishing water utility service area boundaries is entered into this day for purposes of identifying the external boundaries of the service area for which this water purveyor has assumed water service responsibility.

WHEREAS, service area agreements are required by WAC 246-293-250 to help assure that water reserved for public water supply purposes with Pierce County will be utilized in the future in an efficient and planned manner; and

WHEREAS, the designation of retail water service area and future service planning areas, together with the cooperation of other utilities, will help assure efficient planning to accommodate growth, avoid duplication of service, and facilitate the best use of resources;

WHEREAS, the responsibilities applicable to water purveyors are outlined in the Pierce County Coordinated Water System Plan (CWSP) and by the adopted rules and regulations of the Washington State Department of Health (DOH); and

WHEREAS, it is not the intent of this Agreement to give new authority or responsibilities to the water purveyor or to the County or State regulatory agencies, in addition to those requirements imposed by law; and

NOW, THEREFORE, the undersigned party, having entered into this Agreement by its signature, concur with and will abide by the following provisions:

Section 1. The terms used within the contract shall be as defined in the implementing regulations of Chapter 70.116 RCW, except as identified below.

A. Lead Agency shall mean the department or organization within Pierce County that has been designated by the Pierce County Executive as being administratively responsible for the coordination and filing of the Pierce County Water Service Area map, Standard Service Agreement Establishing Water Utility Service Area Boundaries, Agreements for Retail Service Areas, Utility Service Policies, and other administrative documents necessary for the implementation of the Pierce County CWSP.

B. Pierce County Coordinated Water System Plan (CWSP) shall mean the latest plan adopted by the Pierce County Council for public water systems within critical water supply service areas within Pierce County Council which identifies the present and future needs of the systems and sets forth means for meeting those needs in the most efficient manner possible.

EXHIBIT "A"Resolution No. 2873
September 15, 1997

C. Pierce County Water Service Area Map shall mean the map referenced in this Agreement for the retail service area signed by the water purveyor except as amended in accordance with the CWSP procedures, with the concurrence of the affected water purveyors, or by operation of law.

D. Retail Service Area shall mean the designated geographical area within Pierce County in which the undersigned water purveyor assumes full responsibility for providing water service to individual customers.

E. Utility Service Policies shall mean those policies and conditions of service that are attached to the provision of water service for individual customers. The identified policies and conditions of service are those conditions incorporated within the water purveyor's water system improvement and expansion plans required under the provisions of the Public Water Systems Coordination Act and DOH.

Section 2. Lead Agency. The lead agency for administering the Pierce County Water Utility service area agreements shall be the Pierce County Department of Public Works and Utilities unless otherwise established by the Pierce County Executive. The lead agency shall function only as a coordination center. The lead agency will maintain the original documents and will be responsible for updating the water system map and agreements as provided for in the CWSP.

Section 3. Authority. The authority for this Agreement is granted by the Public Water Systems Coordination Act of 1977, Chapter 70.116 RCW.

Section 4. Service Area Boundaries. The undersigned Water Purveyor acknowledges that the Pierce County Water Service Area Maps identifying its retail service area boundaries, dated July 8, 1997 and included as Attachment A to this Agreement, identify the Water purveyor's present and future service area within Pierce County. The undersigned further acknowledges that there are no service area conflicts with an adjacent water utility or purveyor, or, if such a conflict exists, agrees that no new water service will be extended within disputed areas except as stipulated in an adjudication by DOH, a final decision made by a court of competent jurisdiction, or by operation of law.

This agreement shall apply to service area boundaries claimed and identified in the above referenced maps. Revisions may be may require an amendment to the purveyor's or utility's service plans and shall be filed with the lead agency.

Section 5. Boundary Adjustments. If, at some time in the future it is in the best interests of the undersigned parties to make service area boundary adjustments, such modifications must be by: (1) written concurrence of all involved utilities and the proper legislative authority(ies), and must be noted and filed with the designated Pierce County lead agency and DOH; or (2) by operation of law. It is understood by the undersigned

utility that it may decline to provide service within its designated service area boundary, but in that case, an applicant may be referred to other adjacent purveyors or utilities or a new utility may be created and the original service area boundary will be adjusted accordingly.

Section 6. System Extension Policies. The undersigned utility agrees that in order to expand its existing water service area, (other than by addition of retail customers to existing water mains), or to serve in the capacity of a pre-qualified satellite system management agency (SSMA), it shall have adopted design standards and Utility Service extension policies. The design standards shall meet or exceed the Pierce County Water System Minimum Standards and Specifications.

A water utility anticipating expansion of retail service in unincorporated areas of Pierce County, or intending to operate as an SSMA, shall identify utility service policies in its updated water system plan. The undersigned utility agrees to identify, for information, its utility service policies or provide a copy of the updated water system plan to the Lead Agency prior to application for extension of its existing water system into new service areas within the unincorporated areas of Pierce County.

Municipalities further agree that if they identify a service area outside of their existing municipal corporate boundaries, the municipality will assume full responsibility for providing water service equivalent to the level of service provided for their customers inside the city limits with similar service requirements, and must also meet or exceed Pierce County's minimum design standards.

Section 7. Special Working Agreements. Special working agreements, if they exist and are relevant, between this water purveyor and an adjacent water purveyor shall be attached to this Agreement as Attachment B and incorporated herein by this reference.

Section 8. Compliance with the CWSP. Nothing in this Agreement shall waive any requirement of the state, federal or local government regarding the provision of water service. This Agreement shall comply with the interlocal agreement requirement of the CWSP.

IN WITNESS WHEREOF, the undersigned party has executed this Agreement as of 9/16/97.

City of Auburn
Water Purveyor

Charles A. Booth
Representative

Mayor
Title

EXHIBIT "A"Resolution No. 2873
September 15, 1997

Approved as to Form

Michael J. Reynolds, City Attorney

Attested to:

Robin Wohlhueter, City Clerk

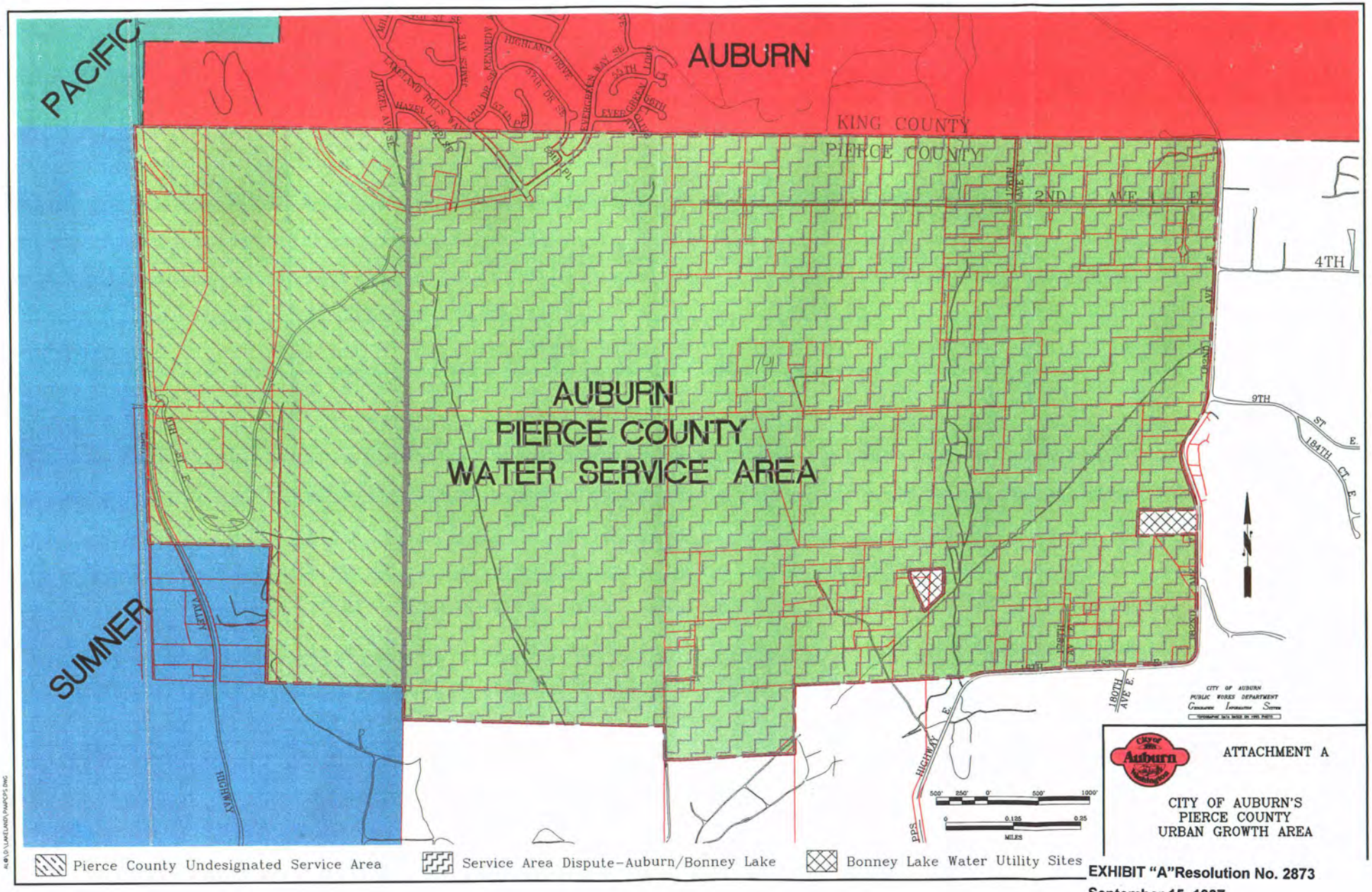
PIERCE COUNTY PUBLIC WORKS & UTILITIES DEPARTMENT

Susan McClark 9-26-97 Date

Name

Associate Planner

Title


PACIFIC
AUBURN
KING COUNTY
PIERCE COUNTY
SUMNER
AUBURN
PIERCE COUNTY
WATER SERVICE AREA
2ND AVE E
4TH
9TH ST E
184TH CT E
HIGHWAY
CITY OF AUBURN
PUBLIC WORKS DEPARTMENT
Pierce County Undesignated Service Area
Service Area Dispute-Auburn/Bonney Lake
Bonney Lake Water Utility Sites
ATTACHMENT A
CITY OF AUBURN'S
PIERCE COUNTY
URBAN GROWTH AREA
EXHIBIT "A"Resolution No. 2873
September 15, 1997

Attachment B:

SPECIAL WORKING AGREEMENTS:

List of Special Working Agreements Included:

Potential Annexation Agreement between City of Auburn and City of Federal Way
Urban Service Area Agreement between City of Auburn and City of Pacific
Potential Annexation Agreement between City of Auburn and City of Sumner
Potential Annexation Agreement between City of Auburn and City of Kent

CITY CLERK'S OFFICE
CITY OF AUBURN
25 West Main
Auburn, WA 98001

RECEIVED
FEB 8 1996
KING COUNTY
RECORDER

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ORIGINAL
AG 95-238

RECEIVED
NOV 13 1995

AN AGREEMENT BETWEEN THE CITIES OF FEDERAL WAY AND AUBURN RELATING TO POTENTIAL ANNEXATION AREA DESIGNATION

THIS IS AN AGREEMENT between the Cities of Federal Way, a municipal corporation of the State of Washington ("Federal Way"), and Auburn, a municipal corporation of the State of Washington ("Auburn"), hereinafter collectively referred to as the "Cities."

RECITALS

A. Pursuant to RCW 36.70A.110(2), the Washington State Growth Management Act of 1990 as amended requires each City within the County to propose the location of an urban growth area, and

B. The Countywide Planning Policies adopted and approved by Ordinance 10450 on July 6, 1992 by the County Council and amended by Ordinance 11446 on July 19, 1994 and ratified by Cities within the County, establishes rules for designating potential annexation areas for cities within the countywide urban growth boundary, and

C. Countywide Planning Policy LU-31 states that in collaboration with adjacent counties and cities and King County, and in consultation with residential groups in affected areas, each City shall designate a Potential Annexation Area (PAA), and

D. It is in the public interest that the jurisdictions cooperate to designate logical and achievable PAA boundaries, and

NOW THEREFORE, the Cities hereby agree:

1. PURPOSE.

The purpose of this agreement is to confirm the decision made between the Cities for the identification of PAA boundaries.

2. DEFINITIONS.

Potential Annexation Area (PAA): The incorporated urban area adjacent to a City, within which urban growth shall be encouraged and phased, and which is expected to annex to the city. Annexation is expected to occur sometime during the next 20 years at which time the city will provide services and utilities. Potential Annexation Area is another term for a City's Urban Growth Area.

Urban Growth Areas: Areas proposed by the Cities and designated by the County within which urban growth shall be encouraged and phased and outside of which growth can occur only if it is not urban in nature. A City's Urban Growth Area is another term for its Potential Annexation Area.

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960221-0337 09:16:00 AM KING COUNTY RECORDS 006 SN 12.00

REF: Resolution No. 2873
September 15, 1997

Urban Growth Boundary: The boundary marking the limit between the urban growth areas and other areas such as rural and resource area where urban growth is not permitted. The boundary shall be designated by the County in consultation with the appropriate Cities, under the requirement of the Growth Management Act, as amended.

3. PUBLIC PROCESS.

The designation of PAAs in Exhibit A (map) attached hereto and by this reference made a part of this agreement are of interest to a variety of affected parties, including property owners, area residents, the general public, special service districts and the municipalities.

4. RELATIONSHIP TO EXISTING LAWS AND STATUTES.

This Agreement in no way modifies nor supersedes existing laws and statues and is consistent with existing laws and statues. In meeting the commitments encompassed in this Agreement, all parties will comply with the requirements of the annexation Statutes, Open Public Meetings Act, State Environmental Policy Act, Growth Management Act and Countywide Planning Policies for King County.

5. RESPONSIBILITIES.

A. The Cities acknowledge the PAA boundary described in Exhibit A.

B. The Cities will only annex territory within their designated PAAs.

C. The Cities shall conduct a public involvement process that includes, but is not limited to workshops, surveys, or hearings in areas within the PAA, prior to the inclusion of any additional areas within the PAA.

9602210337

6. AMENDMENTS.

A. A city which desires to modify the Potential Annexation Area shall contact the other party to this Agreement to begin discussions regarding potential annexation area boundary amendments. The Cities agree to participate in such discussions when called. Either Party is authorized to call a meeting upon 30 days written notice.

B. The proposed amendments shall be supported by written evidence of a significant change in one of the criteria listed in paragraph 6D. Below. The Cities shall concur that the substantial change warrants an amendment to the original designated PAA.

C. A public process shall be conducted regarding an amendment to a potential annexation area as described in 5(C) above.

D. *Criteria for Designation of Potential Annexation Areas*

- Recognition of resident community identification.
- Financial and technical ability to provide municipal services.

- Creation of logical service areas (vehicular accessibility and utility construction).
- Recognition of physical boundaries.
  - Bodies of water
  - Topographical features
  - Watersheds
  - Freeways
- Protection of critical/resource areas significant to a particular jurisdiction.
  - Protection of critical areas
  - Opportunities for urban separators
- Logical boundaries.
  - Elimination of unincoporated islands
  - No overlapping potential annexation areas

E. The proposed amended PAA agreement shall be submitted to the respective legislative authorities for approval.

7. DURATION AND TERMINATION.

This Agreement is effective upon signature of both parties and shall continue in effect from year to year unless terminated by a six month written notice by one party to the others.

9602210337

8. SEVERABILITY CLAUSE.

Any provision of this Agreement which is declared invalid or illegal shall in no way affect or invalidate any other provision hereof and such other provisions shall remain in full force and effect.

9. INDEMNIFICATION.

A. The City of Federal Way shall indemnify and hold harmless the City of Auburn and its officers, agents and employees, or any of them from any and all claims, actions, suits, liability, loss, costs, expenses and damages of any nature whatsoever, by reason of or arising out of any negligent act or omission of the City of Federal Way, its officers, agents and employees, or any of them, in the performance of this Agreement. In the event that any such suit based upon such a claim, action, loss or damage is brought against the City of Auburn, the City of Federal Way shall defend the same at its sole cost and expense; provided, that the City of Auburn reserves the right to participate in such suit if any principle of governmental or public law is involved. If final judgment be rendered against the City of Auburn and its officers, agents and employees, or any of them, or jointly against the City of Federal Way and the City of Auburn and their respective officers, agents and employees, or any of them, the City of Federal Way shall satisfy the same, including all chargeable costs and attorney's fees.

B. In executing this Agreement, the City of Auburn does not assume liability or responsibility for or in any way release the City of Federal Way from any liability or responsibility which arises in whole or in part from the existence or affect of Federal Way City ordinances, rules or regulations. If any cause, claim, suit, action or administrative proceeding is commenced in which the enforceability and/or validity of any such Federal Way City ordinance, rule or regulation is at issue, the City of Federal

Way shall defend the same at its sole expense and if judgment is entered or damages are awarded against the City of Auburn, the City of Federal Way shall satisfy the same, including all chargeable costs and attorney's fees.

C. The City of Auburn shall indemnify and hold harmless the City of Federal Way and its officers, agents and employees, or any of them from any and all claims, actions, suits, liability, loss, costs, expenses and damages of any nature whatsoever, by reason of or arising out of any negligent act or omission of the City of Auburn, its officers, agents and employees, or any of them, in the performance of this Agreement. In the event that any such suit based upon such a claim, action, loss or damage is brought against the City of Federal Way, the City of Auburn shall defend the same at its sole cost and expense; provided, that the City of Federal Way reserves the right to participate in such suit if any principle of governmental or public law is involved. If final judgment be rendered against the City of Federal Way and its officers, agents and employees, or any of them, or jointly against the City of Federal Way and the City of Auburn and their respective officers, agents and employees, or any of them, the City of Auburn shall satisfy the same, including all chargeable costs and attorney's fees.

D. In executing this Agreement, the City of Federal Way does not assume liability or responsibility for or in any way release the City of Auburn from any liability or responsibility which arises in whole or in part from the existence or affect of Auburn City ordinances, rules or regulations. If any cause, claim, suit, action or administrative proceeding is commenced in which the enforceability and/or validity of any such Auburn City ordinance, rule or regulation is at issue, the City of Auburn shall defend the same at its sole expense and if judgment is entered or damages are awarded against the City of Federal Way, the City of Auburn shall satisfy the same, including all chargeable costs and attorney's fees.

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10. ADMINISTRATION.

This Agreement shall be administered by:

A. The Federal Way City Manager or the City Manager's designee, and

B. The Mayor of Auburn or the Mayor's designee.

CITY OF FEDERAL WAY

Kenneth E. Nyberg
City Manager

Date 11/3/95

CITY OF AUBURN

Charles A. Booth
Mayor

Date 10-6-95

REF: Resolution No. 2873
September 15, 1997

Approved as to Form:

City Attorney

Approved as to Form:

City Attorney

BHS\FWAGRMT

9602210337

EXHIBIT "A"Resolution No. 2873
September 15, 1997

REF: Resolution No. 2873
September 15, 1997

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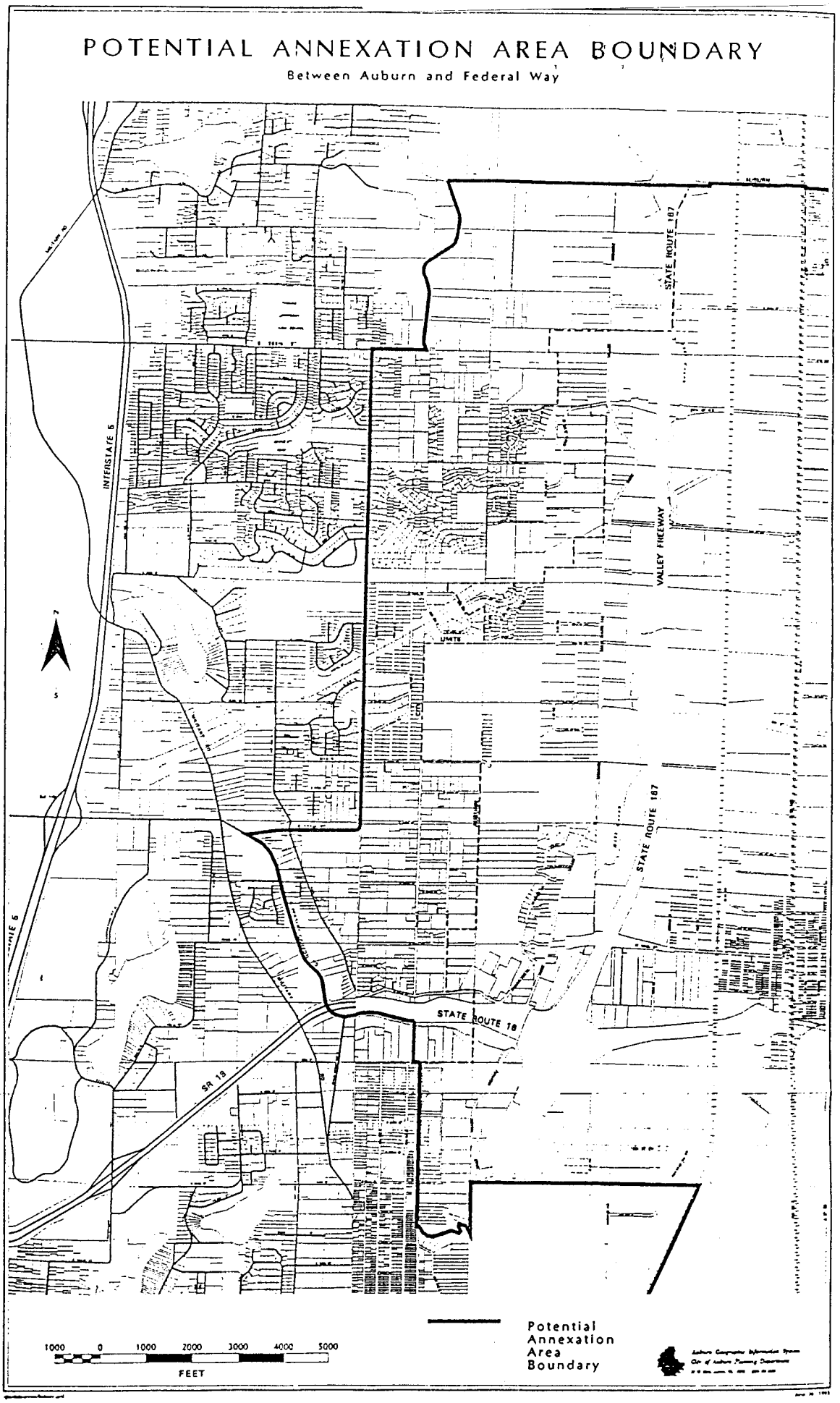


ORIGINAL

AN AGREEMENT BETWEEN THE CITIES OF PACIFIC AND AUBURN RELATING TO URBAN SERVICE AREA DESIGNATION

THIS IS AN AGREEMENT between the Cities of Pacific, a municipal corporation of the State of Washington ("Pacific"), and Auburn, a municipal corporation of the State of Washington ("Auburn"), hereinafter collectively referred to as the "Cities."

RECITALS

A. Pursuant to RCW 36.70A.110(2), the Washington State Growth Management Act of 1990 as amended requires each City within the County to propose the location of an urban growth area, and

B. The Pierce County Countywide Planning Policies adopted and approved by Resolution R92-86 on June 30, 1992 by the County Council and ratified by Cities within the County, establishes rules for designating City urban growth areas within the countywide urban growth boundary, and

C. The Pierce County Comprehensive Plan adopted and approved by Ordinance 94-82S by the County Council identifies an urban growth area overlap between the Cities of Auburn and Pacific.

D. It is in the public interest that the jurisdictions cooperate to designate logical and achievable urban growth area boundaries,

NOW THEREFORE, the Cities hereby agree:

1. PURPOSE.

The purpose of this agreement is to resolve the boundary overlap between the Cities of Auburn and Pacific.

2. DEFINITIONS.

Urban Service Area (USA): The incorporated urban area adjacent to a City, within which urban growth shall be encouraged and phased, and which is expected to annex to the city. Annexation is expected to occur sometime during the next 20 years at which time the city will provide services and utilities. Urban Service Area is another term for a City's Urban Growth Area.

Urban Growth Areas (UGA): Areas designated by the County within which urban growth shall be encouraged and phased and outside of which growth can occur only if it is not urban in nature. A City's Urban Growth Area is another term for its Urban Service Area.

Comprehensive Urban Growth Area Boundary (CUGA Boundary): The boundary marking the limit between the urban growth areas and other areas such as rural and resource area where urban growth is not permitted. The boundary shall be designated by the County in

consultation with the appropriate Cities, under the requirement of the Growth Management Act, as amended.

3. PUBLIC PROCESS.

The designation of USAs in Exhibit A (map) are of interest to a variety of affected parties, including property owners, area residents, the general public, special service districts and the municipalities.

4. RELATIONSHIP TO EXISTING LAWS AND STATUTES.

This Agreement in no way modifies nor supersedes existing laws and statues and is consistent with existing laws and statues. In meeting the commitments encompassed in this Agreement, all parties will comply with the requirements of the annexation statutes, Open Meetings Act, State Environmental Policy Act, Growth Management Act and the Pierce County Countywide Planning Policies.

5. RESPONSIBILITIES.

A. The Cities acknowledge the USA boundary as shown in Exhibit A. The City of Pacific urban service area boundary will not include any area shown in exhibit A.

B. The Cities will only annex territory within their designated USAs.

C. The Cities shall conduct a public involvement process that includes, but is not limited to workshops, surveys, or hearings in areas within the USA, prior to the inclusion of any additional areas within the USA.

6. AMENDMENTS.

A. A city which desires to modify the USA shall contact the other party to this Agreement to begin discussions regarding urban service area boundary amendments. The Cities agree to participate in such discussions when called. Either Party is authorized to call a meeting upon 30 days written notice.

B. The proposed modifications shall be supported by written evidence of a significant change in one of the criteria listed in paragraph 6D. Below. The Cities shall concur that the substantial change warrants an amendment to the original designated urban service area.

C. A public process shall be conducted regarding an amendment to an urban service area.

D. *Criteria for Designation of Potential Annexation Areas*

- Recognition of resident community identification.
- Financial and technical ability to provide municipal services.
- Creation of logical service areas (vehicular accessibility and utility construction).
- Recognition of physical boundaries.

Exhibit "A" Resolution No. 2763
Adopted 12/2/96

Bodies of water
Topographical features
Watersheds
Freeways

- Protection of critical/resource areas significant to a particular jurisdiction.
  Protection of critical areas
  Opportunities for urban separators
- Logical boundaries.
  Elimination of unincoporated islands
  No overlapping potential annexation areas

E. The proposed amended USA agreement shall be submitted to the respective legislative authorities for approval.

7. DURATION AND TERMINATION.

This Agreement is effective upon signature of both parties and shall continue in effect from year to year unless terminated by a six month written notice by one party to the others.

8. SEVERABILITY CLAUSE.

Any provision of this Agreement which is declared invalid or illegal shall in no way affect or invalidate any other provision hereof and such other provisions shall remain in full force and effect.

9. INDEMNIFICATION.

A. The City of Pacific shall indemnify and hold harmless the City of Auburn and its officers, agents and employees, or any of them from any and all claims, actions, suits, liability, loss, costs, expenses and damages of any nature whatsoever, by reason of or arising out of any negligent act or omission of the City of Pacific, its officers, agents and employees, or any of them, in the performance of this Agreement. In the event that any such suit based upon such a claim, action, loss or damage is brought against the City of Auburn, the City of Pacific shall defend the same at its sole cost and expense; provided, that that the City of Auburn reserves the right to participate in such suit if any principle of governmental or public law is involved. If final judgment be rendered against the City of Auburn and its officers, agents and employees, or any of them, the City of Pacific shall satisfy the same, including all chargeable costs and attorney's fees.

B. In executing this Agreement, the City of Pacific does not assume liability or responsibility for, or in any way release, the City of Auburn from any liability or responsibility which arises in whole or in part from the existence or affect City of Auburn ordinances, rules or regulations. If any cause, claim, suit, action or administrative proceedings is commenced in which the enforceability and/or validity of any such City of Auburn ordinance, rule or regulation is at issue, the City of Auburn shall defend the same at its sole expense and if judgment is entered or damages are

awarded against the City of Pacific, the City of Auburn shall satisfy the same, including all chargeable costs and attorney's fees.

C. The City of Auburn shall indemnify and hold harmless the City of Pacific and its officers, agents and employees, or any of them, from any and all claims, actions, suits, liability, loss, costs, expenses and damages of any nature whatsoever, by reason of our arising out of any negligent act or omission of the City of Auburn, its officers, agents or employees or any of them, relating to or arising out of the performance of this Agreement. In the event that any suit based on such a claim, action, loss or damage is brought against the City of Pacific, the City of Auburn shall defend the same at its sole costs and expense; provided by the City of Auburn retains the right to participate in and suit of any principle of government law is involved; and if final judgment be rendered against the City of Pacific, and its officers, agents and employees, or any of them, the City of Auburn shall satisfy the same, including all chargeable costs and attorney's fees.

D. In executing this Agreement, the City of Auburn does not assume liability or responsibility for or in any way release the City of Pacific from any liability or responsibility which arises in whole or in part from the existence or affect City of Pacific ordinances, rules or regulations. If any cause, claim, suit, action or administrative proceedings is commenced in which the enforceability and/or validity of any such City of Pacific ordinance, rule or regulation is at issue, the City of Pacific shall defend the same at its sole expense and if judgment is entered or damages are awarded against the City of Auburn, the City of Pacific shall satisfy the same, including all chargeable costs and attorney's fees.

10. ADMINISTRATION.

This Agreement shall be administered by:

A. The Mayor of Pacific or the Mayor's designee, and

B. The Mayor of Auburn or the Mayor's designee.

Exhibit "A" Resolution No. 2763
Adopted 12/2/96

CITY OF PACIFIC

Cheryl Bertsch

Cheryl Bertsch
Mayor ProTem
Date 11/12/96

Approved as to Form:

City Attorney

CITY OF AUBURN

By Charles A. Booth
Charles A. Booth
Mayor

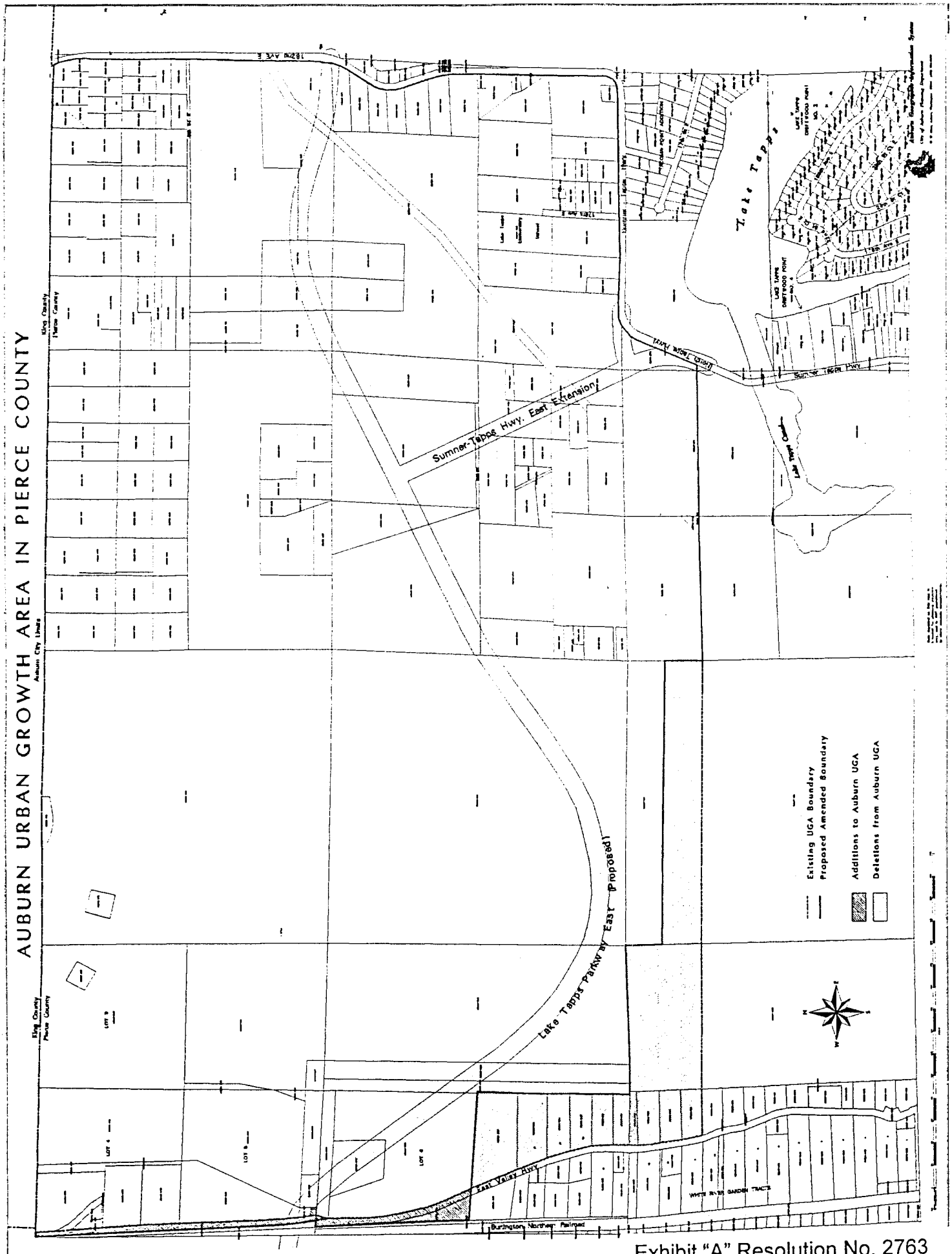
Date 12/5/96

Approved as to Form:

City Attorney

BHS\AGREEMT1

Exhibit "A" Resolution No. 2763
Adopted 12/2/96



REF: Resolution No. 2873
September 15, 1997

Exhibit "A" Resolution No. 2763
- Adopted 12/2/96

REF: Resolution No. 2873
September 15, 1997

ORIGINAL

AN AGREEMENT BETWEEN THE CITIES OF SUMNER AND AUBURN RELATING TO POTENTIAL ANNEXATION AREA DESIGNATION

THIS AGREEMENT is entered into on this 16th day of JULY, 1996, by and between the City of Sumner, a municipal corporation of the State of Washington (hereinafter referred to as "Sumner") and the City of Auburn, a municipal corporation of the State of Washington (hereinafter referred to as "Auburn").

WHEREAS, pursuant to RCW 36.70A.110(2), the Washington State Growth Management Act of 1990 as amended, requires each city within Pierce County to propose the location of an urban growth area; and

WHEREAS, the King Countywide Planning Policies adopted and approved by Ordinance 10450 on July 6, 1992, by the King County Council and amended by Ordinance 11446 on July 19, 1994 and ratified by cities within King County, establish rules for designating potential annexation areas for cities within the countywide urban growth boundary; and

WHEREAS, King Countywide Planning Policy LU-31 states that each city shall designate a Potential Annexation Area (PAA) in collaboration with adjacent counties and cities and King County, and in consultation with residential groups in affected areas; and

WHEREAS, Pierce Countywide Planning Policies adopted and approved by Resolution No. R92-86 on June 30, 1992 by the Pierce County Council reestablish rules for designating urban growth areas for cities within Pierce County; and

WHEREAS, Pierce Countywide Planning Policy No. 1 on Urban Growth areas states "The County shall designate urban growth areas for the County and each municipality in the County based on consultations between the County and each municipality"; and

WHEREAS, the Pierce County Comprehensive Plan approved November 29, 1994 by the Pierce County Council establishes procedures for the adoption of Urban Service Areas (USA's) as a part of a Comprehensive Urban Growth Area (CUGA). The plan also adopts Urban Service Areas for the jurisdictions within Pierce County. The plan indicates an overlap of the USA's for the Cities of Auburn and Sumner in the general vicinity of an approved private development called Lakeland; and

WHEREAS, it is of mutual interest to Sumner and Auburn to resolve the overlaps between the Potential Annexation Areas in order to allow for continued land use and capital facility planning without threat of litigation or appeals; and

WHEREAS, in the spirit of cooperation and mutual understanding, Sumner and Auburn desire to address mutual interests, work together on issues of mutual benefit, and enter into agreements to work constructively on issues of concern; **NOW THEREFORE,**

Exhibit A Resolution No. 2762
August 5, 1996

In consideration of the mutual benefits, Sumner and Auburn hereby agree to the terms and conditions as set forth below:

SECTION 1. PURPOSE.

The purpose of this agreement is to confirm the decision made between Sumner and Auburn for the identification of Potential Annexation Area boundaries and Urban Service Areas.

SECTION 2. DEFINITIONS.

A. Potential Annexation Area (PAA): is a term used in the King Countywide Planning Polices meaning the incorporated urban area adjacent to a city, within which urban growth shall be encouraged and phased, and which is expected to annex to the city. Annexation is expected to occur sometime during the next twenty (20) years at which time the city will provide services and utilities. For purposes of this agreement, the term Potential Annexation Area is the same as Urban Service Area (USA) as applied in the Pierce County Comprehensive Plan.

B. Urban Growth Areas: means areas proposed by the Sumner and Auburn and designated by the county within which urban growth shall be encouraged and passed and outside of which growth can occur only if it is not urban in nature.

C. Urban Growth Boundary: means the boundary marking the limit between the urban growth areas and other areas such as rural and resource area where urban growth is not permitted. The boundary shall be designated by the county in consultation with Sumner and Auburn, under the requirements of the Growth Management Act.

SECTION 3. PUBLIC PROCESS.

The designation of PAAs in Exhibit A (map) attached hereto and by this reference made a part of this agreement are of interest to a variety of affected parties, including property owners, area residents, the general public, special service districts and the municipalities.

SECTION 4. RELATIONSHIP TO EXISTING LAWS AND STATUES.

This Agreement shall in no way modify nor supersede existing laws and statutes and is consistent with existing laws and statutes. In meeting the commitments encompassed in this Agreement, all parties shall comply with the requirements of the annexation statutes, Open Public Meetings Act, State Environmental Policy Act, Growth Management Act and Countywide Planning Policies for King and Pierce Counties.

SECTION 5. RESPONSIBILITIES.

A. Sumner and Auburn acknowledge the PAA boundary described in Exhibit A.

B. Sumner and Auburn shall only annex territory within their designated PAAs.

C. Sumner and Auburn shall conduct a public involvement process that includes, but is not limited to, workshops, surveys, or hearings in areas within the PAA prior to the inclusion of any additional areas within the PAA.

SECTION 6. JOINT PLANNING

Sumner and Auburn shall work cooperatively together in the planning and delivery of services to the respective PAA to the extent feasible as described below:

A. Sumner and Auburn shall initiate discussions between staff to review the feasibility of sharing the costs associated with the construction and operation of a water storage facility. Both cities shall also explore the possibility of shared water resources.

B. Sumner and Auburn shall work cooperatively on other issues of mutual concern which may arise including:
   1. Design, funding, and construction of the 8th Street Corridor from Lake Tapps to SR 167;
   2. Railroad traffic and the mitigation of increased rail activity on transportation;
   3. Mitigation of stormwater impacts to the valley;
   4. Modifications to the Mud Mountain Dam to reduce base flood levels;
   5. Joint fire services and operations such as training, hazardous spill response, mutual aide, and special operations;
   6. Bicycle and pedestrian trails connecting the Sumner and Auburn;
   7. Watershed planning and management related to the Stuck (White) River and its tributaries; and
   8. Joint planning and participation with Pierce County.

SECTION 7. AMENDMENTS.

A. A city which desires to modify the Potential Annexation Area shall contact the other party to this Agreement to begin discussions regarding potential annexation or boundary amendments. Sumner and Auburn agree to participate in such discussions when called. Either city is authorized to call a meeting upon providing the other city has at least a thirty (30) day written notice.

B. The proposed amendments shall be supported by written evidence of a significant change in one of the criteria listed in paragraph 7D below. Sumner and Auburn shall concur that the substantial change warrants an amendment to the original designated PAA.

C. A public process shall be conducted regarding an amendment to a potential annexation area as described in 5(c) above.

D. Criteria for Designation of Potential Annexation Areas

1. Recognition of resident community identification.
2. Financial and technical ability to provide municipal services.
3. Creation of logical service areas (vehicular accessibility and availability of utility service).
4. Recognition of physical boundaries.
   -bodies of water
   -topographical features
   -watersheds
   -freeways
5. Protection of critical/resource areas significant to a particular jurisdiction.
   -protection of critical areas
   -opportunities for urban separators
6. Logical boundaries.
   -elimination of unincorporated islands
   -no overlapping potential annexation areas

E. The proposed amended PAA agreement shall be submitted to the respective legislative authorities for approval.

SECTION 8. DURATION AND TERMINATION.

This Agreement shall be in effect upon signature of both parties and shall continue in effect from year to year unless terminated by a six month written notice by one party to the others.

SECTION 9. SEVERABILITY CLAUSE.

Any provision of this Agreement which is declared invalid or illegal shall in no way affect or invalidate any other provision hereof and such other provisions shall remain in full force and effect.

SECTION 10 ADMINISTRATION.

This Agreement shall be administered by the Mayor of the City of Sumner and the City of Auburn, or their designees.

CITY OF SUMNER

Robert A. Moltke, Mayor

7-16-96
Date

Attest:

City Clerk

Approved as to form:

City Attorney

CITY OF AUBURN

Charles A. Booth, Mayor

August 5, 1996
Date

Attest:

City Clerk

Approved as to form:

City Attorney

REF: Resolution No. 2873
September 15, 1997

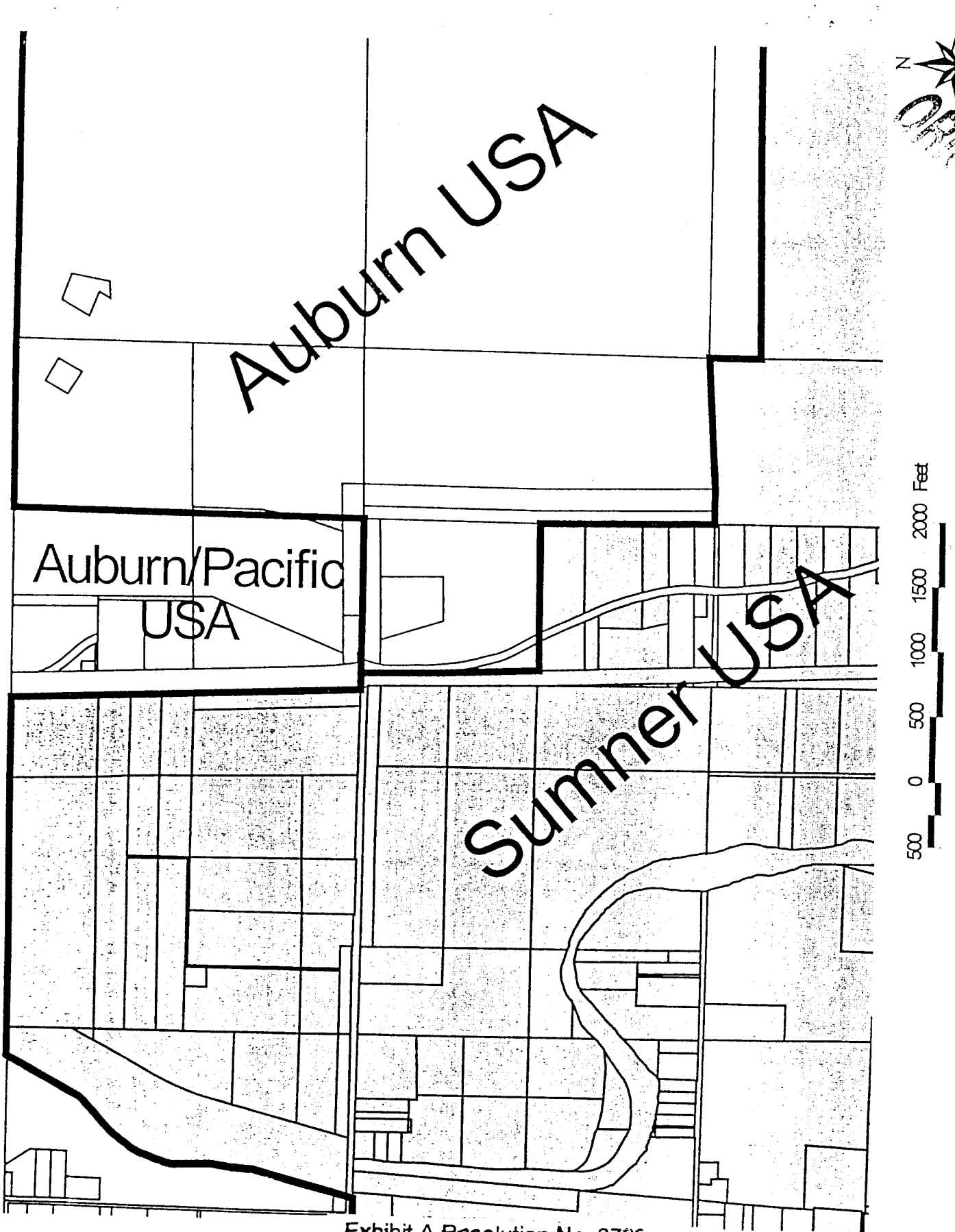
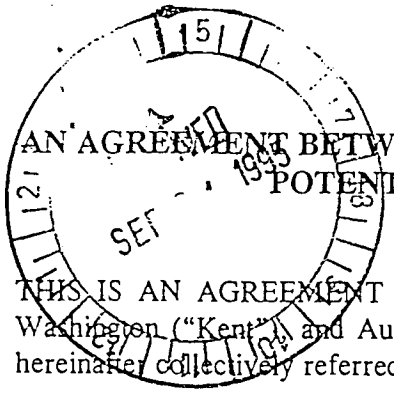


Exhibit "A" - Potential Annexation Areas

Exhibit A Resolution No. 2782
August 5, 1996

Mayor

ORIGINAL



AN AGREEMENT BETWEEN THE CITIES OF KENT AND AUBURN RELATING TO POTENTIAL ANNEXATION AREA DESIGNATION

THIS IS AN AGREEMENT between the Cities of Kent, a municipal corporation of the State of Washington ("Kent"), and Auburn, a municipal corporation of the State of Washington ("Auburn"), hereinafter collectively referred to as the "Cities."

RECITALS

A. Pursuant to RCW 36.70A.110(2), the Washington State Growth Management Act of 1990 as amended requires each City within the County to propose the location of an urban growth area, and

B. The Countywide Planning Policies adopted and approved by Ordinance 10450 on July 6, 1992 by the County Council and amended by Ordinance 11446 on July 19, 1994 and ratified by Cities within the County, establishes rules for designating potential annexation areas for cities within the countywide urban growth boundary, and

C. Countywide Planning Policy LU-31 states that in collaboration with adjacent counties and cities and King County, and in consultation with residential groups in affected areas, each City shall designate a Potential Annexation Area (PAA), and

D. It is in the public interest that the jurisdictions cooperate to designate logical and achievable PAA boundaries, and

NOW THEREFORE, the Cities hereby agree:

1. PURPOSE.

The purpose of this agreement is to confirm the decision made between the Cities for the identification of PAA boundaries.

2. DEFINITIONS.

Potential Annexation Area (PAA): The incorporated urban area adjacent to a City, within which urban growth shall be encouraged and phased, and which is expected to annex to the city. Annexation is expected to occur sometime during the next 20 years at which time the city will provide services and utilities. Potential Annexation Area is another term for a City's Urban Growth Area.

Urban Growth Areas: Areas proposed by the Cities and designated by the County within which urban growth shall be encouraged and phased and outside of which growth can occur only if it is not urban in nature. A City's Urban Growth Area is another term for its Potential Annexation Area.

REF: Resolution No. 2873
September 15, 1997

Urban Growth Boundary: The boundary marking the limit between the urban growth areas and other areas such as rural and resource area where urban growth is not permitted. The boundary shall be designated by the County in consultation with the appropriate Cities, under the requirement of the Growth Management Act, as amended.

3. PUBLIC PROCESS.

The designation of PAAs in Exhibit A (map) attached hereto and by this reference made a part of this agreement are of interest to a variety of affected parties, including property owners, area residents, the general public, special service districts and the municipalities.

4. RELATIONSHIP TO EXISTING LAWS AND STATUTES.

This Agreement in no way modifies nor supersedes existing laws and statues and is consistent with existing laws and statues. In meeting the commitments encompassed in this Agreement, all parties will comply with the requirements of the annexation Statutes, Open Public Meetings Act, State Environmental Policy Act, Growth Management Act and Countywide Planning Policies for King County.

5. RESPONSIBILITIES.

A. The Cities acknowledge the PAA boundary described in Exhibit A.

B. The Cities will only annex territory within their designated PAAs.

C. The Cities shall conduct a public involvement process that includes, but is not limited to workshops, surveys, or hearings in areas within the PAA, prior to the inclusion of any additional areas within the PAA.

6. AMENDMENTS.

A. A city which desires to modify the Potential Annexation Area shall contact the other party to this Agreement to begin discussions regarding potential annexation area boundary amendments. The Cities agree to participate in such discussions when called. Either Party is authorized to call a meeting upon 30 days written notice.

B. The proposed amendments shall be supported by written evidence of a significant change in one of the criteria listed in paragraph 6D. Below. The Cities shall concur that the substantial change warrants an amendment to the original designated PAA.

C. A public process shall be conducted regarding an amendment to a potential annexation area as described in 5(C) above.

D. *Criteria for Designation of Potential Annexation Areas*

- Recognition of resident community identification.
- Financial and technical ability to provide municipal services.

- Creation of logical service areas (vehicular accessibility and utility construction).
- Recognition of physical boundaries.
  - Bodies of water
  - Topographical features
  - Watersheds
  - Freeways
- Protection of critical/resource areas significant to a particular jurisdiction.
  - Protection of critical areas
  - Opportunities for urban separators
- Logical boundaries.
  - Elimination of unincoporated islands
  - No overlapping potential annexation areas

E. The proposed amended PAA agreement shall be submitted to the respective legislative authorities for approval.

7. DURATION AND TERMINATION.

This Agreement is effective upon signature of both parties and shall continue in effect from year to year unless terminated by a six month written notice by one party to the others.

8. SEVERABILITY CLAUSE.

Any provision of this Agreement which is declared invalid or illegal shall in no way affect or invalidate any other provision hereof and such other provisions shall remain in full force and effect.

9. INDEMNIFICATION.

A. The City of Kent shall indemnify and hold harmless the City of Auburn and its officers, agents and employees, or any of them from any and all claims, actions, suits, liability, loss, costs, expenses and damages of any nature whatsoever, by reason of or arising out of any negligent act or omission of the City of Kent, its officers, agents and employees, or any of them, in the performance of this Agreement. In the event that any such suit based upon such a claim, action, loss or damage is brought against the City of Auburn, the City of Kent shall defend the same at its sole cost and expense; provided, that the City of Auburn reserves the right to participate in such suit if any principle of governmental or public law is involved. If final judgment be rendered against the City of Auburn and its officers, agents and employees, or any of them, or jointly against the City of Kent and the City of Auburn and their respective officers, agents and employees, or any of them, the City of Kent shall satisfy the same, including all chargeable costs and attorney's fees.

B. In executing this Agreement, the City of Auburn does not assume liability or responsibility for or in any way release the City of Kent from any liability or responsibility which arises in whole or in part from the existence or affect of Kent City ordinances, rules or regulations. If any cause, claim, suit, action or administrative proceeding is commenced in which the enforceability and/or validity of any such Kent City ordinance, rule or regulation is at issue, the City of Kent shall defend the same at its

sole expense and if judgment is entered or damages are awarded against the City of Auburn, the City of Kent shall satisfy the same, including all chargeable costs and attorney's fees.

C. The City of Auburn shall indemnify and hold harmless the City of Kent and its officers, agents and employees, or any of them from any and all claims, actions, suits, liability, loss, costs, expenses and damages of any nature whatsoever, by reason of or arising out of any negligent act or omission of the City of Auburn, its officers, agents and employees, or any of them, in the performance of this Agreement. In the event that any such suit based upon such a claim, action, loss or damage is brought against the City of Kent, the City of Auburn shall defend the same at its sole cost and expense; provided, that the City of Kent reserves the right to participate in such suit if any principle of governmental or public law is involved. If final judgment be rendered against the City of Kent and its officers, agents and employees, or any of them, or jointly against the City of Kent and the City of Auburn and their respective officers, agents and employees, or any of them, the City of Auburn shall satisfy the same, including all chargeable costs and attorney's fees.

D. In executing this Agreement, the City of Kent does not assume liability or responsibility for or in any way release the City of Auburn from any liability or responsibility which arises in whole or in part from the existence or affect of Auburn City ordinances, rules or regulations. If any cause, claim, suit, action or administrative proceeding is commenced in which the enforceability and/or validity of any such Auburn City ordinance, rule or regulation is at issue, the City of Auburn shall defend the same at its sole expense and if judgment is entered or damages are awarded against the City of Kent, the City of Auburn shall satisfy the same, including all chargeable costs and attorney's fees.

10. ADMINISTRATION.

This Agreement shall be administered by:

A. The Mayor of Kent or the Mayor's designee, and

B. The Mayor of Auburn or the Mayor's designee.

CITY OF KENT

Jim White
Mayor

Date 8-3-95

CITY OF AUBURN

Charles A. Booth
Mayor

Date 7-6-95

REF: Resolution No. 2873
September 15, 1997

Approved as to Form:

City Attorney

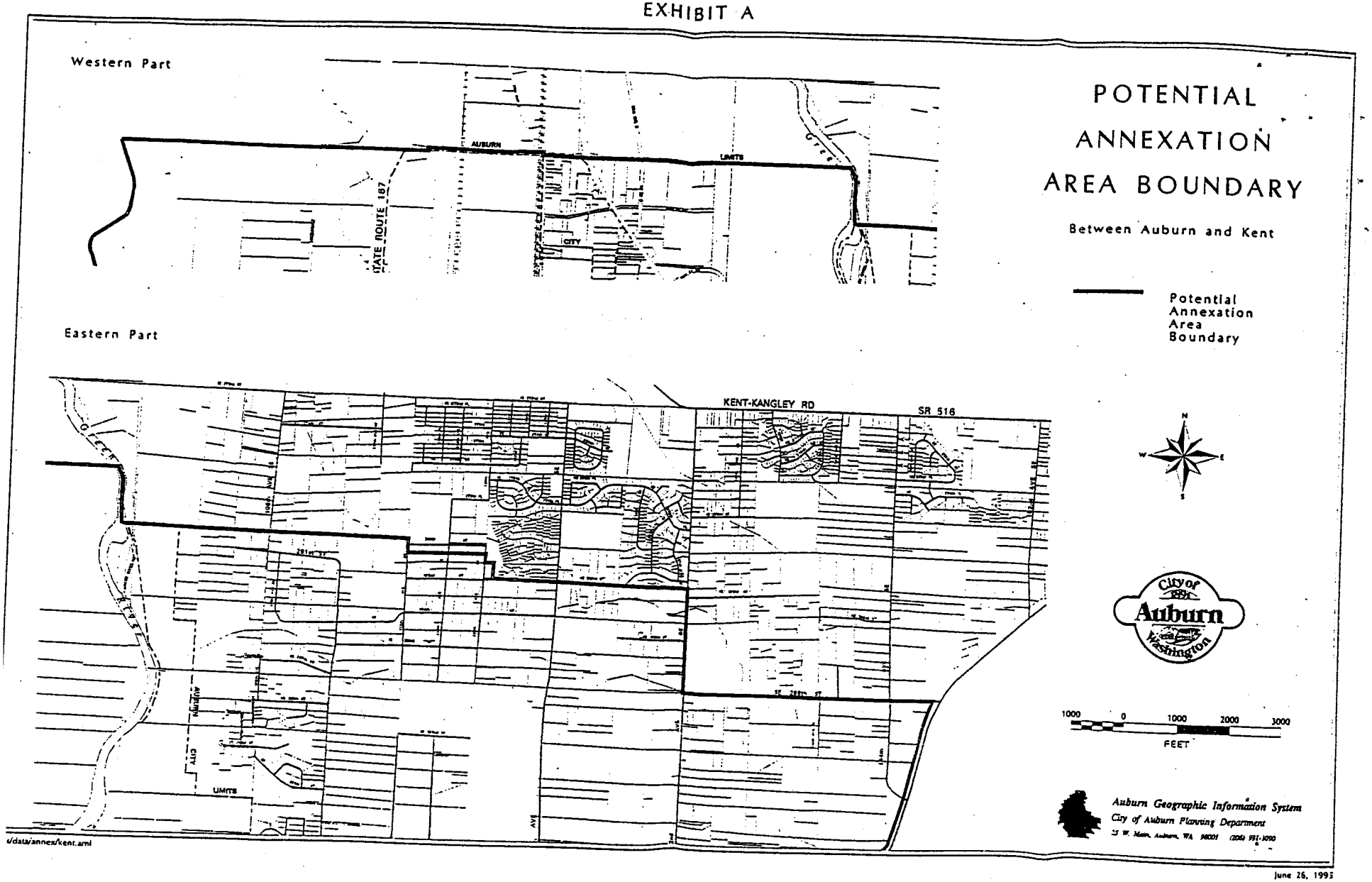
Approved as to Form:

City Attorney

BHS\KENTAGRT

REF: Resolution No. 2873
September 15, 1997

EXHIBIT A



REF: Resolution No. 2873
September 15, 1997

RESOLUTION NO. 2925

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR AND CITY CLERK TO EXECUTE SETTLEMENT AGREEMENT BETWEEN THE CITY OF AUBURN AND THE CITY OF BONNEY LAKE.

WHEREAS, Auburn and Bonney Lake are currently involved in several related disputes regarding the provision of water service to a development known as "Lakeland Hills South" within Auburn's currently-designated Pierce County Potential Annexation Area; and

WHEREAS, Auburn is currently seeking to annex a portion of its Pierce County Potential Annexation Area; and

WHEREAS, Bonney Lake is currently opposing said annexation proposal; and

WHEREAS, Bonney Lake has initiated litigation against Auburn in Pierce County Superior Court alleging tortious interference with a contractual relationship; and

WHEREAS, Auburn has threatened legal and/or administrative action with respect to various water rights owned by Bonney Lake; and

WHEREAS, Bonney Lake has threatened legal and/or administrative action with respect to various water rights owned by Auburn; and

WHEREAS, the parties hereto desire to enter into a settlement agreement, the express intent of which is to settle all claims and disputes between Auburn and Bonney Lake relating to the provision of water service to Auburn's Pierce County Potential Annexation Area and related water rights issues; and

WHEREAS, Bonney Lake and Auburn are both desirous of entering into cooperative arrangements to provide for the efficient and cost-effective provision of water to their customers.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, IN A REGULAR MEETING DULY ASSEMBLED, HEREWITH RESOLVES AS FOLLOWS:

Section 1. The Mayor and City Clerk of the City of Auburn are herewith authorized to execute the Settlement Agreement between the City and the City of Bonney Lake. A copy of said Settlement Agreement is attached hereto, designated as Exhibit "A" and incorporated by reference in this Resolution.

Section 2. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

DATED and SIGNED this 2nd day of March, 1998.

CITY OF AUBURN

Charles A. Booth

CHARLES A. BOOTH
MAYOR

ATTEST:

Danielle E. Daskam

Danielle E. Daskam,
City Clerk

APPROVED AS TO FORM:

Michael J. Reynolds

Michael J. Reynolds,
City Attorney

SETTLEMENT AGREEMENT

CITY OF AUBURN AND CITY OF BONNEY LAKE

THIS SETTLEMENT AGREEMENT ("Agreement") is entered into this 5th day of March, 1998, by and between the **CITY OF AUBURN**, ("Auburn"), a municipal corporation, and the **CITY OF BONNEY LAKE** ("Bonney Lake"), a municipal corporation.

WHEREAS, Auburn and Bonney Lake are currently involved in several related disputes regarding the provision of water service to a development known as Lakeland Hills South ("LHS") within Auburn's currently-designated Pierce County Potential Annexation Area ("PC PAA");

WHEREAS, Auburn is currently seeking to annex a portion of its PC PAA; and

WHEREAS, Bonney Lake is currently opposing said annexation proposal; and

WHEREAS, Bonney Lake has initiated litigation against Auburn in Pierce County Superior Court alleging tortious interference with a contractual relationship; and

WHEREAS, Auburn has threatened legal and/or administrative action with respect to various water rights owned by Bonney Lake; and

Exhibit "A"
Auburn Resolution No. 2925

WHEREAS, Bonney Lake has threatened legal and/or administrative action with respect to various water rights owned by Auburn; and

WHEREAS, the parties hereto desire to enter into a settlement agreement, the express intent of which is to settle all claims and disputes between Auburn and Bonney Lake relating to the provision of water service to Auburn's PC PAA and related water rights issues; and

WHEREAS, Bonney Lake and Auburn are both desirous of entering into cooperative arrangements to provide for the efficient and cost-effective provision of water to their customers.

NOW, THEREFORE, the parties agree as follows:

1. Bonney Lake's claims against Auburn in Pierce County Cause No. 97-2-05212-8 shall be dismissed with prejudice and without costs to either party.

2. Bonney Lake shall withdraw its opposition to Auburn's proposed annexation of a portion of Auburn's PC PAA in Pierce County Boundary Review Board Case No. A-97-5.

3. Auburn recognizes and agrees to Bonney Lake's exclusive right to serve with water all portions of Bonney Lake's water service area as designed by the 1995 Pierce County Coordinated Water System Plan for a period of seven years from the effective date of any Auburn annexation of

any area within such service area. It is understood that Auburn anticipates multiple annexation proceedings regarding such areas. Bonney Lake shall not oppose such annexation proposals, and pursuant to this paragraph, Bonney Lake shall have the exclusive right to serve each annexation area for seven years from the effective date of annexation.

4. Upon the expiration of each seven-year period, or sooner if requested by Bonney Lake, provided for in paragraph 3 with respect to a particular portion of Bonney Lake's water service area, Auburn shall, at its option, have the exclusive right to serve such area with water, subject to the further requirements and conditions contained in paragraphs 5 and 6 of this Agreement.

5. Upon the expiration of each seven-year period, or sooner if requested by Bonney Lake, provided for in paragraph 3 with respect to a particular portion of Bonney Lake's water service area, Bonney Lake shall, at Auburn's option, transfer to Auburn, by bill of sale, all of its ownership rights in water system facilities located within and used to serve such area, with the exception of facilities retained by Bonney Lake in accordance with paragraph 6, below. Auburn shall have no obligation to compensate Bonney Lake for such facilities as are transferred by Bonney Lake pursuant to this Section.

Facilities to be transferred pursuant to this paragraph shall include water pipes, but shall not include source or storage facilities, including but not limited to Bonney Lake's Tacoma Point Wells and Tacoma Point Reservoir, nor those facilities reserved to Bonney Lake under paragraph 6.

6. In contemplation of Auburn's anticipated eventual takeover of water service from Bonney Lake within Auburn's annexation area, and for the purpose of providing Bonney Lake a looped system after Auburn's takeover of water service within its annexed areas hereunder, Auburn shall, prior to the takeover of service within any portion of Bonney Lake's current water service area, construct or cause to be constructed and transfer or cause to be transferred to Bonney Lake, free of charge, future 12" water transmission line as shown on the attached Exhibit A to the southern boundary of Auburn's PC PAA; provided, that in the event the particular alignment shown on Exhibit A shall prove impractical or unavailable, such lines shall be constructed in an alignment as mutually agreed to by the parties. Auburn shall construct or cause these facilities to be constructed and transferred to Bonney Lake without regard to the progress or lack of progress of the development of LHS. Such facilities shall be constructed in accordance with applicable Bonney Lake standards. In addition, Auburn will

not take over water service from Bonney Lake, and Bonney Lake will retain ownership of its water system, within that area shown on Exhibit B, attached hereto. This area will remain part of Bonney Lake's water service area and the facilities serving it will remain part of Bonney Lake's water system in perpetuity, notwithstanding possible annexation of the area by Auburn at any time in the future.

7. Auburn shall guarantee Bonney Lake the right, in perpetuity, to transport water through Auburn's corporate boundaries within Pierce County, in order that Bonney Lake's ability to serve its water service area as recognized in this Agreement is not hindered or rendered impractical. Such guarantee shall be effectuated by the execution of such easements, agreements, franchises, licenses or other documents as are appropriate, on terms that are in no respect less favorable or advantageous to Bonney Lake than those governing the operations of Auburn's own water utility within its corporate limits. Auburn shall not condemn or otherwise interfere with any Bonney Lake water facilities covered by this paragraph or paragraph 6.

8. Neither Auburn nor any of its agents, employees, attorneys or contractors shall challenge, directly, indirectly or through third parties, through legal or administrative proceedings or any other means, Bonney Lake's

existing water rights, including but not limited to Bonney Lake's water rights associated with its Tacoma Point Wells. The rights associated with its Tacoma Point Wells are, specifically, as follows:

(1) Lake Tapps Water Co. Certificate No. C 2809-A, with a date of priority 1/23/57, for 100gpm and 45af;

(2) Tacoma Point Well No. 2 Certificate No. C G2-26853, with a date of priority of 2/5/86, for 1000gpm and 800af; and

(3) Tacoma Point Well No. 4 Permit Number G2-27693, with a date of priority of 1/30/90, for 1200gpm and 1600af.

Because of production problems associated with Bonney Lake's current wells at Tacoma Point, Auburn's agreement not to protest or interfere extends to and includes Bonney Lake's drilling of another well or wells at Tacoma Point to achieve full production of its certificated and permitted water rights. It also includes Bonney Lake's effort to proceed to certificate on its permit rights in Tacoma Point Well No. 4, referenced above. Bonney Lake agrees not to seek to increase its water rights in the Tacoma Point well field for any appropriation beyond these permitted/certificated levels. Bonney Lake shall not challenge, directly,

indirectly or through third parties, through legal or administrative proceedings or any other means, Auburn's existing water rights or Auburn's efforts to use those rights in order to serve its PC PAA with water, including any application to permit the withdrawal of water from wells located within LHS commonly known as Lakeland wells 5b and 5c, provided that such rights in Lakeland wells 5b and 5c are supplemental to Auburn's existing rights in wells 5 and 5a. For purposes of this paragraph, the word "challenge" shall include both direct actions, such as the filing of any lawsuit, complaint or letter of protest, as well as indirect actions, such as assisting, facilitating, encouraging or approving any such actions on the part of a third party. Each party will terminate and withdraw any pending challenges to the other's water rights that have been initiated.

Each party expressly reserves the right to challenge any application for new water right or change in water right that is made after the date of this Agreement; provided, that any application for certification of a water right for which a party already holds a permit shall not be deemed an application for new water right or change in water right made after the date of this Agreement.

9. In order to facilitate the practical and efficient provision of water service to the portion of LHS outside Bonney Lake's current water service area, the parties will work together cooperatively to agree on an amendment of their respective water service area boundaries in this area.

10. At such time as either party wishes to pursue the development of additional water source or supply or water storage facilities in the vicinity of LHS, the party will provide notice of same to the other party and the parties will thereupon meet to confer with respect to their respective needs and interests in regard to additional source, supply or storage. Should it appear that the interests of the parties are sufficiently aligned, the parties will mutually agree to join in the development of said additional source, supply or storage facilities, on such terms as the parties may agree are equitable.

11. In the future, at such time as Auburn's water system has been more fully developed in the area of LHS and/or on its common boundary with Bonney Lake's water service area, the parties may agree that it is in their mutual best interests, and the best interests of their respective customers, to enter into an agreement providing for one or more interties between their water systems to be constructed.

12. Each party agrees to sign such documents and to take such actions as are necessary to implement the purpose and intent of this Agreement.

13. Time is of the essence under this Agreement. The terms of this Agreement shall be specifically enforceable by the parties hereto.

14. Each of the individuals signing this Agreement on behalf of a party warrants that he/she has the authority to sign the Agreement and thereby to bind the party on whose behalf he/she signs.

15. This Agreement shall be binding on the heirs, successors and assigns of the parties.

16. This Agreement is designed strictly for the purpose of compromising disputed claims and avoiding the expense and risks of litigation. The Agreement shall be construed according to the fair intent of the language as a whole, and not for or against either party.

17. In the event of any disputes arising out of the implementation or enforcement of this Agreement, the parties agree to submit said disputes first to mediation and, if mediation is unsuccessful, then to binding arbitration in accordance with Ch. 7.04 RCW; provided, however, that each party reserves the right to seek injunctive or other similar equitable relief from a court of competent jurisdiction in

order to preserve the status quo pending any mediation or arbitration or to otherwise protect a right or remedy that might otherwise be lost if such interim relief were not obtained.

18. This Agreement shall not waive Auburn's right to assess and collect any taxes, assessments or fees which it is otherwise authorized under law to assess or collect on any water service; provided, that Auburn's assessment and collection of any such taxes, assessments or fees with respect to any area served with water by Bonney Lake shall be upon the same terms as Auburn's assessment and collection of any such taxes, assessments or fees with respect to areas served with water by Auburn.

CITY OF AUBURN

By: Charles A. Booth
CHARLES A. BOOTH

Its: Mayor

CITY OF BONNEY LAKE

By: Robert Penney

Its: MAYOR

Exhibit "A"
Resolution No. 2925

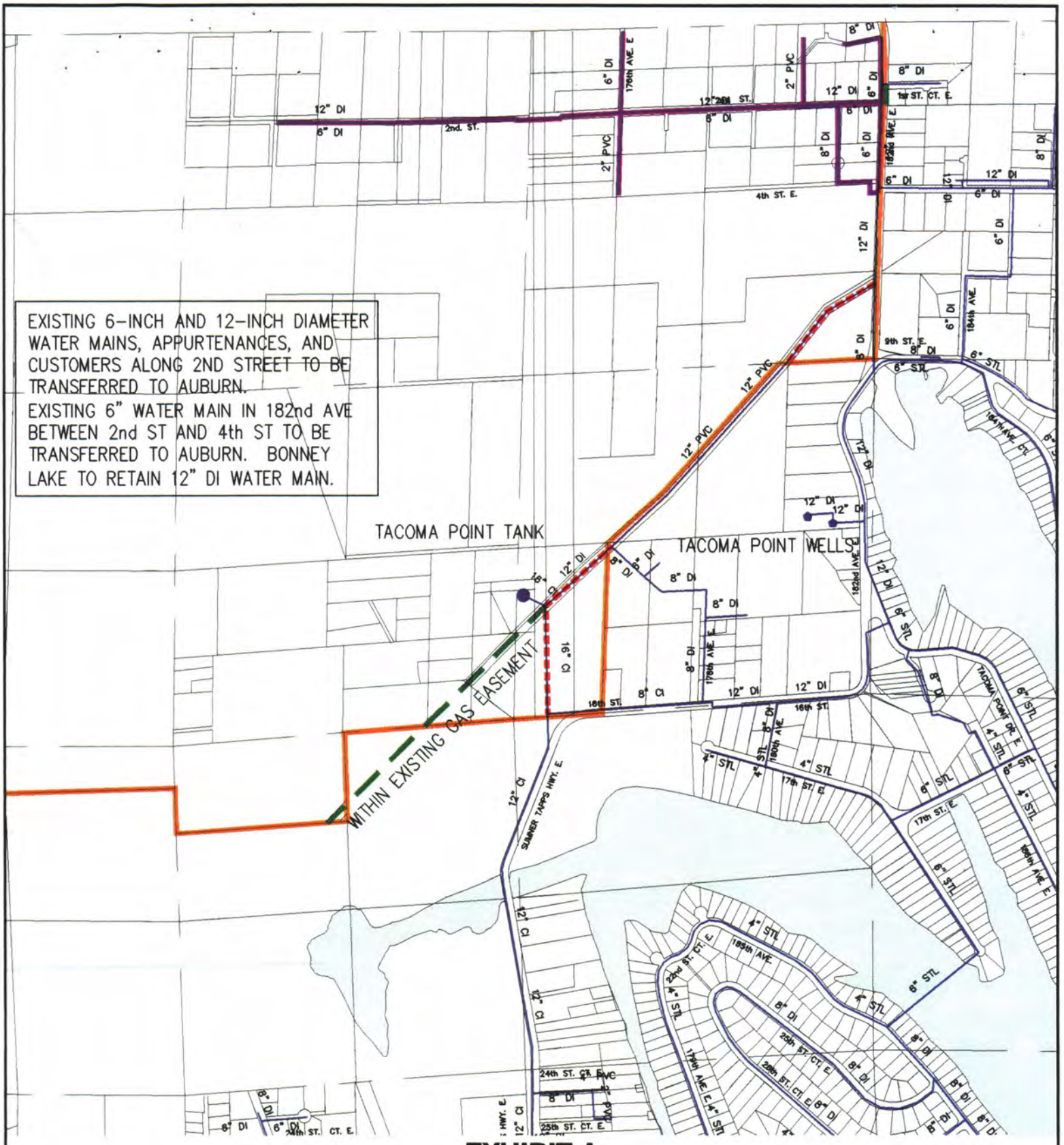


EXHIBIT A

CITY OF AUBURN AND CITY OF BONNEY LAKE SETTLEMENT AGREEMENT

LEGEND

- EXISTING BONNEY LAKE WATER MAIN
- PROPOSED 12" DIAMETER WATER MAIN TO BE PROVIDED BY AUBURN
- EXIST. BONNEY LAKE WATER MAIN IN FRANCHISE WITH AUBURN
- EXISTING BONNEY LAKE WATER MAIN TO BE TRANSFERRED TO AUBURN

Res 2925

SCALE: 1" = 1000'

BON\198-027\BL_AB-S2

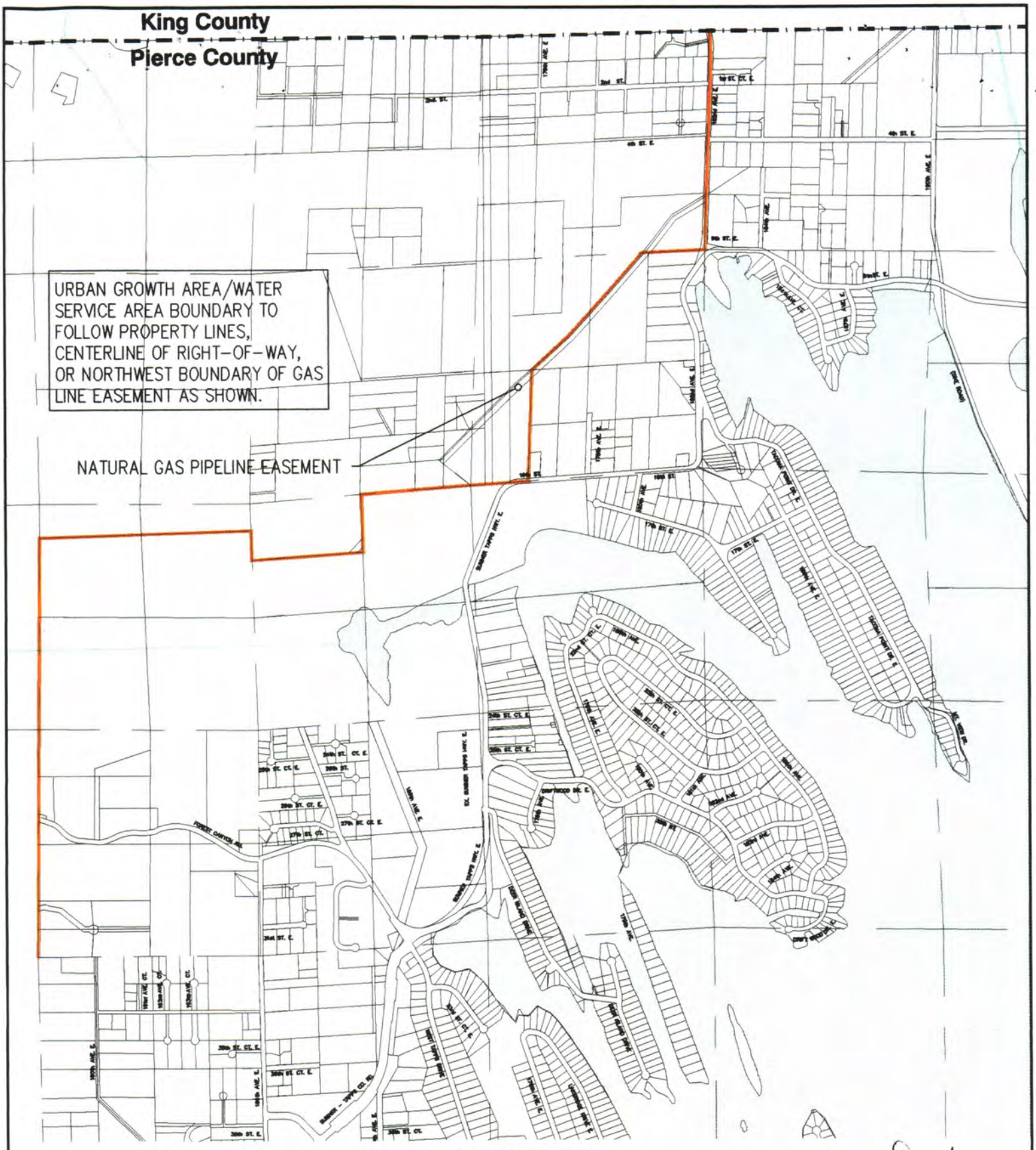


EXHIBIT B

CITY OF AUBURN AND CITY OF BONNEY LAKE SETTLEMENT AGREEMENT

AREA TO REMAIN IN BONNEY LAKE SERVICE AREA IN PERPETUITY.

BONNEY LAKE WATER SERVICE AREA BOUNDARY

Res 2925

SCALE: 1" = 1500'

\BON\196-027\BL_AB-S1

RESOLUTION NO. 2 9 5 5

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR AND CITY CLERK TO EXECUTE FIRST AMENDMENT TO LAKELAND ANNEXATION AND UTILITIES AGREEMENT BETWEEN THE CITY AND THE LAKELAND COMPANY, INC.

WHEREAS, the City and The Lakeland Company, Inc. have previously entered into the Lakeland Annexation and Utilities Agreement in June, 1996; and

WHEREAS, disputes arose between the parties on the interpretation and enforcement of the said Agreement and the parties now desire to resolve any disputes with respect to that Agreement and with respect to all claims and obligations between the parties arising from events which pre-date the execution on of this Agreement.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, IN A REGULAR MEETING DULY ASSEMBLED, HEREWITH RESOLVES AS FOLLOWS:

Section 1. The Mayor and City Clerk of the City of Auburn are herewith authorized to execute First Amendment to Lakeland Annexation and Utilities Agreement with The Lakeland Company, Inc. A copy of said Agreement is attached hereto, denominated as Exhibit "A" and made a part hereof as though set forth in full herein.

Section 2. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

DATED this 4th day of May, 1998.

CITY OF AUBURN

CHARLES A. BOOTH
MAYOR

ATTEST:

Danielle E. Daskam,
City Clerk

APPROVED AS TO FORM:

Michael J. Reynolds,
City Attorney

PIERCE COUNTY, WA
9805210624
5-21-1998 01:49 pm
Fee Amt: $57.00

AUDITOR'S NOTE

LEGIBILITY FOR RECORDING AND COPYING UNSATISFACTORY IN A PORTION OF THIS INSTRUMENT WHEN RECEIVED

Return Address:
Auburn City Clerk
City of Auburn
25 West Main St.
Auburn, WA 98001

RECORDER'S COVER SHEET

Document Title(s) (or transactions contained therein):
1. Amendment to Lakeland Annexation and Utilities Agreement
2.
3.
4.

Reference Number(s) of Documents assigned or released: NONE

☒Additional reference #'s on page __3____ of document

Grantee (Last name first, then first name and initials)
1. The Lakeland Company
2.
3.
4.

Grantor: (Last name first)
1. AUBURN, CITY OF
2.
3.
4.

Legal Description (abbreviated: i.e. lot, block, plat or section, township, range)
SEC 6 TWP 20 N Range 5

☒ Additional legal is on page 31 of document.

Assessor's Property Tax Parcel/Account Number: 0520061012, 0520061013, 0520061014, 0520052038, 0520061015, 0520052039, 0520061016, 0520082006, 0520082010, 0520064000, 0520063000, 0520053001, 0520053004, 0520053014, 0520053004, 0520053014, 0520053004, 0520053014, 0520053008, 0520053042, 0520051032, 0520051001, 0520051003, 0520071001, 0520053041, 0520062007, 0520062027, 0520062028, 0520053038, 0520053030, 0520063000, 0520064000, 0520063008

☐ Assessor Tax # not yet assigned

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57

AMENDMENT
TO
LAKELAND ANNEXATION AND UTILITIES AGREEMENT

THIS AGREEMENT made and entered into this 14th day of May, 1998, by and between the **CITY OF AUBURN**, a municipal corporation, organized under Title 35A, Optional Municipal Code, hereinafter referred to as **"CITY"** and **THE LAKELAND COMPANY, INC.**, a Washington corporation, its heirs, successors and assigns and all related entities and all shareholders, and/or owners, jointly and severally and their marital communities, including all parties that have an interest in the property affected by this Agreement, herein referred to as **"TLC"**.

WHEREAS, the parties to this Agreement have previously entered into the Lakeland Annexation and Utilities Agreement, referred to as "PRE-ANNEXATION/UTILITIES

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AGREEMENT" in June, 1996, which agreement was approved by Auburn City Council under Ordinance No. 4867; and

WHEREAS, disputes arose between the parties on the interpretation and enforcement of the Pre-Annexation/Utilities Agreement referred to above, and the parties desire to resolve any disputes with respect to all claims and obligations between the parties arising from events which pre-date the execution of this Agreement; and

WHEREAS, the parties desire to end all disputes and claims, including any and all claims for damages, attorney fees and costs arising from events which pre-date the execution of this Agreement; and

WHEREAS, the parties have engaged in numerous meetings to resolve all issues between the parties and this Agreement reflects a compromised position between the parties for the purposes of attaining a complete settlement; and

WHEREAS, it is the intent of this Agreement that the agreement entitled Lakeland Annexation and Utilities Agreement, recorded under Recording No. 9608120131 shall remain in force and effect except as specifically amended by this Agreement; and

WHEREAS, the parties acknowledge that a dispute existed between the City of Bonney Lake and the CITY with respect to

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water service, which dispute has been settled between the City of Bonney Lake and the CITY and in such settlement comments were taken from TLC and incorporated into the final Settlement Agreement between the CITY and Bonney Lake; and

WHEREAS, it is the intent of the parties that the CITY proceed with the annexation of the TLC property and that TLC develops that property which is either annexed or will be annexed in accordance with the standards and land use polices and procedures of the CITY; and

WHEREAS, this Agreement and the requirements for any monetary payment from TLC to the CITY under this Agreement were specifically requested by TLC to result in a more marketable development for TLC and any payments are acknowledged to be not requested by the CITY but placed in the Agreement by TLC unilaterally and is not considered payment under RCW 82.02.020; and

WHEREAS, the parties acknowledge that TLC, in cooperation with the State of Washington and other local government units, other than the City of Auburn, is proceeding with the construction of the certain portions of the Lake Tapps Parkway East, as defined in a mitigation agreement executed between Pierce County and TLC and that the CITY has no responsibility to construct, make any

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payments nor guarantee in any way any obligations for the construction of TLC's portion of the Parkway project. However, the parties acknowledge the importance of this construction project to TLC and that the execution of this Agreement is vital to TLC's ability to secure financing for its construction, and understand that the sole purpose of the expedited handling of this Agreement is to obtain a resolution of disputes prior to May 4, 1998. May 4, 1998 is a TLC funding date which requires this Agreement for TLC to obtain the necessary funding to construct this roadway; and

WHEREAS, the parties acknowledge the existence of an Agreement referred to as the "Crabtree Agreement" and agree that the settlement provisions in this Agreement settle all disputes including but not limited to any claims that TLC may have as a successor under the Crabtree Agreement; and

WHEREAS, the Crabtree Agreement and all its terms, including those terms relating to customer equivalent charges for services, expire on June 6, 1998; and

WHEREAS, the parties agree that TLC has had input with regard to the resolution of the CITY and the City of Bonney Lake dispute and agree that the settlement provisions in this Agreement settle any claims TLC may have against the CITY with respect to water, including but not limited to the

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providing of water, the providing of water pressure, fire flow or any other claims related to the water utility.

NOW, THEREFORE, BASED UPON MUTUAL COVENANTS TO BE DERIVED, THE PARTIES AGREE AS FOLLOWS:

1. LAKELAND ANNEXATION AND UTILITIES AGREEMENT:

The parties reaffirm the terms and conditions of the Lakeland Annexation and Utilities Agreement recorded under Recording No. 9608120131, except as specifically amended herein.

This Agreement affects that real property identified on the map attached hereto and incorporated by reference as Exhibit "1" and legally described on attached Exhibit "2", hereafter referred to as "TLC Property".

3. DEVELOPMENTAL APPROVALS FROM PIERCE COUNTY:

The parties acknowledge that as provided in the PRE-ANNEXATION/UTILITIES AGREEMENT, paragraphs 2.2,2.9,2.13, and 4.1, prior to annexation of the subject project TLC, must obtain developmental approvals from Pierce County and in so doing agrees to comply with the Pierce County requirements and the CITY standards and land use polices and procedures.

In the event that the imposition of CITY standards on a development application submitted to Pierce County for

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an area not yet annexed to the CITY would result in the denial of the application by Pierce County, then the Pierce County standard will prevail. The CITY agrees to provide sewer service consistent with the terms and conditions of this Agreement.

4. POLICE AND FIRE SERVICES:

Upon annexation the CITY will provide to the area annexed, police and fire services that it provides to its other citizens. Fire service shall be provided to the annexed property provided that TLC has met all requirements of ACC Titles 15, and Chapter 13.16 as it relates to fire flow, and provided that the CITY may contract fire services if it cannot practicably provide fire service to some of the annexed area. Sprinklers shall be required for multifamily and commercial development. Sprinklers shall be required for single-family residential development only if necessary to satisfy the CITY's fire flow standards as described in Title 15.

5. PARKS:

Paragraph 4.5, "Parks", of the PRE-ANNEXATION/ UTILITIES AGREEMENT, is amended to read as follows:

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4.5(a) TLC shall dedicate to CITY, one developed 15-acre park, one undeveloped 15-acre park, two developed 5-acre parks, and a linear park along Lakeland Hills Way for a total of approximately 42.91 acres.

4.5(b) The parks will be located as indicated on Exhibit 1. Except for the linear park and Park P4, the topography and soil conditions shall be approved by the CITY to ensure each site is suitable for active park use. The CITY has reviewed Park P4 and agrees to accept this undeveloped park "as is". The park locations indicated on Exhibit 1 are acceptable to the CITY. However, the parties acknowledge that in order to locate the parks where indicated on Exhibit 1, TLC must obtain a major amendment approval pursuant to Pierce County Code. TLC agrees to process the major amendment application by submitting an application to the CITY and Pierce County concurrently within 30-days of execution of this Agreement. While reserving the right to review any other aspects of the major amendment, the CITY agrees not to object to the proposed park locations.

4.5(c) As soon as reasonably possible upon legal segregation, but no later than six months after approval of the preliminary plat for Lakeland Division One,

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TLC shall dedicate Park P4 to the CITY. The linear park depicted on Exhibit 1 shall be designed to standards approved by the CITY Parks Director and shall be developed concurrent with construction of Lakeland Hills Way. The CITY agrees that TLC's commitment to dedicate Park P4 and the linear park, as described in this Agreement, satisfies the CITY's concurrency and mitigation requirements for issuance of 800 residential building permits. Prior to the issuance of residential building permits for 801 dwelling units within the PUD, TLC shall develop and dedicate Park P2 to the CITY or make arrangements for dedication and use acceptable to the CITY as necessitated by financing. CITY and TLC agree that upon dedication of Parks P2 and P4, TLC shall have satisfied concurrency requirements for the issuance of residential building permits for a total of 2,173 dwelling units. Thereafter, prior to the issuance of residential building permits for dwelling units in excess of a total of 2,173, CITY and TLC agree that additional park improvements must be dedicated to CITY (or the land dedicated, the improvements bonded, and an improvement schedule agreed upon) consistent with the formula described below:

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The ratio of improved parks required per thousand population shall be calculated based upon the following mathematical assumptions:

3,408 units approved in Lakeland South

42.91 acres of both improved and unimproved parks required

2.8 residents per household assumed for conversion of people to units

Accordingly the ratio of improved park required per thousand population shall be calculated as follows:

Total	(42.91 acs / (3408 x 2.8 = 9542)) = 4.5 acres combined parks/1000 population
Less	(15.0 acs / (739 x 2.8 = 2069)) = 7.25 acres of unimproved park/1000
	(27.91 acs /(2669 x 2.8 = 7473)) = 3.73 acres of unimproved park/1000

Based upon the foregoing calculations, TLC shall be entitled to the issuance of 95.62 residential building permits for each acre of improved park dedicated to the CITY (or unimproved/bonded park) dedicated to the CITY.

4.4 TLC and CITY shall work cooperatively in development of specific plans that meet CITY park standards. Each party shall respond promptly to proposals and submittals relating to the design and construction of park improvements. The CITY reserves final approval authority of park plans and CITY approval must be granted prior to

9805210624

construction. The level of improvements required in Parks P1, P2 and P3 shall be based upon $1.82 per square foot of total park areas for P1, P2 and P3. The cost per square foot is based upon improvements made to Lakeland Hills Park in 1992 and the improvements shall be made at that rate adjusted by Consumer Price Index from 1992 until the date of Park plan approval by the CITY. The CITY has the right to distribute improvement funds between and among the Parks but in any event, TLC's financial obligation shall not exceed the total per square foot cost as specified above.

4.5(d) The CITY shall assume the responsibility for proper maintenance of the parks dedicated to it, provided, however, that the CITY may allow TLC to provide additional maintenance within parks dedicated to the CITY with the CITY's written consent. Except for Park P4, TLC must give CITY 1-year notice prior to dedication of any park land to the CITY.

4.5(e) TLC and/or appropriate homeowner associations, agree to develop, own, maintain, repair, and pay real estate taxes and assessments (if any) on all other park areas indicated on Exhibit 1 which are less than five acres in size.

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4.5(f) The CITY agrees that TLC's satisfactory performance of the terms contained in this Section of the Agreement shall constitute full and complete satisfaction of the CITY's park standards and requirements and shall be deemed to meet all park mitigation and concurrency requirements for the development of the TLC Property.

4.5(g) TLC agrees that any park impact fees paid to Pierce County pursuant to Pierce County requirements will not affect or reduce the park commitments to the CITY contained in this Agreement.

4.5(h) In addition to the parks referenced in this Section, TLC agrees to develop recreational trails within the relocated power line haul road depicted on Exhibit 1 pursuant to a design and construction schedule to be mutually determined by CITY and TLC. Upon completion of trail construction, maintenance of this recreational trail shall be the responsibility of the CITY.

6. INSPECTING AGENCY:

A building permit that has been issued by Pierce County shall be inspected by Pierce County even if the subject property is annexed after permit approval. Building permits approved by the CITY shall be inspected by the CITY.

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7. COVENANT RUNNING WITH THE LAND:

The parties agree that this Agreement is a covenant running with the land and is binding and benefiting the TLC Property. In order to insure that purchasers of homes, rental, commercial or other properties may obtain title free of the encumbrances of this Agreement, the issuance of a building permit for such property shall be satisfactory evidence of compliance with all provisions of this Agreement.

8. SCHOOL IMPACT FEE ORDINANCE:

The parties acknowledge that at the request of the Dieringer School District, and without objection by TLC, the CITY has enacted a School Impact Fee Ordinance. TLC agrees not to challenge the School Impact Fee Ordinance and agrees not challenge any school impact fees up to $1425 for single-family and $750 for multifamily. The CITY reserves the right to increase the above fees in the future, TLC reserves the right to challenge any school impact fees which exceed the above stated amounts.

9. PROTOCOL FOR SUBMISSION OF APPLICATIONS:

Paragraph 4.1(b) of the PRE-ANNEXATION/UTILITIES AGREEMENT is amended as follows:

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For TLC Property not yet annexed, and therefore under Pierce County jurisdiction, development applications shall be submitted to Pierce County. However, TLC agrees to simultaneously submit all such applications, except single-family building and grading permits, to the CITY. Except as provided in paragraph 2 of this Agreement, TLC agrees to comply with all applicable CITY standards and land use polices and procedures as determined by City Planning Director. Failure to comply with the provisions of this paragraph shall be determined a "Default" of this Agreement. To assure such compliance, TLC agrees to pay to CITY liquidated damages in the amount of $1,000 per day for each day that development is in Default. Notwithstanding any other provision of this Agreement, the liquidated damages shall not begin to accrue if the Default is cured within thirty (30) days from the date that the CITY mails or delivers written notice of the Default to The Lakeland Company, PO Box 3866, Bellevue, Washington 98009 If any Default is capable of being cured and the cure cannot be reasonable completed within the thirty (30) day cure period, the cure period shall be extended up to ninety (90) days so

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long as TLC has commenced action to cure within the thirty (30) day cure period and is proceeding to cure the Default with due diligence.

The decision of the CITY Planning Director may be appealed to the CITY Hearing Examiner within thirty (30) days from the date written decision. The day of filing of the appeal to the Hearing Examiner shall stay accrual of the liquidated damages. The stay of damages shall be released on the effective date of the Hearing Examiner's written decision. If the Hearing Examiner's decision is appealed, pursuant to paragraph 5.3 of the PRE-ANNEXATION/UTILITIES AGREEMENT, accrual of liquidated damages shall be stayed again until a written decision is issued by the mediator/arbitrator pursuant to provisions of Section 5.3 of the PRE-ANNEXATION/UTILITIES AGREEMENT. However, in no event shall any stay following appeal of the Hearing Examiner's decision exceed ninety (90) days.

Those permit applications filed with Pierce County which are considered complete and approved by Pierce County before annexation shall be built in compliance with the conditions placed upon it by Pierce County and pursuant to the conditions of this Agreement.

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10. RELEASES:

The parties to this Agreement hereby release, discharge, resolve and settle any and all claims arising from events which pre-date the execution of this Agreement including their officials, employees, staff, consultants, shareholders, owners, attorneys, and including attorney fees and costs, including but not limited to claims involving providing of water or other utilities and any claims that TLC may claim to have under the Crabtree Agreement. This Agreement is not intended to waive or release any claims or address any disputes or potential disputes that TLC may have with the City of Bonney Lake.

11. TRANSPORTATION:

Paragraph 4.3 of the PRE-ANNEXATION/UTILITIES AGREEMENT is replaced in its entirety by the following:

TLC agrees to pay the CITY at the time a building permit is issued by either CITY or Pierce County, the following:

(1) $839.57 per detached single-family residential unit,

(2) $544.94 per attached single-family or multifamily unit,

(3) $187.26 per residence for residential units within the senior housing zone, and

9805210624

(4) $2.18 per gross foot of commercial or retail structures.

For building permits which are issued by Pierce County prior to execution of this Agreement, TLC shall pay the above amounts for such permits within 30 days of execution of this Agreement.

The fee amounts described above shall be adjusted to reflect the increase in the Consumer Price Index for the Seattle-Metropolitan area beginning as the base year January 1, 2000 and on January 1st each year thereafter the percentage difference of each year shall equal the adjustment

Payment of these fees shall constitute complete satisfaction of any transportation mitigation and concurrency requirements for the development of the TLC Property.

TLC agrees that all streets shall be constructed consistent with CITY standards including design criteria, construction specifications, operational criteria, and approved engineering submittals, except that the CITY may agree to modify the standards for private streets.

The parties acknowledge that there is a transportation cap which will allow a generation of up to

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800 pm peak hour trips for TLC development and that the development of TLC property subject to this Agreement cannot exceed that capacity cap until the extension of Lakeland Hills Way to the Lake Tapps Parkway and the construction of TLC's portion of the Lake Tapps Parkway East connection 8th Street East as required in the TLC/Pierce County transportation mitigation agreement. The Lake Tapps Parkway East project is identified as Lake Tapps Parkway East (WEST), MAP ID No. 166, in the 1998-2003 Transportation Improvement Program for Pierce County. Upon completion of The Lake Tapps Parkway East connection to 8th Street East as described in the TLC/Pierce County transportation mitigation agreement, the transportation cap shall expire.

The calculation of peak hour trips shall be determined at building permit approval.

The CITY shall consider the 800 pm peak hour trips to be present in the transportation system in its review of development applications for property not included in Exhibits 1 and 2.

12. STORM WATER:

Paragraph 4.4(a) of the PRE-ANNEXATION/UTILITIES AGREEMENT is amended as follows:

The CITY agrees to receive the storm water from the

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Lakeland property described herein subject to the construction and dedication of necessary infrastructure which meets CITY standards including design criteria, construction specifications, operational criteria, and approved engineering submittals upon the effective date of annexation under the same terms and conditions as storm water is received from other developments within the CITY, including payment of any charges required by the CITY's utility ordinances provided, the water received from properties in TLC property not yet annexed shall be of the same quality and flow rate as from the property prior to development, shall not exceed the capacity of the CITY's existing storm drainage system, and shall be subject to the same charges as any other property in the CITY for storm water.

The CITY and TLC acknowledge that substantial mater storm drainage planning has been completed for TLC properties in the form of the Comprehensive Drainage Plan Lakeland Hills Development Area, prepared by CH2Mhill Engineers, dated March 1991 and the Lakeland Hills South Development Area Conceptual Storm Drainage Plan, prepared by Stephen/Dowl Engineers, dated March 1995. Both parties also acknowledge that supplemental drainage basin information

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will need to be developed by TLC to address changed conditions such as the Lake Tapps Parkway, certain differences between CITY and County standards, and impacts associated with grading activities. In addition, the parties agree that TLC will need to continue to develop more precise drainage subbasin planning information to insure the adequacy and timely staging of necessary storm drainage facilities associated with specific development proposals.

13. SANITARY SEWER:

Paragraph 4.4(b) "SEWER", PRE-ANNEXATION/UTILITIES AGREEMENT is replaced in its entirety as follows:

The CITY shall allow the TLC Property to connect to the CITY's sanitary sewer utility under the same terms and conditions as if the property were within the CITY limits subject to obtaining expanded service area boundaries and all other terms of this Agreement, including, but not limited to, Section 3. The CITY shall apply to Pierce County for any franchise that would be required for the property not yet annexed with the understanding that applying for the franchise and any subsequent Pierce County approval does not waive any conditions set forth herein for the provision of sanitary sewer service.

For the orderly development of its property TLC

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will need sanitary sewer from the CITY prior to CITY's annexation of the subject property. TLC agrees to construct all sanitary sewer in accordance with CITY standards including design criteria, construction specifications, operational criteria and approved engineering submittals, and the CITY agrees, upon verification, of TLC's compliance with its standards to connect to the CITY system the TLC system for sanitary sewer upon payment of all charges set forth in Auburn City Code.

The CITY and TLC acknowledge that substantial master sanitary sewer planning has been completed for TLC properties in the form of the Comprehensive Sanitary Sewer Study Lakeland Hills Development Area, prepared by Dowl Engineers, dated March 1991. Both parties also acknowledge that supplemental sanitary sewer information will need to be developed by TLC to address changed conditions such as density changes and impacts associated with grading activities. In addition, the parties agrees that TLC will need to continue to develop more precise sanitary sewer subbasin planning information to insure the adequacy and timely staging of necessary storm drainage facilities associated with specific development proposals.

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14. WATER:

Paragraph 4.4(c) is amended as follows:

The parties acknowledge that pursuant to the Settlement Agreement with the City of Bonney Lake, the City of Bonney Lake is the water purveyor for portions of the TLC Property as set forth in the Settlement Agreement. In the event the CITY determines that the City of Bonney Lake water system fails to provide adequate fire flow pursuant to Title 15 of the Auburn City Code the CITY agrees to work in good faith with the City of Bonney Lake in an attempt to help achieve a system which meets the CITY requirements for the provision of urban water services.

Immediately upon legal segregation of the relevant parcels, TLC shall convey title to the CITY of the following: the water wells commonly known as 5b and 5c, the water rights it owns or controls on such wells, and the property depicted on the easements which were granted to the CITY as indicated in Exhibit 3. The CITY and TLC agree that the use of the real property described in Exhibit 3 shall be subject to the restrictions indicated in Exhibit 4.

As consideration for TLC's conveyance of the water wells and the real property described in Exhibit 3, the CITY agrees to pay TLC the appraised value for the land and a

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mutually agreeable fair market value for the wells up to a maximum of $370,000, adjusted at 10% per annum until closing of the conveyance. TLC agrees to convey the subject property free and clear of all liens and encumbrances and provide the CITY with a policy of title insurance in the value of the purchase price insuring the property free and clear of all liens and encumbrances and agrees to provide a Statutory Warranty Deed.

16. FIRE:

The parties acknowledge that the property subject to this Agreement which is not yet annexed may not be provided fire service directly by the CITY. TLC shall arrange for fire service coverage through Fire District 22 and any agreement between TLC and Fire District 22 shall contain provisions which allow termination upon annexation by the CITY, so that the property may be served by the CITY if the CITY chooses to provide fire services directly rather than by contract. Upon forty-five (45) days written notice from the City of its intent to provide fire service directly or by contract with another service provider, TLC agrees to provide Fire District 22 thirty (30) days written notice of termination. For all building permits issued subsequent to the forty-five (45) day notice period, TLC agrees to pay

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mitigation fees to the CITY at the time of building permit issuance for developments within the annexed property, in the amounts indicated below:

1. $419.78 per detached single-family residential unit.

2. $272.47 per attached single or multi-family residential unit.

3. $93.63 per residential unit within the Senior Housing Zone.

4. $1.09 per gross foot of commercial or retail structures.

The above amounts shall be adjusted to reflect the increase in the Consumer Price Index for the Seattle-Metropolitan area beginning as the base year January 1, 2000 and on January 1st of each year thereafter the percentage difference shall equal the adjustment. Payment of these fees shall constitute complete satisfaction of any fire service mitigation and concurrency requirements by CITY for the property described herein.

17. PENDING APPLICATIONS IN PIERCE COUNTY:

The development applications indicated on Exhibit 5, attached hereto and incorporated by reference, were submitted to Pierce County by TLC prior to annexation. The CITY agrees to allow TLC to process the applications indicated on Exhibit 5 through Pierce County's development

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review process to issuance of a final decision, even if the subject property is annexed to the CITY prior to completion of the Pierce County review process.

CITY OF AUBURN

Charles A. Booth

CHARLES A. BOOTH
MAYOR

ATTEST:

Danielle E. Daskam

Danielle E. Daskam,
City Clerk

APPROVED AS TO FORM:

Michael J. Reynolds,
City Attorney

9805210624

THE LAKELAND COMPANY, INC.

By: _____

Its: Chairman of the Board

STATE OF WASHINGTON)
)ss
COUNTY OF KING)

On this 14th day of May, 1998, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared Charles L. Henderson, to me known to the Chairman, of **THE LAKELAND COMPANY, INC.**, the corporation that executed the within and foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that he/she is authorized to execute said instrument on behalf of said corporation.

GIVEN UNDER my hand and official seal the date hereinabove set forth.

PAMELA S. BURKE NOTARY PUBLIC STATE OF WASHINGTON COMMISSION EXPIRES 5-15-00

Pamela S. Burke

Pamela S. Burke
NOTARY PUBLIC in and for the State of Washington, residing at Bellevue

MY COMMISSION expires: 5-15-2000

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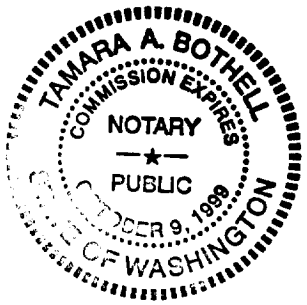
STATE OF WASHINGTON)
)ss
COUNTY OF KING)

On this 11th day of May, 1998, before me, the undersigned, a Notary Public in and for the State of Washington, personally appeared CHARLES A. BOOTH and DANIELLE E. DASKAM, personally known to me to be the Mayor and City Clerk, respectively, of the **CITY OF AUBURN**, the corporation that executed the within and foregoing instrument, and acknowledged the said instrument to be the free and voluntary act and deed of said municipal corporation for the uses and purposes mentioned in the instrument.

GIVEN UNDER my hand and official seal the date hereinabove set forth.



Tamara A. Bothell
Tamara A. Bothell
NOTARY PUBLIC in and for the State of Washington, residing at King Co.
MY COMMISSION expires: 10-9-99

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EXHIBIT 1

EXHIBIT 1
First Amendment to Lakeland Annexation
and Utilities Agreement

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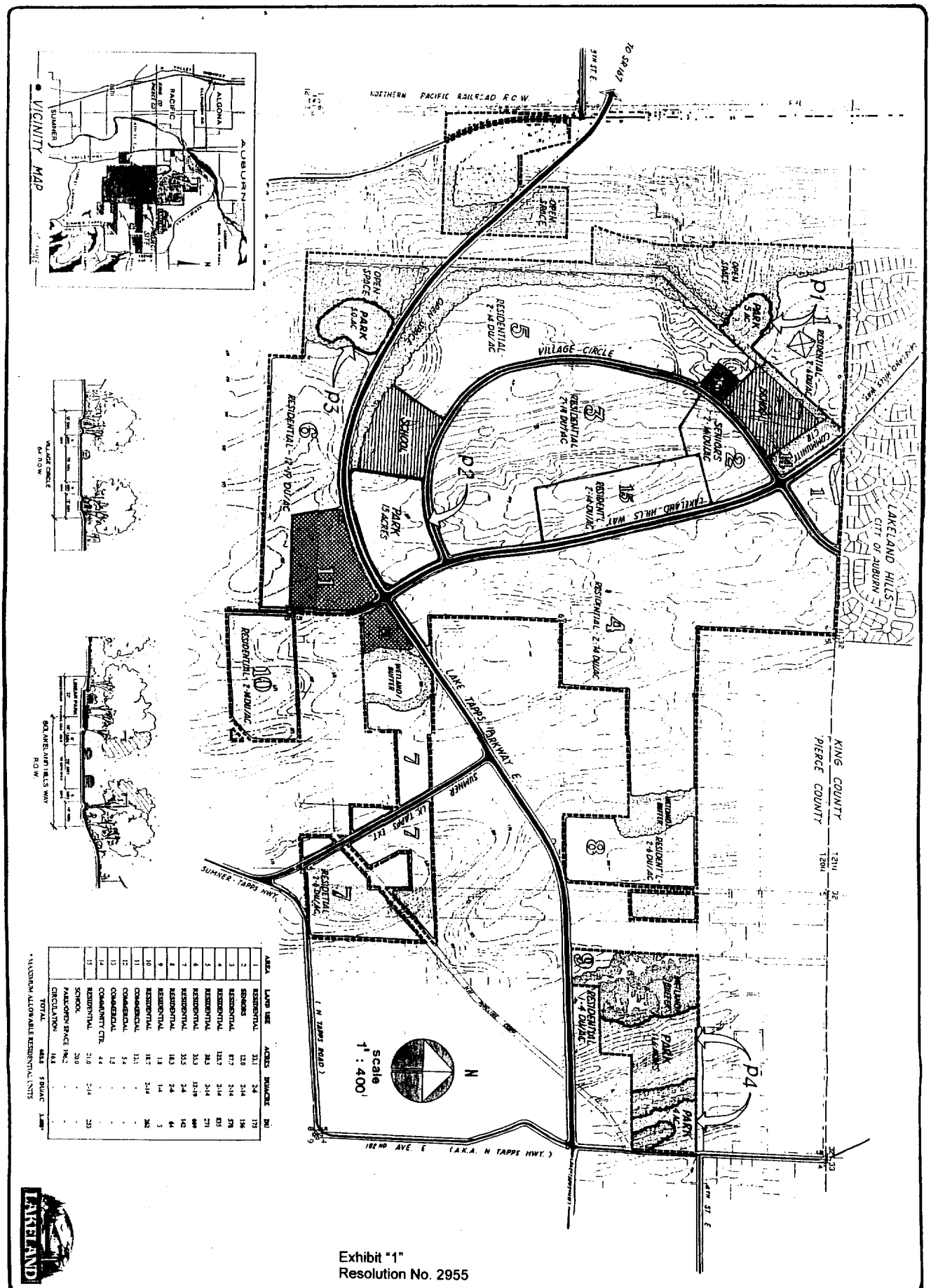

	AREA	LAND USE	ACRES	DENSITY	DU
1		RESIDENTIAL	33.1	2-4	
2		SENIORS	12.0	2-14	156
3		RESIDENTIAL	87.7	2-14	575
4		RESIDENTIAL	133.7	2-14	835
5		RESIDENTIAL	38.5	2-14	271
6		RESIDENTIAL	35.3	2-14	169
7		RESIDENTIAL	35.5	2-4	142
8		RESIDENTIAL	18.3	2-4	64
9		RESIDENTIAL	1.8	1-4	5
10		RESIDENTIAL	18.7	2-14	262
11		COMMERCIAL	13.1	-	-
12		COMMERCIAL	5.4	-	-
13		COMMERCIAL	1.5	-	-
14		COMMUNITY CTR.	4.4	-	-
15		RESIDENTIAL	21.0	2-14	253
		SCHOOL	20.0	-	-
		PARK/OPEN SPACE	196.2	-	-
		CIRCULATION	76.8	-	-
		TOTAL	684.6	5 DU/AC	3,489

* MAXIMUM ALLOWABLE RESIDENTIAL UNITS

Exhibit "1"
Resolution No. 2955

FINAL DEVELOPMENT PLAN FOR LAKELAND

ESM inc.

ORDINANCE NO. 5 1 6 3

AN ORDINANCE OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR TO EXECUTE A NEW FRANCHISE AGREEMENT BETWEEN THE CITY OF AUBURN AND PIERCE COUNTY TO CONSTRUCT, OPERATE AND MAINTAIN WATER PIPELINES FOR A WATER SYSTEM OVER, IN, ALONG, ACROSS, UNDER, AND UPON CERTAIN PUBLIC ROADS AND HIGHWAYS IN PIERCE COUNTY, WASHINGTON UNTIL SEPTEMBER, 2003.

WHEREAS, the City of Auburn wishes to expand their water line system to areas outside the current boundaries; and

WHEREAS, the City of Auburn has applied to Pierce County and has been granted a nonexclusive franchise to construct and maintain water pipelines with appurtenances for a water system in, across, under, upon, along and over certain public roads and highways in Pierce County, Washington, as hereinafter set forth;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, DO ORDAIN AS FOLLOWS:

Section 1. AGREEMENT. The Mayor of the City of Auburn is herewith authorized to execute a Franchise Agreement between the City of Auburn and Pierce County to construct, operate, and maintain water pipelines for a water system over, in, across, under, and upon certain public roads and highways in Pierce County Washington. A copy of said Agreement is attached hereto, denominated as Exhibit "A", and a copy of Pierce County Ordinance No. 98-72 approving the franchise is

attached hereto denominated as Exhibit "B", and made a part hereof as though set forth in full herein.

Section 2. AUTHORIZATION. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

Section 3. This Ordinance shall take effect and be in force five (5) days from and after its passage, approval and publication, as provided by law.

INTRODUCED: October 19, 1998

PASSED: October 19, 1998

APPROVED: October 19, 1998

Charles A. Booth

CHARLES A. BOOTH
MAYOR

ATTEST:

Danielle E. Daskam

Danielle E. Daskam,
City Clerk

APPROVED AS TO FORM:

Michael J. Reynolds,
City Attorney

Published: 10-23-98

PIERCE COUNTY, WA
9812020061
12-2-1998 08:52 am
Fee Amt: $28.00

RECEIVED
DEC 16 1998
PIERCE COUNTY COUNCIL

Return Address
Sandy Bassett
Pierce County Council
930 Tacoma Ave S, Room 1046
Tacoma, WA 98402

Please print legibly or type information.

Document Title(s) (Or transactions contained therein):
1. Ordinance No: 98-72
2.
3.
4.

DEC 31 1998
CITY OF AUBURN
CITY CLERKS OFFICE

Grantor(s) (Last name first, then first name and initials):
1. Pierce County
2.
3.
4.
5. ☐ Additional Names on Page _____ of Document

Grantee(s) (Last name first, then first name and initials):
1. Ordinance Number 98-72
2.
3.
4.
5. ☐ Additional Names on Page _____ of Document.

Legal Description (Abbreviated: i.e., lot, block, plat; or section, township, range):
in Sections 5, 6, 7 & 8, Township 20 North, Range 4 East.

Legal Description is on Page 5 & 6 of Document.

Reference Number(s) (Of documents assigned or released):
n/a

☐ Additional Reference Numbers on Page _____ of Document

Assessor's Property Tax Parcel/Account Number
Not assigned.

The Auditor/Recorder will rely on the information provided on this cover sheet. The staff will not read the document to verify the accuracy or completeness of the indexing information provided herein.

9812020061

FILE NO. 80 PROPOSAL NO. 98-72

Sponsored by: Councilmember Jan Shabro

Requested by: County Executive/Public Works and Utilities Department

ORDINANCE NO. 98-72

AN ORDINANCE OF THE PIERCE COUNTY COUNCIL GRANTING A NON-EXCLUSIVE FRANCHISE TO THE CITY OF AUBURN, A MUNICIPAL CORPORATION OF THE STATE OF WASHINGTON, FOR LOCATION OF WATER LINES ON CERTAIN COUNTY-OWNED RIGHTS-OF-WAY; AND AUTHORIZING THE COUNTY EXECUTIVE TO EXECUTE THE FRANCHISE.

WHEREAS, The City of Auburn, a municipal corporation of the State of Washington, has applied for a non-exclusive franchise to construct, operate, and maintain a water line system in, across, over, upon, along, and under certain County roads, highways, and other County property in Pierce County, Washington, as hereinafter set forth; and

WHEREAS, Said application came on regularly for hearing before the Pierce County Council on the date set forth below under the provisions of Chapter 36.55, State Session Laws of 1937; and

WHEREAS, It appears to the Council that notice of said hearing has been duly given to the public and those interested in providing the same service applied for by the applicant as required by law and that it is in the public interest to grant the franchise; NOW, THEREFORE, BE IT ORDAINED by the Council of Pierce County:

Section 1. A non-exclusive franchise, a copy of which is attached hereto and identified as Exhibit "A", is hereby given and

Exhibit "B", Ordinance 5163

9812020061

ORDINANCE NO. 98-72, continued

granted to the City of Auburn, a municipal corporation of the State of Washington, hereinafter referred to as the Grantee, for a period of five years, from and after the date of filing of the franchise to be granted with the Clerk of the Pierce County Council.

Section 2. The City of Auburn must indicate its full acceptance of this franchise and all its terms and conditions within thirty days from the effective date of this Ordinance. Said acceptance is to be in writing and filed with the Clerk of the Pierce County Council and shall be a condition precedent to the validity of said franchise, and unless the franchise is accepted within such time, this grant of permission shall be null and void.

Section 3. The Executive of Pierce County is hereby authorized to execute said franchise.

PASSED this 15th day of September, 1998.

ATTEST:

PIERCE COUNTY COUNCIL
Pierce County, Washington

Clerk of the Council

Council Chair

Approved as to Form Only:

PIERCE COUNTY EXECUTIVE

Deputy Prosecuting Attorney

Approved ___ Vetoed ___ this
18th day of Sept. 1998.

Approved s to Insurance and Bond Requirements Only:

Risk Management

PUBLIC HEARING NOTICE DATE: September 2 & 9, 1998
EFFECTIVE DATE: September 28, 1998

9812020061

EXHIBIT "A" TO ORDINANCE NO. 98-72

In the Matter of the Application of the City of Auburn, a municipal corporation of the State of Washington, for a franchise to construct, operate and maintain water pipelines for a Water System over, in, along, across, under and upon certain Public Roads and Highways in Pierce County Washington)

EXHIBIT "A"

F R A N C H I S E

Application of City of Auburn, a municipal corporation of the State of Washington, for a non-exclusive franchise to construct and maintain water pipelines with appurtenances for a water system in, across, under, upon, along and over certain public roads and highways in Pierce County, Washington, as hereinafter set forth, having come on regularly for hearing before the County Council of Pierce County, Washington, under the provisions of Chapter 36.55, Revised Code of Washington, and it appearing to the Council that notice of said Hearing has been duly given as required by law, and that it is in the public interest to grant the franchise herein granted;

NOW, THEREFORE, IT IS ORDERED, that a franchise be, and the same is hereby given and granted to City of Auburn, a municipal corporation of the State of Washington, hereinafter called the "Grantee" for a term of five (5) years from and after the date of filing this franchise with the Clerk of the Pierce County Council. This franchise is a license for the privilege, and authority to construct, maintain, and operate for the said period of time, a water pipeline with appurtenances for a water system in, across, under,

Exhibit "A", Ordinance 5163

9812020061

EXHIBIT "A" TO 98-72

upon, along and over the public roads and highways in Pierce County, Washington, to wit:

BEGINNING AT THE EASTERLY MARGIN OF THE BURLINGTON NORTHERN RAILROAD RIGHT-OF-WAY, AKA NORTHERN PACIFIC RAILROAD RIGHT-OF-WAY, AT THE NORTH BOUNDARY OF SECTION 1, TOWNSHIP 20 NORTH, RANGE 4 EAST, WM.; THENCE EASTERLY ALONG SAID NORTH BOUNDARY OF SECTION 1, TO THE NORTHWEST CORNER OF SECTION 6, TOWNSHIP 20 NORTH, RANGE 5 EAST, WM.; THENCE EASTERLY ALONG THE NORTH BOUNDARY OF SAID SECTION 6 AND ALONG THE NORTH BOUNDARY OF SECTION 5, TOWNSHIP 20 NORTH, RANGE 5 EAST, WM. TO THE NORTHEAST CORNER OF SAID SECTION 5; THENCE SOUTHERLY ALONG THE EAST BOUNDARY OF SAID SECTION 5 TO THE EASTERLY MARGIN OF 182nd AVENUE EAST; THENCE SOUTHERLY ALONG SAID EASTERLY MARGIN OF 182nd AVENUE EAST TO THE SOUTHERLY MARGIN OF 16th STREET EAST, AKA NORTH TAPPS ROAD; THENCE WESTERLY ALONG SAID SOUTHERLY MARGIN OF 16th STREET EAST TO A POINT ON THE SOUTH BOUNDARY OF THE NORTH 30.00 FEET OF THE NORTHEAST QUARTER OF SECTION 8, TOWNSHIP 20 NORTH, RANGE 5 EAST, WM.; THENCE WESTERLY ALONG SAID SOUTH BOUNDARY OF THE NORTH 30.00 FEET OF THE NORTHEAST QUARTER OF SECTION 8 TO THE SOUTHWEST CORNER THEREOF; THENCE NORTHERLY ALONG THE WESTERLY BOUNDARY OF SAID NORTHEAST QUARTER OF SECTION 8 TO THE NORTHWEST CORNER THEREOF; THENCE WESTERLY ALONG SAID NORTH BOUNDARY OF SECTION 8 TO THE NORTHEAST CORNER OF THE NORTH HALF OF THE NORTHWEST QUARTER OF SAID NORTHWEST QUARTER OF SECTION 8; THENCE SOUTHERLY ALONG THE EAST BOUNDARY OF SAID NORTH HALF OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 8 TO THE SOUTHEAST CORNER THEREOF; THENCE WESTERLY ALONG

9812020061

EXHIBIT "A" TO 98-72

THE SOUTH BOUNDARY OF SAID NORTH HALF OF THE NORTHWEST QUARTER OF NORTHWEST QUARTER OF SECTION 8 TO THE SOUTHWEST CORNER THEREOF; THENCE NORTHERLY ALONG THE WEST BOUNDARY OF SAID SECTION 8 TO THE SOUTHEAST CORNER OF THE NORTH 330.00 FEET OF THE NORTHEAST QUARTER OF SECTION 7, TOWNSHIP 20 NORTH, RANGE 5 EAST, WM.; THENCE WESTERLY ALONG THE SOUTH BOUNDARY OF SAID NORTH 330.00 FEET OF THE NORTHEAST QUARTER OF SECTION 7 TO THE SOUTHWEST CORNER THEREOF; THENCE NORTHERLY TO THE SOUTHEAST CORNER OF THE SOUTHWEST QUARTER OF SAID SECTION 6; THENCE WESTERLY ALONG THE SOUTH BOUNDARY OF SAID SECTION 6 TO THE SOUTHEAST CORNER OF GOVERNMENT LOT No. 7 IN SAID SECTION 6; THENCE NORTHERLY ALONG THE EAST BOUNDARY OF SAID GOVERNMENT LOT No. 7 TO THE NORTHEAST CORNER THEREOF; THENCE WESTERLY ALONG THE NORTH BOUNDARY OF SAID GOVERNMENT LOT No. 7 TO THE EASTERLY MARGIN OF SAID BURLINGTON NORTHERN RAILROAD RIGHT-OF-WAY; THENCE NORTHERLY ALONG SAID EASTERLY MARGIN OF THE BURLINGTON NORTHERN RAILROAD RIGHT-OF-WAY TO THE POINT OF BEGINNING.

I

In the construction and installations of water system appurtenances and the excavation of trenches on county roads for the purposes of laying, relaying, connecting, disconnecting, and repairing mains and pipes and making connections between the same to the dwellings and other buildings of the consumers, the Grantee shall be governed by and conform to the general rules adopted by the Public Works and Utilities - Transportation Services of Pierce County, Washington; and the Grantee, at no expense to the County, shall

9812020061

complete all such work and shall repair the county roads and leave the same in as good condition as before the work was commenced; PROVIDED, HOWEVER, that no such work shall be done prior to the obtaining of a permit therefor issued by the Pierce County Public Works and Utilities Director (hereinafter "Director"), which permits shall set forth conditions pertaining to the work to be done and specifications for the restoration of the roads to the same condition as they were prior to such work; and PROVIDED FURTHER, the Director may in his or her discretion require a bond in a sum sufficient to guarantee to Pierce County that such roads shall be restored to the same condition as existed prior to such work. If the Grantee does not repair the county roads to the satisfaction of the Director, the County Department of Public Works and Utilities - Transportation Services may, at its sole discretion, repair such county roads, or cause them to be repaired, and the Grantee hereby agrees to reimburse the County of Pierce for the cost of such work, including overhead costs.

II

The water mains and pipes shall be laid down as directed by the Director at a depth of not less than thirty-six inches below the surface of the ground along the county roads, and in such a manner as not to interfere unnecessarily with the construction of sewers and drains, nor with the grading of the county roads. All surface appurtenances to the water system shall be installed or constructed as approved by the Director.

9812020061

EXHIBIT "A" TO 98-72

III

All work done under this franchise shall be done in a thorough and professional manner. During the laying of water pipes and conduits and the digging of ditches therefor, the Grantee shall leave ditches in such a way as to interfere as little as possible with public travel and shall take all due and necessary precautions to insure that damage or injury shall not occur or arise by reason of such work; and that where any ditches or trenches are left open at night, the Grantee shall place at all crossings suitable lights in such a position to guard against danger, and the Grantee shall be liable for all property damage or personal injury which may be caused by reason of any injury sustained through its negligence by reason of any person, animal or property being injured through any negligence of the Grantee, or by reason of any damage caused through the neglect to properly guard any ditches or trenches dug or maintained by the Grantee. The Director may specify actions to be taken to insure the safety of the public and the Grantee shall comply with such specifications.

IV

The County of Pierce, in the granting of this franchise does not waive any rights which it now holds or may hereafter acquire and this order shall not be construed so as to deprive the County of Pierce of any powers, rights, or privileges which it now has or may hereafter acquire, including the right of eminent domain, to regulate the use and control of the county roads covered by this franchise, or to go upon any and all county roads and highways for the purpose of

9812020061

constructing and improving the same in such a manner as the County of Pierce, or its representatives may elect.

V

Grantee shall provide a certificate of insurance showing evidence of commercial general liability and property damage liability insurance, which includes but is not limited to, the operations of the Grantee, the Grantee's protective liability, products-completed operations coverage, broad form blanket contractual liability:

COVERAGES	LIMITS OF LIABILITY
Commercial General Liability Insurance Bodily Injury Liability	$1,000,000 Each Occurrence
Property Damage Liability	$250,000 Each Occurrence
	or COMBINED SINGLE LIMIT COVERAGE OF $1,000,000

The general requirements of the policy shall contain:

Pierce County is named as an additional insured as respects in this lease and such insurance as is carried by the Grantee for the operation of its facility.

In the event of non-renewal, cancellation or material change in the coverage provided, thirty days written notice will be furnished to the County prior to the date of non-renewal, cancellation, or change. Such notice shall be

9812020061

EXHIBIT "A" TO 98-72

sent to the Director, Public Works and Utilities - Transportation Services, 2401 South 35th Street, Suite 150, Tacoma, Washington 98409.

Pierce County has no obligation to report occurrences to the insurance companies unless a claim is filed with the Pierce County Council; and Pierce County has no obligations to pay premiums.

The Grantee's insurance policies shall contain a "cross liability" endorsement substantially as follows: The inclusion of more than one Insured under this policy shall not affect the rights of any Insured as respects any claim, suit, or judgment made or brought by or for any other insured or by or for any employee of any other Insured. This policy shall protect each Insured in the same manner as though a separate policy has been issued to each, except that nothing herein shall operate to increase the company's liability beyond the amount or amounts for which the company would have been liable had only one Insured been named.

The Grantee's insurance is primary over any insurance that may be carried by Pierce County. Grantee agrees to provide proof of insurance each year to Pierce County.

The Grantee agrees to defend, indemnify, and save harmless

9812020061

EXHIBIT "A" TO 98-72

Pierce County, its appointed and elected officials and employees, from and against all loss or expense, including but not limited to, judgments, settlements, attorney's fees and costs by reasons of any and all claims and demands upon the County, its elected or appointed officials or employees for damages because of personal or bodily injury including death at any time resulting therefrom, sustained by any person or persons, and on account of damage to property including loss of use thereof, whether such injury to persons or damage to property is due to the negligence of the Grantee, its contractors, its or their employees or agents, Pierce County, its appointed or elected officers, or its employees or agents, except only such injury or damage as shall have been occasioned by the sole negligence of Pierce County, its appointed or elected officials or employees.

If the claim, suit, or action for injuries, death, or damages as provided for in the preceding paragraph of this franchise agreement is caused by or results from the concurrent negligence of (a) Pierce County or Pierce County's agents or employees, and (b) the Grantee, or the Grantee's agents or employees, the indemnity provisions provided for in the preceding paragraph of this franchise shall be valid and enforceable only to the extent of the Grantee's negligence.

Grantee specifically and expressly waives any immunity under Industrial Insurance Title 51 RCW, and acknowledges that this waiver was mutually agreed upon by the parties herein.

EXHIBIT "A" TO 98-72

VI

If, at any time, the County of Pierce shall vacate any public street, road or alley which is subject to rights granted by this franchise, the Pierce County Council may, at their option, and by giving thirty days written notice to the Grantee, its successors and assigns, terminate this franchise with reference to such county road, street, or alley so acquired and the County of Pierce shall not be liable for any damages or loss to the Grantee by reason of such termination.

VII

If, at any time, a new county road is created or established, and constructed, or an existing county road is reconstructed, realigned, or its grade is changed, or if sewer or drainage facilities, or any other facilities, within future or existing county road right-of-way are constructed, reconstructed, maintained, or relocated (all such work to be called "County Projects" hereinafter) and if the installation of the facilities as allowed in this franchise) and all supplements and changes thereto, should interfere in any manner with any such county projects then the Grantee at no expense to the Pierce County shall, upon notice, change the location or adjust the elevation of its facilities so that such facilities shall not interfere with such county projects.

When relocation of Grantee's facilities are required by such county projects the following procedures shall be followed:

EXHIBIT "A" TO 98-72

1. Pierce County shall make available to Grantee a list of anticipated projects for each new budget period as soon as is reasonably practicable.

2. Pierce County shall provide to Grantee two sets of preliminary plans for individual projects as soon as such plans are developed to a state of reasonable certainty, and shall advise Grantee of the anticipated date of start of work on such projects.

3. Grantee shall, when requested by Pierce County in writing, locate their facilities in the field, show those locations on one set of the preliminary plans provided, and return that set to Pierce County Public Works and Utilities - Transportation Services within four weeks of receiving the written request.

4. Pierce County shall provide to Grantee final plans for such projects as soon as such plans are available and shall confirm or correct the anticipated date of start of work on such projects.

5. Pierce County shall assist Grantee in determining how its facilities shall be relocated. Such assistance by Pierce County shall include, at a minimum, copies of plans (as required above) and specifications for such county projects, and information known to Pierce County as to

9812020061

existing survey control available for location of such county projects. Such assistance shall not subject Pierce County to any liability for the costs of relocating the subject facilities a second time if Grantee incorrectly relocated its facilities the first time.

6. When requested, Pierce County and Grantee shall meet to discuss how county projects and utility relocations can be accomplished with the least impact on the other. Pierce County's decision shall be final in such matters, but shall not be unreasonable.

7. Relocation of Grantee's facilities shall be completed in a timely manner defined as follows:

> Relocation of Grantee's facilities shall normally be accomplished in advance of county projects. In the event relocation of Grantee's facilities shall be done concurrently with such projects, Pierce County shall be so notified and agree to a written schedule for relocation. Compliance with such a written schedule shall be Grantee's duty. In no event shall relocation of Grantee's facilities interfere with the prosecution of county projects.

9812020061

EXHIBIT "A" TO 98-72

8. If Grantee should not relocate its facilities in a timely manner as required above, Pierce County may relocate, or cause to be relocated, such facilities of Grantee as Pierce County deems necessary, and in the manner Pierce County deems necessary, in its sole discretion. Grantee hereby indemnifies and holds Pierce County, its employees, officers, officials and agents totally free and harmless from all and any liability which may arise from damages caused by the relocation by Pierce County of the facilities of Grantee, even if such damages and liability arise from the negligence of Pierce County, its employees, officers, officials and agents.

9. Grantee hereby indemnifies and hold harmless Pierce County, its officers, officials, and employees, from damages which may arise from Grantees's failure to relocate its facilities in accordance with the dates for completion of relocation of facilities set forth above, or any other act or omission by Grantee, its contractor(s), agents, officers, or employees related to the provisions of this franchise.

10. It shall be conclusively presumed that Pierce County will have suffered damages as a result of exercising its rights as set forth in Item 8, above, and compensation for such damages will be difficult to ascertain, and, therefore, Grantee shall compensate Pierce County for

such damages in the amount of twice the amount of the cost of such relocation of Grantee's facilities by Pierce County.

11. The exercise of its rights, as set forth in Item 8, above, by Pierce County in no way relieves Grantee of completing and/or finalizing the relocation of its facilities at no expense to Pierce County if the relocation work done by Pierce County is incomplete.

12. In the event a law suit is brought by Pierce County against Grantee to collect damages presumed under Item 10, above, for the exercise by Pierce County of its rights under Item 8, above, Grantee hereby agrees the only issue will be the actual cost to Pierce County for relocating Grantee's facilities. The party prevailing in such an action shall be allowed its legal fees and costs.

VIII

The Grantee shall not sell, transfer, or assign this franchise without first securing the written permission to do so upon such terms and conditions as determined by the Council of Pierce County. If such permission is granted, the terms and conditions set forth herein shall be binding on the Grantee's successors and assigns unless others are imposed by the Council of Pierce County when such permission is granted.

9812020061

EXHIBIT "A" TO 98-72

IX

This franchise is granted upon the further express condition that it shall not be an exclusive franchise and shall not, in any manner, prohibit the County of Pierce from granting any other franchise over, in, along, under, upon, and across any of the said county roads of any kind and character or territories that may be deemed proper by the Pierce County Council, and this franchise shall not in any way prevent the County of Pierce from using the county roads and highways, or affect the jurisdiction over them and every part of them by the County of Pierce with full power to make the necessary repairs, changes and alterations in the same and like manner as though this franchise had never been granted.

Pierce County reserves for itself the right to so change, amend, modify or amplify this franchise to conform to any state statute, order of the Washington Utilities and Transportation Commission or county regulation, ordinance or right-of-way regulation, as may hereafter be enacted, adopted or promulgated. And this franchise may be terminated at any time upon ninety days written notice to the Grantee to terminate this franchise if the Grantee fails to comply with its terms and conditions, or if the Grantee fails to comply with such changes, amendments, modifications or amplifications and upon termination Pierce County shall have a lien upon all equipment and materials erected or placed under this franchise, which lien may be enforced to reimburse Pierce County for any reasonable expenses and payments incurred in terminating this franchise and to cure defaults by the Grantee.

9812020061

EXHIBIT "A" TO 98-72

Grantee agrees to and shall provide available financial information to the County upon reasonable request. Grantee agrees to and shall during regular business hours and at its office located in Pierce County, Washington, allow agents of Pierce County access for inspection and reproduction of all of Grantee's business records, gross revenue reports, or rules and regulations relevant to a determination of the gross revenues received by Grantee from the area served by the facilities permitted by this franchise.

X

In the event that the territory covered by this franchise shall at any time during the franchise period be included within the limits of any incorporated city or town, the authorities of said city or town shall have the right, to be exercised at their discretion, to acquire by purchase or condemnation, any part of such pipes, conduits and water system other than transmission lines at a price to be based upon the reasonable value of the same at the time, without any additional value for the franchise or any unexpired period thereof, and upon such acquirement, this grant and franchise shall immediately terminate.

XI

Grantee acknowledges that Pierce County Charter Section 9.20 franchises provides in part: "All franchises shall be subject to the right of the County, or the people acting for themselves through referendum, to repeal for cause, amend, or modify the franchise in the interest of the public" and agrees to said condition.

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EXHIBIT "A" TO 98-12

XII

Any failure to render adequate service to the patrons of said water system, or the discontinuance of such water services without fault on the part of the patron or patrons involved, for a period of thirty days, shall work a forfeiture of this franchise, at the discretion of the Pierce County Council unless the failure should result from causes beyond human control.

XIII

Venue and jurisdiction for any controversy arising from this franchise shall be in Pierce County, Washington.

XIV

The full acceptance of this franchise and all its terms and conditions within thirty days from September 28, 1998, by the City of Auburn, a municipal corporation of the State of Washington, in writing, is to be filed with the Clerk of the Pierce County Council and shall be a condition precedent to its taking effect, and unless the franchise is accepted within such time, this franchise shall be null and void.

9812020061

EXHIBIT "A" TO 98-72

Pursuant to RCW 36.55.080, a copy of this franchise shall be recorded in the Office of the Pierce County Auditor.

DATED at Tacoma, Washington, this 26th day of October, 19____.

Pierce County Executive

City of Auburn, a municipal corporation of the State of Washington accepts and agrees to comply with all the terms and conditions of this franchise.

Name

Charles A. Booth
Name Printed

Mayor
Title

City of Auburn, a municipal corporation of the State of Washington

October 19, 1998
Date

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Pierce County

Office of the County Council

930 Tacoma Avenue South, Room 1046
Tacoma, Washington 98402-2176
(253) 798-7777
FAX (253) 798-7509
1-800-992-2456

STATE OF WASHINGTON)
)
COUNTY OF PIERCE)

I, SANDY BASSETT, Deputy Clerk of the Pierce County Council, do hereby certify that the attached is a full, true, and correct copy of the following document:

ORDINANCE NO. 98-72

The original of this document is currently located in the Office of the Pierce County Council, 930 Tacoma Avenue South, Room 1046, Tacoma, Washington 98402.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of Pierce County, Washington, this 20th day of November, 1998.

PIERCE COUNTY COUNCIL
PIERCE COUNTY, WASHINGTON

Sandy Bassett

Sandy Bassett
Deputy Clerk of the Council

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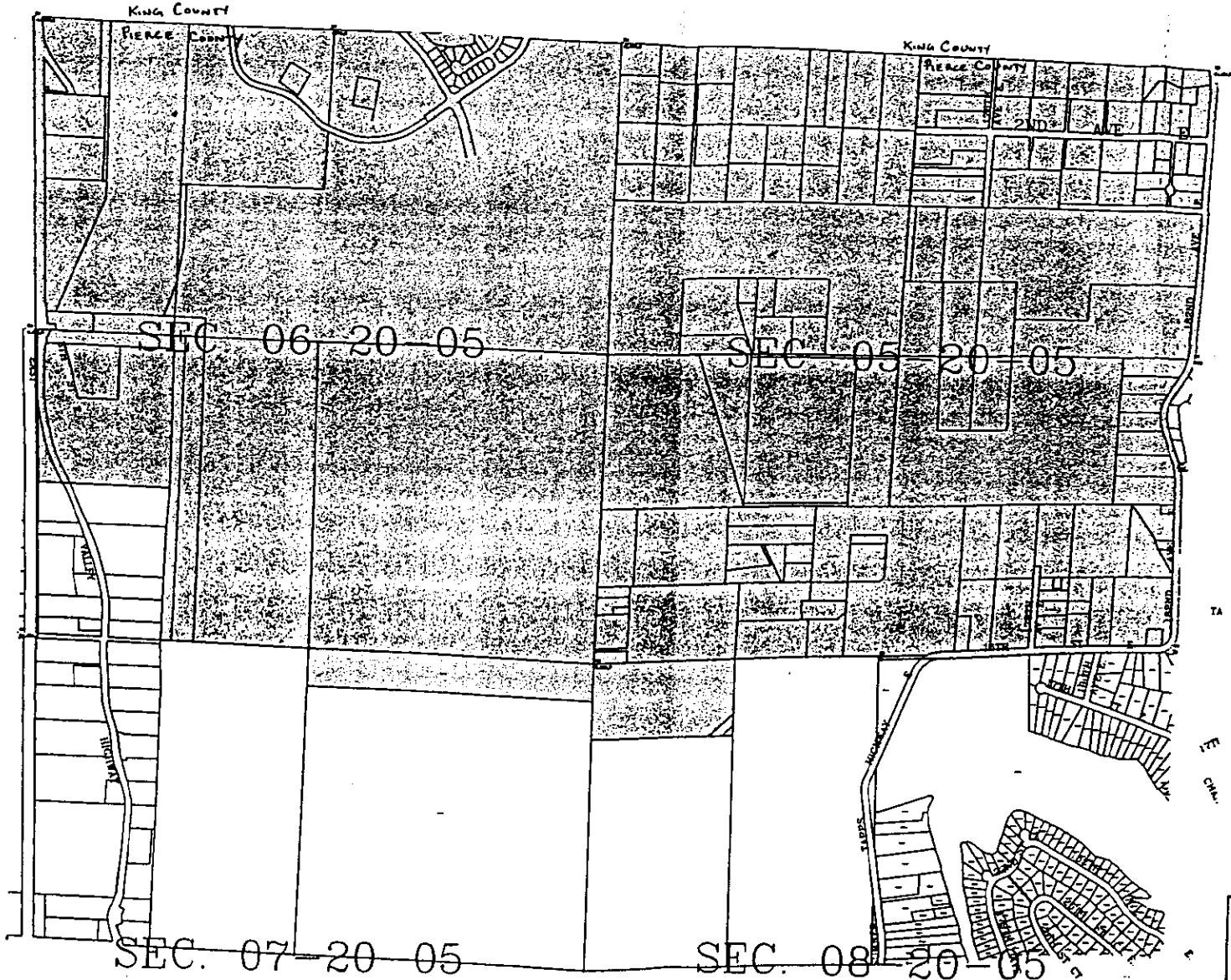
SEC. 01-20-04



UTILITIES SECTION
ENGINEERING DIVISION

NORTH PIERCE COUNTY
WATER FRANCHISE AREA
EXHIBIT A-2

EXHIBIT "A" TO 98-72

Pursuant to RCW 36.55.080, a copy of this franchise shall be recorded in the Office of the Pierce County Auditor.

DATED at Tacoma, Washington, this 26th day of October, 1998.

Pierce County Executive

City of Auburn, a municipal corporation of the State of Washington accepts and agrees to comply with all the terms and conditions of this franchise.

Charles A. Booth
Name

Charles A. Booth
Name Printed

Mayor
Title

City of Auburn, a municipal corporation of the State of Washington

October 19, 1998
Date

RESOLUTION NO. 3018

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR AND CITY CLERK TO EXECUTE A SERVICE AREA AGREEMENT BETWEEN THE CITY AND THE CITY OF BONNEY LAKE TO ESTABLISH A BOUNDARY BETWEEN THEIR CONTIGUOUS SERVICE AREA RELATING TO WATER SERVICE.

WHEREAS, Bonney Lake is engaged in the business of providing water service to the public located in certain areas of Pierce County in the State of Washington; and

WHEREAS, the City of Auburn is engaged in the business of providing water service to the public located in certain areas of King and Pierce Counties in the State of Washington; and

WHEREAS, the parties desire to enter into a formal Service Area Agreement to establish a boundary between their contiguous service area in Pierce County in order to avoid any duplication or overlap of water service and to provide the most efficient service to their respective customers; and

WHEREAS, the City of Auburn and the City of Bonney Lake have entered into a Settlement Agreement related to water service to the Lakeland Hills South development in which, according to Section 9, the Cities have agreed to work together cooperatively to facilitate a practical efficient boundary between the two systems.

NOW, THEREFORE, THE COUNCIL OF THE CITY OF AUBURN, WASHINGTON, IN A REGULAR MEETING DULY ASSEMBLED, HEREWITH RESOLVES THAT:

Section 1. The Mayor and City Clerk of the City of Auburn are herewith authorized to execute a Service Area Agreement between the City and the City of Bonney Lake to establish a boundary between their contiguous service area relating to water service. A copy of said Agreement is attached hereto, denominated as Exhibit "A" and made a part hereof as though set forth in full herein.

Section 2. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

DATED this 7th day of December, 1998.

CITY OF AUBURN

Charles A. Booth

CHARLES A. BOOTH
MAYOR

ATTEST:

Danielle E. Daskam,
City Clerk

APPROVED AS TO FORM:

Michael J. Reynolds,
City Attorney

SERVICE AREA AGREEMENT

This Agreement, dated December 10, 1998, is made and entered into by and between the City of Bonney Lake, a Washington municipal corporation, **("Bonney Lake")** and the City of Auburn, a Washington municipal corporation **("Auburn").**

Whereas, Bonney Lake is engaged in the business of providing water service to the public located in certain areas of Pierce County in the State of Washington. **Auburn** is engaged in the business of providing water service to the public located in certain areas of King and Pierce Counties in the State of Washington, and;

Whereas, the parties desire to enter into a formal service area agreement to so establish a boundary between their contiguous service area in Pierce county in order to avoid any duplication or overlap of water service and to provide the most efficient service to their respective customers, and;

Whereas, The City of Auburn and the City of Bonney Lake have entered into a Settlement Agreement related to water service to the Lakeland Hills South development in which, according to section 9, the Cities have agreed to work together cooperatively to facilitate a practical efficient boundary between the two systems.

Bonney Lake and **Auburn** therefore agree as follows:

1. This Agreement is entered into pursuant to the Pierce County Coordinated Water System Plan which Plan and Appendices are incorporated herein by this reference.

2. The contiguous water service boundary between **Bonney Lake** and **Auburn** is agreed upon by both parties as shown on the attached maps (Exhibit "A") and as described in Exhibit "B", which by this reference are incorporated herein.

3. **Bonney Lake** and **Auburn** may by mutual written amendment(s) to this Agreement make such adjustments to the service boundary as they may mutually agree upon from time to time so that water service to new service locations in close proximity to the service boundary may be provided in an efficient, effective and economical manner. Any such adjustments shall be documented by modifying the attached maps which when so modified and agreed to by the parties shall constitute amendments to this Agreement. Minor adjustments consisting of ten acres or less may be authorized by the Public Works Director or Superintendent of each party.

4. Except as specifically set forth herein, this Agreement shall not modify the Settlement Agreement referenced above.

Exhibit "A"
Resolution No. 3018
City of Auburn

IN WITNESS WHEREOF, we have hereunto set our hands and seals.

CITY OF AUBURN

Charles A. Booth

CHARLES A. BOOTH, MAYOR

ATTEST:

Danielle E. Daskam

Danielle E. Daskam, City Clerk

APPROVED AS TO FORM:

Michael J. Reynolds, City Attorney

STATE OF WASHINGTON)
) ss.
County of King)

I certify that I know or have satisfactory evidence that Charles A. Booth and Danielle E. Daskam were the persons who appeared before me, and said persons acknowledged that they signed this instrument, on oath stated that they were authorized to execute the instrument and acknowledged it as the **MAYOR** and **CITY CLERK** of the CITY OF AUBURN to be the free and voluntary act of such parties for the uses and purposes mentioned in this instrument.

Dated 12-21-98

NOTARY PUBLIC STATE OF WASHINGTON OCTOBER 9, 1999

Tamara A Bothell

Notary Public in and for the State of Washington
residing at King Co
My appointment expires 10-9-99

CITY OF BONNEY LAKE

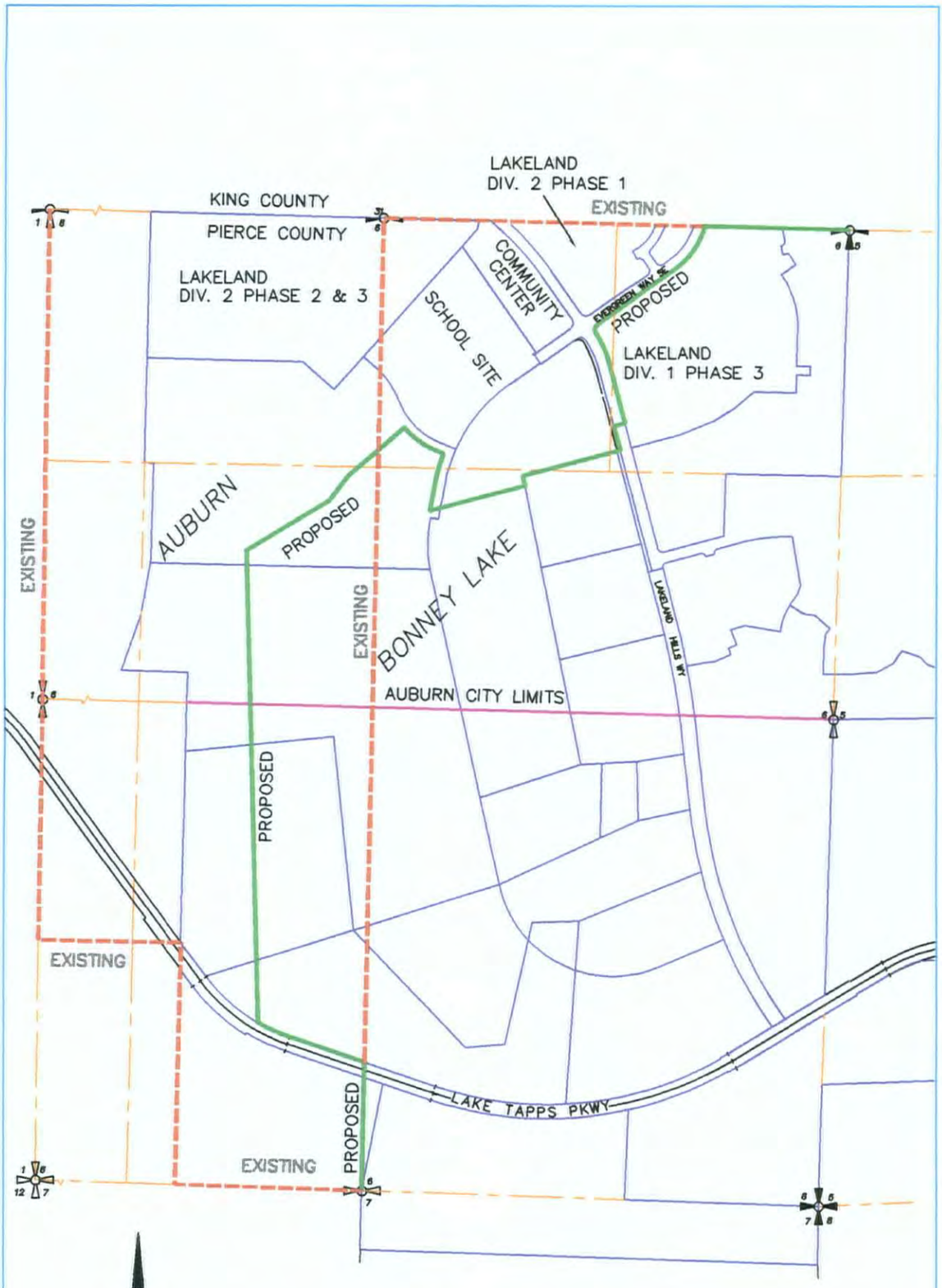
BOB YOUNG, MAYOR

STATE OF WASHINGTON)
) ss.
County of Pierce)

I certify that I know or have satisfactory evidence that Bob Young was the person who appeared before me, and said person acknowledged that they signed this instrument, on oath stated that they were authorized to execute the instrument and acknowledged it as the **MAYOR** of the CITY OF BONNEY LAKE to be the free and voluntary act of such parties for the uses and purposes mentioned in this instrument.

Dated 12-10-98

Mona R. Musgrave
Notary Public in and for the State of Washington
residing at Bonney Lake
My appointment expires 9-1-2002



PROPOSED AUBURN/BONNEY LAKE WATER SERVICE AREAS SECTION 06-20-05

DBM CONSULTING ENGINEERS

Exhibit "B"

LEGAL DESCRIPTION FOR PROPOSED AUBURN/BONNEY LAKE WATER SERVICE AREAS OF SECTION 6, TOWNSHIP 20 NORTH, RANGE 5 EAST OF W.M., PIERCE COUNTY, WASHINGTON;
LINE DESCRIBED AS THE BORDER BETWEEN THE CITY OF AUBURN AND BONNY LAKE WATER SERVICE AREAS MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING FROM THE SOUTH QUARTER CORNER OF SECTION 6, TOWNSHIP 20 NORTH, RANGE 5 EAST; THENCE NORTH 01°12' 59" EAST A DISTANCE OF 713.61 FEET TO THE NORTHERLY MARGIN OF LAKE TAPPS PARKWAY EAST;
THENCE IN A NORTHWESTERLY DIRECTION ALONG THE NORTH LINE OF SAID PARKWAY, NORTH 71° 22' 39" WEST A DISTANCE OF 440.58 FEET TO THE BEGINNING OF A CURVE TO THE RIGHT HAVING A RADIUS POINT BEARING NORTH 18° 37' 21" EAST A DISTANCE OF 960.00 FEET;
THENCE ALONG THE ARC OF SAID CURVE TO THE RIGHT THROUGH A CENTRAL ANGLE OF 11° 22' 29", AN ARC DISTANCE OF 190.59 FEET;
THENCE LEAVING SAID MARGIN NORTH 01° 28' 45" WEST A DISTANCE OF 2,629.81 FEET;
THENCE NORTH 58° 56' 04" EAST A DISTANCE OF 532.96 FEET;
THENCE NORTH 37° 29' 20" EAST A DISTANCE OF 178.29 FEET;
THENCE NORTH 49° 21' 27" EAST A DISTANCE OF 410.04 FEET TO A POINT OF A NON-TANGENT CURVE TO THE LEFT HAVING A RADIUS POINT BEARING NORTH 49° 37' 08" EAST HAVING A DISTANCE OF 454.00 FEET;
THENCE ALONG THE ARC OF SAID CURVE TO THE LEFT THROUGH A CENTRAL ANGLE OF 27° 21' 25" AN ARC DISTANCE OF 216.77 FEET;
THENCE SOUTH 67° 44' 15" EAST A DISTANCE OF 47.08 FEET TO A POINT OF A NON-TANGENT CURVE TO THE LEFT HAVING A RADIUS POINT BEARING SOUTH 69° 16' 55" EAST A DISTANCE OF 927.50 FEET THENCE ALONG THE ARC OF SAID CURVE TO THE LEFT THROUGH A CENTRAL ANGLE OF 10° 09' 01" AN ARC DISTANCE OF 164.31 FEET;
THENCE SOUTH 10° 34' 04" WEST A DISTANCE OF 163.57 FEET;
THENCE IN A NORTHEASTERLY DIRECTION ALONG THE NORTH LINE OF LOT G OF BOUNDARY LINE ADJUSTMENT RECORDED UNDER AUDITOR'S FILE #9808310329, NORTH 75° 13' 36" EAST A DISTANCE OF 548.99 FEET TO THE EASTERLY LINE OF LOT G;
THENCE NORTH 11° 28' 56" WEST A DISTANCE OF 56.64 FEET TO THE SOUTHERLY LINE OF LOT B PER SAID BOUNDARY LINE ADJUSTMENT;
THENCE NORTH 75° 13' 36" EAST A DISTANCE OF 560.63 FEET TO THE WESTERLY MARGIN OF LAKELAND HILLS WAY S.E.;
THENCE NORTH 14° 46' 24" WEST A DISTANCE OF 138.04 FEET;
THENCE LEAVING SAID WESTERLY MARGIN NORTH 75° 13' 36" EAST A DISTANCE OF 63.00 FEET TO THE EASTERLY MARGIN OF LAKELAND HILLS WAY S.E.;
THENCE IN A NORTHWESTERLY DIRECTION ALONG SAID MARGIN NORTH 14° 46' 24" WEST A DISTANCE OF 353.16 FEET TO THE BEGINNING OF A

CURVE TO THE LEFT HAVING A RADIUS POINT BEARING SOUTH 75° 13 ' 36" WEST A DISTANCE OF 545.67 FEET;
THENCE ALONG THE ARC OF SAID CURVE TO THE LEFT THROUGH A CENTRAL ANGLE OF 19° 07' 09" AN ARC DISTANCE OF 182.08 FEET TO THE POINT OF A CURVE TO THE RIGHT HAVING A RADIUS POINT BEARING NORTH 60° 27' 56" EAST A DISTANCE OF 35.00 FEET;
THENCE ALONG THE ARC OF SAID CURVE TO THE RIGHT THROUGH A CENTRAL ANGLE OF 84° 32' 04" AN ARC DISTANCE OF 51.64 FEET; THENCE NORTH 55° 00' 00" EAST A DISTANCE OF 208.52 FEET; THENCE NORTH 53° 05' 27" EAST A DISTANCE OF 150.08 FEET;
THENCE NORTH 55° 00' 00' EAST A DISTANCE OF 166.23 FEET TO THE BEGINNING OF A CURVE TO THE LEFT HAVING A RADIUS POINT BEARING NORTH 35° 00' 00" WEST A DISTANCE OF 430.00 FEET;
THENCE ALONG THE ARC OF SAID CURVE TO THE LEFT THROUGH A CENTRAL ANGLE OF 37° 44' 40" AN ARC DISTANCE OF 283.27 FEET TO THE POINT OF A CURVE TO THE LEFT HAVING A RADIUS POINT BEARING NORTH 72° 44'00" WEST A DISTANCE OF 1,030.00 FEET;
THENCE ALONG THE ARC OF SAID CURVE TO THE LEFT THROUGH A CENTRAL ANGLE OF 00° 56' 13" AND AN ARC DISTANCE OF 16.84 FEET TO THE NORTHERLY SECTION LINE OF SECTION 6, TOWNSHIP 20 NORTH, RANGE 5 EAST;
THENCE ALONG THE NORTH LINE OF SECTION 6 SOUTH 88° 34' 43" EAST A DISTANCE OF 808.23 FEET TO THE NORTHEAST CORNER OF SAID SECTION 6 TERMINUS OF SAID BOUNDARY

98119C.001

RESOLUTION NO. 3 0 1 9

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR AND CITY CLERK TO EXECUTE AN EMERGENCY FIRE FLOW PROTECTION AGREEMENT BETWEEN THE CITY AND THE CITY OF BONNEY LAKE.

WHEREAS, by Resolution No. 2925 the City of Auburn approved an agreement with Bonney Lake on water service; and

WHEREAS, by unanimous adoption at the March 2, 1998 Council Workshop, Bonney Lake approved an agreement with the City of Auburn on water service; and

WHEREAS, the Lakeland PUD in Pierce County is located in the Bonney Lake water service area as defined in the 1995 Pierce County Coordinated Water System Plan; and

WHEREAS, in the Lakeland Annexation and Utilities Agreement, Ordinance No. 4867, and Amendment to the Lakeland Annexation and Utilities Agreement, Resolution No. 2955, The Lakeland Company, hereinafter referred to as TLC agreed to comply with City of Auburn's urban service standards; and

WHEREAS, by separate agreement The Lakeland PUD in Pierce County is served by the Auburn Fire Department, as agreed in Section 16 of the Amendment to the Lakeland Annexation and Utilities Agreement, Resolution No. 2955, and the Lakeland Annexation and Utilities Agreement, Ordinance No. 4867; and

WHEREAS, the City of Auburn's minimum fire flow service standard is 2500 gpm for 3 hours with residual pressure of 20 psi, as defined in the 1995 Comprehensive Water Plan and amended in 1997 by Ordinance No. 5051; and

WHEREAS, TLC desires to build Multi-Family Developments Division 1 Phase 4 (1P4) and Lots 5, 6, and 7, hereinafter referred to as the "Multifamily Development Area", in the immediate future, within the Lakeland PUD in the Bonney Lake Water Service Area; and

WHEREAS, TLC has requested Bonney Lake enter into an agreement with the City of Auburn to provide an emergency intertie for fire flow in order that TLC's development meet AUBURN's fire flow service standards; and

WHEREAS, Bonney Lake is unable at this time to meet AUBURN's fire flow requirements and desires to enter into an agreement for an emergency intertie for fire flow for the proposed Lakeland Company "Multifamily Development Area"; and

WHEREAS, the City of Auburn's water service area abuts BONNEY LAKE's water service area, and Auburn's system has adequate infrastructure to provide the emergency intertie for fire flow protection to the "Multifamily Development Area"; and

WHEREAS, AUBURN is willing to provide emergency fire flow to TLC's proposed "Multifamily Development Area", in consideration of Lakeland's agreement to pay to the City of Auburn a fire flow development charge; and

WHEREAS, TLC, pursuant to a separate agreement, has agreed to compensate the City of Auburn for Auburn's providing to Bonney Lake, pursuant to this agreement, an intertie for emergency fire flows to the proposed "Multifamily Development Area".

NOW, THEREFORE, THE COUNCIL OF THE CITY OF AUBURN, WASHINGTON, IN A REGULAR MEETING DULY ASSEMBLED, HEREWITH RESOLVES THAT:

Section 1. The Mayor and City Clerk of the City of Auburn are herewith authorized to execute an Emergency Fire Flow Protection Agreement between the City and the City of Bonney Lake. A copy of said Agreement is attached hereto, denominated as Exhibit "A" and made a part hereof as though set forth in full herein.

Section 2. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

DATED this 7th day of December, 1998.

CITY OF AUBURN

Charles A. Booth

CHARLES A. BOOTH
MAYOR

ATTEST:

Danielle E. Daskam

Danielle E. Daskam,
City Clerk

APPROVED AS TO FORM:

Michael J. Reynolds

Michael J. Reynolds,
City Attorney

EMERGENCY FIRE FLOW PROTECTION AGREEMENT
City of Auburn and the City of Bonney Lake

THIS AGREEMENT made and entered into by and between the City of Auburn, hereinafter referred to as "AUBURN" and the City of BONNEY LAKE, hereinafter referred to as "BONNEY LAKE".

WITNESSETH:

WHEREAS, By Resolution 2925 AUBURN approved an agreement with BONNEY LAKE on water service, and

WHEREAS, By unanimous adoption at the March 2, 1998 Council Workshop, BONNEY LAKE approved an agreement with AUBURN on water service, and

WHEREAS, the Lakeland PUD in Pierce County is located in the BONNEY LAKE water service area as defined in the 1995 Pierce County Coordinated Water System Plan, and

WHEREAS, in the Lakeland Annexation and Utilities Agreement, Ord. 4867, and Amendment to the Lakeland Annexation and Utilities Agreement, Res. 2955, The Lakeland Company, hereinafter referred to as TLC agreed to comply with AUBURN's urban service standards, and

WHEREAS, by separate agreement The Lakeland PUD in Pierce County is served by the AUBURN Fire Department, as agreed in Section 16 of the Amendment to the Lakeland Annexation and Utilities Agreement, Res. 2955, and the Lakeland Annexation and Utilities Agreement, Ord. 4867, and

WHEREAS, AUBURN's minimum fire flow service standard is 2500 gpm for 3 hours with residual pressure of 20 psi, as defined in the 1995 Comprehensive Water Plan and amended in 1997 by Ordinance 5051, and

WHEREAS, TLC desires to build Multi-Family Developments Division 1 Phase 4 (1P4) and Lots 5, 6, and 7, hereinafter referred to as the "MULTIFAMILY DEVELOPMENT AREA", in the immediate future, within the Lakeland PUD in the BONNEY LAKE Water Service Area,

WHEREAS, TLC has requested BONNEY LAKE enter into an agreement with AUBURN to provide an emergency intertie for fire flow in order that TLC's development meet AUBURN's fire flow service standards, and

Exhibit "A"
Resolution No. 3019
City of Auburn

WHEREAS, BONNEY LAKE is unable at this time to meet AUBURN's fire flow requirements and desires to enter into an agreement for an emergency intertie for fire flow for the proposed Lakeland Company "MULTIFAMILY DEVELOPMENT AREA", and

WHEREAS, AUBURN's water service area abuts BONNEY LAKE's water service area, and AUBURN's system has adequate infrastructure to provide the emergency intertie for fire flow protection to the "MULTIFAMILY DEVELOPMENT AREA", and

WHEREAS, AUBURN is willing to provide emergency fire flow toTLC's proposed "MULTIFAMILY DEVELOPMENT AREA", in consideration of Lakeland's agreement to pay to AUBURN a fire flow development charge, and

WHEREAS, TLC, pursuant to a separate agreement, has agreed to compensate AUBURN for AUBURN's providing to BONNEY LAKE, pursuant to this agreement, an intertie for emergency fire flows to the proposed "MULTIFAMILY DEVELOPMENT AREA, and

NOW THEREFORE, IT IS MUTUALLY AGREED as follows:

1. In the event a fire flow emergency occurs within the Lakeland South Multi-Family Developments of Division 1 Phase 4 (1P4) and Lots 5, 6, and 7, hereinafter referred to as the "MULTIFAMILY DEVELOPMENT AREA", requiring fire flows beyond what the BONNEY LAKE System can deliver, the AUBURN Fire Chief, or his/her designee, is hereby authorized to open the valve in the water main between the two systems to provide the required fire flow.

2. The authorization granted in section 1 above herein is intended to serve as emergency fire flow protection for the "MULTIFAMILY DEVELOPMENT AREA", only. Water shall not be withdrawn from the AUBURN Water System for any other purpose than that described in section 1, without prior written approval from AUBURN.

3. A fire flow emergency is defined as a fire event that requires fire flow capacity beyond that which the BONNEY LAKE System is able to provide as required under AUBURN's 1995 Comprehensive Water Plan and amended in 1997 by Ordinance 5051, to the "MULTIFAMILY DEVELOPMENT AREA".

4. In the event if it becomes necessary for the AUBURN Fire Chief or his/her designee to open the valve as described in the above sections no fees will be charged to BONNEY LAKE for water consumed.

5. This agreement does not authorize or permit AUBURN to utilize water from the BONNEY LAKE Water System.

6. This agreement shall terminate when BONNEY LAKE provides documentation that demonstrates to AUBURN that infrastructure has been developed to meet AUBURN's urban service standards for fire flow.

7. Each participant agrees to defend, indemnify and hold harmless the other participant from and against any liability, loss, cost, damage, or expense of any kind and nature arising out of injury to person or damage to property in any manner caused by the negligent act or omission of the indemnifying individual participant in performance of its work pursuant to in connection with this agreement.

8. Should a dispute arise between the parties that cannot be resolved satisfactorily, a mediator mutually acceptable to the parties shall resolve the dispute through the use of mediation at equal cost to each party. Should the parties not be able to satisfactorily resolve the dispute through mediation, the forum for resolution shall be Pierce County Superior Court. The prevailing party will be entitled to attorney fees and costs.

9. If any provision of this agreement shall be unenforceable or invalid for any reason, the remaining sections shall be in force and effect.

10. In the event TLC fails to make payment as provided in its Emergency Fire Flow Protection Agreement with AUBURN, AUBURN is under no obligation to provide emergency fire flow to BONNEY LAKE for the MULTI-FAMILY DEVELOPMENT AREA.

IN WITNESS WHEREOF, we have hereunto set our hands and seals.

CITY OF AUBURN

Charles A. Booth

CHARLES A . BOOTH
MAYOR

ATTEST:

Danielle E. Daskam

Danielle E. Daskam,
City Clerk

APPROVED AS TO FORM:

Michael J. Reynolds,
City Attorney

STATE OF WASHINGTON)
)ss.
County of King)

I certify that I know or have satisfactory evidence that Charles A. Booth and Danielle E. Daskam were the persons who appeared before me, and said persons acknowledged that they signed this instrument, on oath stated that they were authorized to execute the instrument and acknowledged it as the **MAYOR** and **CITY CLERK** of the CITY OF AUBURN to be the free and voluntary act of such parties for the uses and purposes mentioned in this instrument.

Dated 12-21-98

TAMARA A. BOTHELL NOTARY PUBLIC STATE OF WASHINGTON COMMISSION EXPIRES OCTOBER 9, 1999

Tamara A Bothell

Tamara A Bothell
Notary Public in and for the State of Washington
residing at King Co
My appointment expires 10-9-99

CITY OF BONNEY LAKE

BOB YOUNG, MAYOR

STATE OF WASHINGTON)
) ss.
County of Pierce)

I certify that I know or have satisfactory evidence that Bob Young was the person who appeared before me, and said person acknowledged that they signed this instrument, on oath stated that they were authorized to execute the instrument and acknowledged it as the **MAYOR** of the CITY OF BONNEY LAKE to be the free and voluntary act of such parties for the uses and purposes mentioned in this instrument.

Dated 12-10-98

Mona R. Musgrave
Notary Public in and for the State of Washington
residing at Bonney Lk
My appointment expires 9-1-2002

LM/bd

REF. H:/FAC/FAC2385/E98-1268

RESOLUTION NO. 3190

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR AND CITY CLERK TO EXECUTE AMENDMENT NO. 1 TO THE BILATERAL COMPLIANCE AGREEMENT BETWEEN THE CITY AND THE STATE DEPARTMENT OF PUBLIC HEALTH.

WHEREAS, the City entered into a Bilateral Compliance Agreement in 1996, which identified a step plan to meet the provisions of the Lead and Copper Rule of the Safe Drinking Water Act; and

WHEREAS, the step plan must be expanded to include treatment for Well 6 and Well 7, as they are supplemental supply for the City's water system; and

WHEREAS, it has been determined the timeline for completion of the project must be expanded to account for the development of the new wells;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, IN A REGULAR MEETING DULY ASSEMBLED, HEREWITH RESOLVES THAT:

SECTION 1. The Mayor and City Clerk of the City of Auburn, Washington, are herewith authorized to execute Amendment No. 1 to the Bilateral Compliance Agreement between the City of Auburn and the State Department of Health, including treatment for Well 6 and Well 7 and modifying

the timeline for the treatment facility to be operational. A copy of said Amendment is attached hereto and denominated as Exhibit "A".

SECTION 2. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

DATED and SIGNED this 6TH day of March, 2000.

CITY OF AUBURN

Charles A. Booth

CHARLES A. BOOTH
MAYOR

ATTEST:

Danielle E. Daskam,
City Clerk

APPROVED AS TO FORM:

Michael J. Reynolds,
City Attorney

BILATERAL COMPLIANCE AGREEMENT
Amendment No. 1

Water System Name: City of Auburn Water System

Subject: Compliance with the Lead and Copper Rule, Chapter 246-290-WAC

The following compliance agreement is hereby established between the Department of Health (hereafter, Department), and City of Auburn Water System (hereafter, City).

The Department and the City agree on the following corrosion control issues, approaches and schedules:

1. Auburn has slightly exceeded the copper action level at the 90th percentile per the Lead and Copper Rule (1.5 and 1.57 mg/L copper at 90th percentile compared to standard of 1.3 mg/L copper for medium size systems).

2. The best utility system approach is to adjust the pH of the water in the distribution system to reduce corrosiveness towards copper, and may include other appropriate measures such as replacement of susceptible materials, changes to electrical grounding practices, etc.

3. Corrosion control optimization is realized when the elevated pH levels will have caused the following:

   - Copper levels are reduced and maintained below the action level of 1.3 mg/L at the 90th percentile (see items 4 and 5 for clarifications);

   - No significant adverse impacts of the treatment on bacteriological quality in the distribution system;

   - No significant adverse impacts of the treatment on domestic customer satisfaction (e.g., red water due to disturbances in unlined cast irons); and

   - No significant adverse impact on commercial and industrial customers, health care facilities, and wastewater facilities.

   Any significant adverse impacts occurring as a result of corrosion control will be investigated and documented along with possible mitigation measures in a report prepared by the City and submitted to DOH.

4. The 90th percentile copper level will be calculated using the original 60 monitoring sites per the Lead and Copper Rule plus an estimated 30 additional monitoring sites in the vicinity of untreated sources. Results of all analyses of samples from all monitoring sites in the system will be evaluated in one sampling pool to determine Lead and Copper Rule Compliance. The limits of the zones surrounding untreated sources are depicted on Exhibit 1.

5. Untreated sources of supply will be sampled within the limits of the zones of influence using the number of connections and the population of the zone and a factor of 2.5 people per connection as a conversion factor as follows:

Population	Number of Sample Sites
<100	5
101—500	10
501—3,300	20
3,301—10,000	40

Sample sites will be selected per the Lead and Copper Rule. Any previous monitoring sites in the untreated zones of influence will be retained and can be used in lieu of a new site.

6. Treatment is anticipated in 4 stages at this time.

Source	Stage
Coal Creek Springs, plus blending of well (#4)	1
Well #2, 6 and 7	1
Well #1	To be determined.
Well #4	2. if needed
West Hill Springs	3, if needed
Wells 5 and 5A (Lakeland Hills)	No treatment. Monitoring indicates supply is not corrosive.
Wells 3Aand3B	To be determined.
Future Sources	To be determined.

7. Monitoring will be conducted after each stage to determine if optimization is achieved. If optimization is achieved, no further treatment stages are needed. If optimization is not achieved, the City plans to proceed to next stage with Department approval.

8. Schedule for Stage 1.

Project Schedule for Stage 1	Date
Submit Lead and Copper Compliance Report DOH July 1, 1995 – Schedule Met	July 19, 1995
Finalized BCA (assumed start)	October 7, 1996
Submit 30% Design Reports for Coal Creek and Fulmer Field to DOH	October -- 1999
DOH Approval of 30 % Design Reports	Pending
BCA Amendment No. 1	March 20 , 2000
Submit Final Plans and Specifications	September 15, 2000
DOH Approval of the Final Plans and Specifications	October 12, 2000
Complete Construction of Facilities	July 18, 2002
Monitoring Report - 2 Rounds	July 17, 2003
Submit Report to Determine if System is Optimized	October 23, 2003

9. If the Lead and Copper Rule is amended or changed, the Department and City will review the changes and their effects on the City, and if needed, will jointly renegotiate this agreement.

The City of Auburn agrees to perform the following:

Submit a project report and construction documents. In accordance with WAC 246-290-110 and 120 submit for review and approval a project report (Predesign Engineering Report) and construction documents (plans and specifications) for the installation of the corrosion control treatment equipment approved by the Department.

Construct corrosion control treatment facilities. Complete the installation of Stage 1 corrosion control treatment facilities in accordance with Department approved construction documents prior to July 18, 2002.

Monitor water quality parameters. Monitor water quality parameters in accordance with Title 40 CFR Chapter 1 Part 141.87(c), (d), and (e) beginning on July 19, 2002.

Monitor tap water quality for lead and copper. Monitor tap water quality in accordance with Title 40 CFR Chapter 1 Part 141.86 (d) and complete two six-month monitoring compliance periods prior to July 19, 2003.

Well #4. Discharge Well #4 into Reservoir #1 for blending under normal operating procedures. Monthly production records will be kept to document where the water is directed and made available to the Department upon request. Department will allow Well No. 4 to be discharged directly into the distribution system should distribution system pressure drop below 35 psi during an emergency (fire, main break, etc.).

Optimization Report. Prepare and submit an optimization report that addresses copper monitoring results, any significant adverse effects that may reasonably be associated with corrosion control, any copper staining incidents that occur in the untreated zones of influence, and any copper staining or corrosion incidents in new construction. The report will document what action the City plans to take to address these occurrences. Further, the optimization report will recommend a pH operating range for optimization and will recommend if Stage 2 treatment needs to be implemented.

The Department of Health agrees to:

Concur with Optimization. The Department agrees that optimization is achieved, that Auburn will be considered in compliance with the LCR, and that no further stages of implementation will be required when the following conditions are met.

- Copper levels are reduced and maintained below the action level of 1.3 mg/L at the 90th percentile (see items 4 and 5 for clarifications);
- No significant adverse impacts of the treatment on bacteriological quality in the distribution system;
- No significant adverse impacts of the treatment on domestic customer satisfaction; and
- No significant adverse impact on commercial and industrial customers, health care facilities, and wastewater facilities.

The Department will also consider the Optimization Report in determining compliance with the LCR.

Defer enforcement. The Department shall not initiate any enforcement actions for violations of the Lead and Copper Rule as long as the conditions of this agreement are being met.

Renegotiate agreement. The Department will negotiate the level of activity or the schedules in this agreement if requested by the City.

Terminate agreement. The Department agrees to terminate this agreement within 30 days upon request by the City.

All documents or reports required by this agreement, questions about compliance and request to modify this agreement shall be directed to DOH—Northwest Drinking Water Operations, 1511 3rd Avenue, Suite 719, Seattle, Washington 98101.

CITY OF AUBURN

Charles A. Booth

Charles A. Booth, Mayor

Date 3-6-2000

ATTEST:

Danielle E. Daskam

Danielle E. Daskam, City Clerk

APPROVED AS TO FORM:

Michael J. Reynolds, City Attorney

WASHINGTON STATE DEPARTMENT HEALTH

BY: Robert E James

Authorized Signature

Robert E. James

Print or Type Name

TITLE: Regional Engineer

Date February 14, 2000

Phone (206) 464-7671

LRM/bd

REF. H:\PROJ\PR629-21\E00-133

RECEIVED

FEB 14 2000

NW DRINKING WATER

Exhibit 1
Auburn Water System
Limits of Zones of Influences for Untreated Sources

RESOLUTION NO. 3374

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, REPEALING RESOLUTION NO. 3358 AND THE AUTHORIZATION THEREFOR AND APPROVING THIS RESOLUTION NO.3374 AUTHORIZING THE MAYOR AND CITY CLERK TO EXECUTE AN EMERGENCY WATER SYSTEM INTERTIE AGREEMENT BETWEEN THE CITY OF AUBURN AND THE CITY OF KENT.

WHEREAS, Resolution No. 3358 authorizing the execution of an Emergency Water System Intertie Agreement was approved by the City Council on June 18, 2001; and

WHEREAS, the Emergency Water System Intertie Agreement attached as Exhibit "A" to Resolution No. 3358 was a draft of the final Emergency Water System Intertie Agreement agreed to by Auburn and Kent; and

WHEREAS, changes were made by both parties to the draft agreement attached to Resolution No. 3358 that were intended to be in the agreement executed by both parties; and

WHEREAS, pursuant to RCW 35A.11.040, Auburn and Kent have legal authority to exercise their powers and perform any of their functions as set forth in RCW 39.34; and

WHEREAS, pursuant to RCW 39.34, the Interlocal Cooperation Act, Auburn and Kent have legal authority to cooperate with other localities on the basis of mutual advantage and provision of services; and

WHEREAS, the City of Auburn and the City of Kent currently have an emergency water system intertie; and

WHEREAS, the existing intertie station is going to be removed and relocated as part of the South 277th Street Improvement project; and

WHEREAS, a temporary emergency water system intertie will be constructed and available for use during the South 277th Street Improvement project; and

WHEREAS, an agreement outlining the design, construction and operation of the temporary and permanent emergency water system intertie is needed.

NOW, THEREFORE, THE COUNCIL OF THE CITY OF AUBURN, WASHINGTON, IN A REGULAR MEETING DULY ASSEMBLED, HEREWITH RESOLVES THAT:

Section 1. Pursuant to RCW 39.34, the Interlocal Cooperation Act, Auburn and Kent have legal authority to cooperate with other localities on the basis of mutual advantage and provision of services.

Section 2. The Mayor and City Clerk of the City of Auburn are herewith authorized to execute the Emergency Water System Intertie Agreement which was agreed to between the City and the City of Kent. A copy of said Agreement is attached hereto, denominated as Exhibit "A" and made a part hereof as though set forth in full herein.

Section 3. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

DATED this 6th day of August, 2001.

CITY OF AUBURN

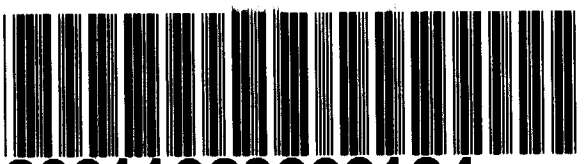
Charles A. Booth
CHARLES A. BOOTH
MAYOR

ATTEST:

Danielle E. Daskam
Danielle E. Daskam,
City Clerk

APPROVED AS TO FORM:

Michael J. Reynolds
Michael J. Reynolds,
City Attorney



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PACIFIC NW TIT AG 12.00
PAGE 001 OF 005
10/23/2001 09:12
KING COUNTY, WA

DEC 10 2001
CITY OF AUBURN

Return Address:
Auburn City Clerk
City of Auburn
25 West Main St.
Auburn, WA 98001

RECORDER'S COVER SHEET

Document Title(s) (or transactions contained therein):
1. EMERGENCY WATER SYSTEM INTERTIE AGREEMENT (RES 3374)

Reference Number(s) of Documents assigned or released: 5112

☐ Additional reference #'s on page _____ of document

FILED BY PNWT
W1295-12

Grantor(s) (Last name first, then first name and initials)
1. Auburn, City of

Said document(s) were filed for record by Pacific Northwest Title as accommodation only. It has not been examined as to proper execution or as to its effect upon title.

Grantee: (Last name first)
1. Kent, City of

Legal Description (abbreviated: i.e. lot, block, plat or section, township, range)

N/A Government Interlocal

Additional legal is on page of document.

Assessor's Property Tax Parcel/Account Number

N/A Government Interlocal

☐ Assessor Tax # not yet assigned

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EMERGENCY WATER SYSTEM INTERTIE AGREEMENT
Kent/Auburn Intertie Agreement No. 1

THIS AGREEMENT made and entered into by and between the City of Auburn, hereinafter referred to as Auburn, and, the City of Kent, hereinafter referred to as Kent, for the purposes of planning, designing, constructing, maintaining, and operating an emergency system intertie between the respective parties,

WITNESSETH:

WHEREAS, both Cities have water facilities in the vicinity, and

WHEREAS, both Cities can increase fire protection and emergency water supply reliability for their customers, and

WHEREAS, the Cities are willing to provide the necessary services to increase fire fighting and emergency supply reliability upon the terms and conditions set forth herein,

NOW, THEREFORE, IT IS MUTUALLY AGREED as follows:

1. The emergency water system intertie is intended to be operated manually as a two way emergency supply between the Auburn and Kent Systems. The intertie facility shall be located near South 277th Street at the Water Service Area Boundaries between the two cities. An existing intertie located at B Street NE and South 277th Street will be replaced with a temporary metering station and eventually a permanent metering station. Final location and configuration of the facilities shall be determined at the time of final design.

2. The emergency water system intertie shall be operated only in the event of an emergency. For purposes of this agreement, an emergency shall be defined as resulting from a water shortage, a major water line break, fire demand, contamination to the water supply system, mechanical equipment failure, electrical equipment failure or Puget Sound Energy facility failure, or any other agreed upon emergency within the water supply system.

3. Auburn has acquired the right of way for the metering station and Kent will design and administer the contract for the construction of the temporary facilities within the right of way acquired by the City of Auburn. The permanent facilities will be constructed as part of the South 277th Street Improvement Project. All of the facilities will be designed and constructed in accordance with reasonably accepted water utility standards for similar municipal water utilities. Auburn will own and maintain the piping, interior

2001 102 3000194

equipment, emergency meter and interior appurtenances, and all piping up to the Kent side of the vault for both the temporary and permanent metering stations.

4. Upon completion of construction, Auburn will transfer ownership of all exterior appurtenances, and all piping which is located on the Kent side of the vault, to Kent. Kent will own and maintain the exterior appurtenances and all piping on Kent's side of the vault.

5. Each City will each have unlimited access to the vault via a dual padlock or ownership of keys to the vault.

6. Each City will operate the respective normally locked valve inside of the vault. Auburn will solely unlock and operate the locked valve on Auburn's side of the meter and Kent will solely unlock and operate the locked valve on Kent's side of the meter.

7. The procedure for operating the intertie in the event of such emergency shall be as follows:

   A. Each City shall determine that an emergency of sufficient magnitude has occurred which warrants the need to request that the intertie be activated.

   B. The Public Works Director or appointed person or authorized personnel shall provide a verbal request to the other City's Public Works Director or appointed person. Upon agreement that an emergency exists which shall allow for the intertie to be opened, the intertie will be activated as soon as reasonably possible. Both Cities' personnel shall be present at the vault to open the valves to activate the facility.

   C. The City requesting the activation shall provide a written confirmation of the request not less than 24 hours after the verbal request, or on the first day of normal business after the verbal request.

   D. The intertie shall remain activated until the City requesting activation determines that the need for activation of the emergency intertie has ceased and shall request in writing to close the intertie.

   E. In case of emergency or whenever the public health, safety, or the equitable distribution of water so demands, the City supplying the water may change, reduce or limit the time for or temporarily discontinue the supply of water without notice; water service may be temporarily interrupted, limited for purposes of making repairs,

2001 102 3000194

2001 102 3000194

extensions or doing other necessary work; and the City supplying the water shall not be responsible for any damage resulting from interruption, change or failure of the water supply, and the City receiving the water (City requesting activation) shall save and hold harmless the City supplying the water from any loss, damages or suites to or by customers of the City receiving the water resulting from interruption, change or failure of water supply provided by this Agreement, except damages arising out of the City supplying the water's negligence. Prior to a planned interruption or limiting of service, the City supplying the water will notify the City receiving the water of such not less than three days prior to the service disruption. The City supplying the water agrees to use best efforts and reasonable diligence to notify the City receiving the water as soon after it becomes aware of the need for service disruption and further will, to the extent practical, limit the service disruption to daylight hours.

8. Auburn shall read the meter upon activation and upon deactivation of the intertie. The city supplying the water shall verify the information and shall then calculate and invoice the other City for the water used during the request. The invoice shall be calculated by the total water used during the event. The rate shall be at the current Auburn or Kent Wholesale Rate depending on which city is supplying the water. This shall be complete payment for the water, labor, and administration of activating the intertie.

9. The total project costs shall include costs for consulting design service, and construction. These costs shall be paid for by the City of Kent. The project costs shall be reviewed and agreed upon by Public Work Directors of both Cities at the beginning and end of each stage described above. Each City is responsible for associated staff, administration and legal costs associated with the implementation of the agreement.

10. To the extent allowed by law, the City of Kent shall defend, indemnify, and hold harmless the City of Auburn, its elected officials, employees and agents from and against any and all suits, claims, actions, losses, costs, expenses of litigation, attorney's fees, penalties and damages of whatsoever kind or nature arising out of or in connection with or incident to an act or omission of the City of Kent, its employees, agents, and contractors in the performance of the City of Kent's obligations under the Agreement and this Amendment. This indemnification provision shall include, but is not limited to, all claims against the City of Auburn by an employee or former employee of the City of Kent or its contractors and, as to such claims, the City of Kent expressly waives all immunity and limitation of liability under Title 51 RCW.

2001 102 3000194

To the extent allowed by law, the City of Auburn shall defend, indemnify and hold harmless the City of Kent, its elected officials, employees and agents from and against any and all suits, claims, actions, losses, costs, expenses of litigation, attorney's fees, penalties, and damages or whatsoever kind or nature arising our of, in connection with or incident to an act or omission of the City of Auburn, its employees, agents, and contractors in the performance of the City of Auburn's obligations under this Agreement. This indemnification obligation shall include, but is not limited to, all claims against the City of Kent by an employee or former employee of the City of Auburn or its contractors and, as to such claims, the City of Auburn expressly waives all immunity and limitation of liability under Title 51 RCW.

11. This Agreement shall remain in force until terminated by either party hereto upon 60-days written notice to the other party. Any project costs, incurred up to the date of such notice, as described herein, shall be shared in accordance with the provisions of this Agreement.

IN WITNESS WHEREOF, we have hereunto set our hands and seals.

CITY OF AUBURN
King County, Washington

By: Charles A. Booth 08-07-01
Mayor Date

Approved as to form:

By: [signature] 7/17/01
City Attorney Date

CITY OF KENT
King County, Washington

By: [signature]
Mayor Date 8-29-01
JIM WHITE

Approved as to form:

By: [signature] 8-29-01
ASST. City Attorney Date
SIMON STOCKTER

RESOLUTION NO. 3383

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR AND CITY CLERK TO PERFORM THE NECESSARY ADMINISTRATIVE MEASURES TO APPROVE AUBURN'S WITHDRAWAL FROM THE EXISTING SOUTH KING COUNTY REGIONAL WATER ASSOCIATION JOINT OPERATING AGREEMENT, DATED OCTOBER 8, 1996, AND TO INDICATE AUBURN'S ACCEPTANCE AND CONTINUANCE AS A SIGNATORY MEMBER OF THE REVISED SOUTH KING COUNTY REGIONAL WATER ASSOCIATION JOINT OPERATING AGREEMENT DATED DECEMBER 19, 2000.

WHEREAS, Auburn is a member of the South King County Regional Water Association (SKCRWA) consisting of the cities of Algona, Black Diamond, Kent, and Pacific, and Lakehaven Utility District, Soos Creek Water & Sewer District, and King County Water District #111 as authorized by Resolution No. 2568, adopted June 5, 1995, and modified by Resolution No. 2781, adopted December 2, 1996; and

WHEREAS, the Board of Directors of the SKCRWA saw a need to make certain amendments to the Joint Operating Agreement, dated October 8, 1996, to provide clarification to the intent of the agreement; and

WHEREAS, the Board of Directors of the SKCRWA have now prepared and recommended for approval by each participatory member an update of the Joint Operating Agreement to which Auburn is a signatory member.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, IN A REGULAR MEETING DULY ASSEMBLED, HEREWITH RESOLVES AS FOLLOWS:

Section 1. The Mayor and City Clerk of the City of Auburn are hereby authorized to perform the necessary administrative measures to approve Auburn's withdrawal from the existing SKCRWA Joint Operating Agreement, dated October 8, 1996, and to indicate Auburn's acceptance and continuance as a signatory member of the revised SKCRWA Joint Operating Agreement, dated December 19, 2000. A copy of said Agreement is attached hereto and denominated as Exhibit "A" and incorporated by reference in this Resolution.

Section 2. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

DATED and SIGNED this 4th day of September, 2001.

CHARLES A. BOOTH
MAYOR

ATTEST:

Danielle E. Daskam,
City Clerk

APPROVED AS TO FORM:

Michael J. Reynolds,
City Attorney

Return Address:
Auburn City Clerk
City of Auburn
25 West Main St.
Auburn, WA 98001

RECORDER'S COVER SHEET

Document Title(s) (or transactions contained therein):

Interlocal Agreement – South King County Regional Water Association Joint Operating Agreement

Reference Number(s) of Documents assigned or released:
☐ Additional reference #'s on page _____ of document

13/31
FILED BY PNWT
W3474-12

Grantor(s)/Borrower(s) (Last name first, then first name and initials)
Auburn, City of

Grantee/Assignee/Beneficiary: (Last name first)
South King County Regional Water Association

Legal Description (abbreviated: i.e. lot, block, plat or section, township, range)

PER RCW 39.34

☐ Additional legal is on page of document.

Assessor's Property Tax Parcel/Account Number

N/A

☐ Assessor Tax # not yet assigned

examined as to its effect upon title.

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SOUTH KING COUNTY REGIONAL WATER ASSOCIATION
JOINT OPERATING AGREEMENT
December 19, 2000

WHEREAS, an adequate and safe water supply for South King County Regional Water Association (SKCRWA) and its members is vital to both existing citizens and in implementing the long-term comprehensive plans of SKCRWA members; and

WHEREAS, the State and SKCRWA prepared a Coordinated Water System Plan (CWSP) for South King County; and

WHEREAS, projects that provide for the coordinated and cooperative use and operation of supply, transmission, storage, treatment, and pumping facilities to minimize cost, provide for improved water quality, protect the environment, provide for emergency needs, and maximize the best use of the resource is in the best interest of the citizens of the region;

WHEREAS, the current and near-term water needs of the local governments and SKCRWA require steps to establish a cooperative subregional water supply system; and

WHEREAS, the SKCRWA is committed to cooperate toward regional solutions for both emergency and long range water supply needs: and

WHEREAS, the SKCRWA signatory members developed a Joint Operating Agreement in 1995 and revised the Joint Operating Agreement in 1996 and now want to further revise the Agreement.

NOW THEREFORE, the SKCRWA signatory members of this Joint Operating Agreement (JOA), agree as follows:

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1. GENERAL

A. The Signatory Members acknowledge the requirement to incorporate land use planning as defined by the Growth Management Act with water supply planning; and

B. The Signatory Members recognize the benefits of developing a subregional water supply system that will allow the optimum use of surface and groundwater to better manage and protect the area's water resources; and

C. The Signatory Members will hold an Annual Meeting about September 30th to review the status of this JOA and any Amendments as well as other problems of mutual concern. The specific date, time, and location of the meeting will be set by mutual agreement.

D. Merger shall mean when two signatory members merge or when a signatory member and a non-signatory member merge.

E. Termination – This agreement shall cease to be binding on or to any signatory member that is not in good standing or whenever a merger occurs.

2. **INTENT**

A. The general intent is to create a method for the Signatory Members to cooperatively use certain existing facilities and construct new facilities needed to develop a subregional water system. The Signatory Members may mutually agree by Interlocal Agreement to produce additional water and distribute it within the Subregional Service Area, with or without change to their retail service area.

B. The JOA provides a framework for joint development of specific projects that may include two or more Participants. Each facility, project, and/or intertie shall be developed under a separate Interlocal Agreement (IA) consistent with this JOA subject to approval by appropriate affected city council and/or water district boards. The specific intent of this JOA is to make provisions for a standardized form to create or expand cooperative agreements to meet the public water supply needs for both emergency and long-term use, and to establish a basis for agreement between Participants for financing, ownership, construction, and operation of mutually beneficial projects required to achieve cooperative objectives. These projects may include common facilities with other Agencies outside the SKCRWA planning area.

Interlocal Agreements (IA) negotiated under the provisions of this JOA shall speak for themselves and should reference the version of the JOA, which is in place at the time that the agreement is reached. It is the intent of the Signatory Members that any Interlocal Agreements negotiated under the JOA would survive the withdrawal of a Signatory Member from the JOA or from the South King County Regional Water Association.

It is further the specific intent of this JOA to preserve Signatory Members' existing water rights and protect the established or planned interest and needs of each Signatory Member with respect to sources of water.

Suggested content for an Interlocal Agreement is shown in Exhibit A.

C. It is the desire of the Signatory Members that this JOA be incorporated into the South King County CWSP at the next update.

D. The term "Participant" as used in this JOA shall mean all the signatories of an IA consistent with and implemented subsequent to this JOA.

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E. The term "Signatory Members" as used in this JOA shall mean a member, in good standing, of the South King County Regional Water Association who has signed this JOA. Good standing includes but is not limited to being current on all dues to the SKCRWA.

3. SUBREGIONAL SERVICE AREA AND FACILITIES

A. "Subregional Service Area " shall mean the Signatory Members' Designated Water Service Areas identified in the CWSP or as approved by amendments to the CWSP or as identified in a Signatory Member's approved Comprehensive Water Plan.

B. "Subregional Facilities" shall mean:

(a) that portion of the Participants' sources, interties, transmission, and storage systems required to supply water to the service areas of the Participants or new facilities as defined by a separate IA pursuant to this JOA.

(b) those designated capacities within a Participant system as specifically defined in an appropriate IA.

C. "Facility Ownership". Ownership of the physical facilities that exist on the date of this JOA shall remain with the individual Signatory Members. Unless otherwise agreed to within a specific IA, ownership and operational responsibilities of new facilities shall be based generally on location in designated service areas, with capacity rights defined by appropriate IA.

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4. WATER SUPPLY - CAPACITY RIGHTS

A. Capacity Rights - Participants may purchase capacity by IA. Any changes in these capacity rights shall be recognized by an IA, approved by the appropriate affected city councils and/or water district boards.

B. Additional JOA Participants - Other agencies may purchase capacity rights in subregional facilities subject to the provisions of paragraph 4.C. Other agencies who become Signatory Members of the SKCRWA and become Participants in future projects undertaken under this JOA and future IAs will be assessed past costs associated with development of this JOA as specified in Exhibit B.

C. Wholesaling Water -

a) A Signatory Member may wholesale water through lease or otherwise, delivered through subregional facilities to areas outside of the Signatory Member's Service Area, so long as the other Signatory Members' capacity rights are not negatively impacted. Signatory Members of the SKCRWA agree that, where feasible and mutually beneficial, they will coordinate planning and development of water resources.

b) Signatory Members further agree that prior to entering into any agreement to deliver long term water supply or construct joint facilities with a non-Signatory Member agency, they will first make a good faith effort to offer such supplies and/or capacities to Signatory Members (provide the right of first refusal). Such offers shall be made on a cost of service basis as established by separate IA. Signatory Members shall have 60 days to respond.

c) Signatory Members agree that when entering into any agreement to deliver long term water supply or construct joint facilities with a non-Signatory Member agency in accordance with this JOA, they will include and collect for remittance to the SKCRWA a fee for reimbursement of the costs for development of the JOA as specified in Exhibit B.

d) Regular meetings of the SKCRWA shall be the forum for making Signatory Members aware of discussions regarding water sales and joint projects, however all offers of participation or requests for participation shall be in writing with copies to other Signatory Members.

D. Conservation - All Participants will develop and implement a conservation plan that is consistent with State guidelines. Additional or supplemental conservation requirements beyond basic programs may be included in a specific Interlocal Agreement.

E. Curtailment - In general, curtailment for delivery of "firm water" shall be on a uniform percentage basis for both wholesale and retail customers and curtailment for delivery of "interruptible water" shall be on a "last in first out" basis as determined by the date of formal agreement. Specific curtailment requirements and provisions shall be included in Interlocal Agreements implemented under this JOA.

F. Quality - An objective of the Signatory Members is to maintain the quality of the water in the subregional facilities at or above the quality required by the State drinking water standards. The purchasing Participant will be responsible for ensuring water quality blending analyses and other water quality issues are resolved to their own satisfaction. The Signatory Members may meet periodically to ensure that water quality and operational issues are addressed, and that needed

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information is exchanged in a timely fashion. The written results of these meetings will be circulated in a timely manner to all members and participants and reviewed at the annual meeting.

G. Additional Facilities - Projected needs will be identified by the Participants based on the Participant's designated service areas. As five or more years may be needed to bring major new source capacity capabilities on line, five-year and ten-year forecasts are required, and must be updated whenever a Participant becomes aware of any significant change in their forecast demand. These will be discussed jointly as they arise, and reviewed at the annual meeting.

H. Financing - Each Project IA will include pertinent details of financing for that project. Financial participation in existing and additional facilities will be based on each Participant's projected need for each facility, as designated capacity rights.

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I. Cost of Service Charge - The Signatory Members and Participants will establish wholesale water sales charges for both emergency and long-term supply that include: (1) capital cost, (2) fixed operating cost, and (3) a variable operating cost based on quantity of water delivered based on actual costs of providing the service.

Fixed and variable operating and maintenance costs payments will be made monthly per meter and use rates. Projected annual rate adjustments and documentation shall be provided at the annual meeting. Any rate increase will be effective beginning January 1, of the following year.

(1) The Rates and Charges for the capital, operation, and maintenance of the system shall be based on the following:

(a) Capital Cost - Those construction related costs incurred for Capacity Rights. Capital Costs for facilities contracted solely for a specific project (described in an IA) are allocated based on designated capacity to be purchased.

Capital costs shall include the debt service for each Participant. Such debt service shall be defined as the actual debt service on debt issued for the Participant's proportionate share of capacity rights, or if no debt is issued for the Participant's costs by the financing Participant, the amortized value at the interest rate of the most recent revenue bond issued by the financing Participant over 20 years. However, should all capital costs be paid in full by any Participant purchasing capacity rights prior to the time of the financing Participant incurring the costs, no interest charges shall be assigned to the Participant purchasing capacity rights.

Capital Costs associated with a supplying Participant's construction of their internal water system facilities may be included in the fixed and variable operating costs as appropriate, using cost of service principles, in the same manner as those costs are included in the supplying Participant's customer rate base.

(b) Fixed Operating Cost - The cost of labor, supervision, supplies, utilities, services, taxes, insurance, and all other costs required to operate and maintain the system other than those items included under Variable Operating Cost. The operating cost will include an allocation for renewal and replacement.

(c) Variable Operating Cost - Those costs directly proportionate to the volume of water produced, including chemicals, electric power, and other costs required to meet customer and system needs not included in (a) and (b) above.

(2) Accounting

Subregional facilities accounting shall be documented in accordance with generally accepted accounting practices acceptable to the Participants.

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5. ADMINISTRATIVE, LEGAL AND OTHER PROVISIONS

A. Each Signatory Member shall designate in writing their representative responsible for coordination and implementation of the JOA and the subsequent IAs. The designated individuals will be the primary contact for all project approvals and communication and shall prepare and publish a schedule and plan to facilitate the planning, design and day-by-day operation of facilities associated with the subsequent IAs.

B. Signatory Members in good standing may propose Amendments to this JOA at any time. Signatory Members in good standing shall vote on proposed Amendments at the Annual Meeting. A quorum of Signatory Members present shall approve any Amendments to this JOA prior to their submittal to Signatory Members city councils and/or utility district boards for approval. A Special Meeting of the Signatory Members may be called for the purpose of amending this JOA by two thirds of the Signatory Members in good standing.

C. A Signatory Member may withdraw from this JOA by providing 120 days notice to other Signatory Members. Notice shall be provided to each Signatory Member in writing and shall include the reason for withdrawal.

D. Any Signatory Member that withdraws from the SKCRWA also withdraws from this JOA.

E. This JOA shall remain in full force unless terminated in writing by mutual agreement of all Signatory Members in good standing. Termination of the JOA or withdrawal by any signatory member shall not affect any Interlocal Agreements negotiated under a JOA.

F. A Signatory Member who merges with any Agency which is not a Signatory Member of this JOA must withdraw from the JOA. The merged agency would then be allowed to reapply for Signatory Membership in the JOA as the merged Agency.

IN WITNESS WHEREOF, the SKCRWA members hereto have caused this agreement to be executed by their proper Officers on the 21 day of May 2002.

200207160007600

By: Glenn Lubliner
Title: Mayor
City of Algona
Date: 8-7-01

Attest:
By:

Approved As To Form:
By: George S Kelley

By: Charles A. Booth
Title: Mayor
City of Auburn
Date: September 4, 2001

Attest:
By: Daniel E Denham

Approved As To Form:
By: Judith C Runeman
for Michael Reynolds

By:_____
Title:_____
City of Black Diamond
Date:_____

Attest:

By:_____

Approved As To Form:

By:_____

By: Jim White
Title: Mayor
City of Kent
Date: 4-4-01

2000760

Attest:

By:_____

Approved As To Form:

By: Bret C. Vinson
Bret C. Vinson
Assistant city attorney

By:_____
Title:_____
Lakehaven Utility District
Date:_____

Attest:

By:_____

Approved As To Form:

By:_____

By: Tom Joseph
Title: District Mgr
Soos Creek Water and Sewer District
Date: 4/4/01

Attest:

By:_____

Approved As To Form:

By:_____

By: David S. Irons
Title: Commissioner
King County Water District #111
Date: 4-16-01

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Attest:

By:_____

Approved As To Form:

By:_____

By: _____
Title: _____
City of Pacific
Date: _____

Attest:

By:_____

Approved As To Form:

By:_____

South King County
Regional Water Association
Joint Operating Agreement

Exhibit A
Check List for Interlocal Agreements

200207160000760

1. Project Title

2. General

   - List of Utilities to be parties to the Interlocal Agreement (IA) and approval of the appropriate city councils and/or water district boards.
   - Consistency with the Joint Operating Agreement (JOA).
   - Description of need for the project.
   - Listing of potential wholesale customers for the water in accordance with Section 4.C of the JOA.
   - Recognition of assessment of costs associated with development of JOA in accordance with Section 4.B of the JOA.
   - Recognition of right of first refusal to excess capacity of Signatory Members of the South King County Regional Water Association (SKCRWA) in accordance with Section 4.C of the JOA.
   - Recognition that capacity and water rights are available to meet the needs of the IA.

3. Description of Project

   - Include a drawing (or description) which identifies all the facilities to be considered within the IA. Included within the description should be all jointly or solely owned facilities that are to be operated or paid for by a party to the IA.
   - Description of long term ownership of the facility.
   - Identification of the party responsible for operation and/or maintenance of the facility.
   - Identification of the party responsible for payment for the design and construction of the facility.

4. Project Costs, Financing, Capacity Rights

   - Description of all project costs and the allocation to each party.
   - Definition of capacity rights for all facilities.
   - Definition of cost sharing for long-term maintenance for each facility.
   - Definition of method of reimbursement for moneys expended (if required).
   - Description of any applicable latecomer fees or hook-up charges.
   - Description of requirements for record keeping and monitoring of costs.

5. Project Design and Construction Management

   - Definition of overall project management responsibilities.
   - Definition of design and construction management responsibilities for individual facilities.
   - Description of basic periodic meeting schedule for review of project progress.

6. Conditions of Service
    - Limitations to source sharing or delivery of water (if any).
    - Design criteria for the project facilities.
    - Minimum and maximum flow rates and pressures.
    - Items specifically excluded from the project.

7. Term of Duration of the Agreement

    - Discussion of the length of time the agreement is in effect as well as the method to terminate the agreement and succeeding agencies' obligations.

8. Amendments

    - Method by which the agreement could be amended.

9. Hold Harmless, Liability Language, etc.

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South King County
Regional Water Association
Joint Operating Agreement

Exhibit B
Computation of Charges

Initial Computation based on 8 shares.

$ 16,652	Cost to develop JOA (from Covington and WD 111).
8	
$ 2,081	Initial "charge" for a share.

Cost to the three participants of IA2.

Covington and Auburn, three share	$ 6,244
WD 111, two shares =	$ 4,163

Final Computation based on 12 shares.

$ 16,652	
12	
$ 1,388	

Ultimate use charge

Algona and Black Diamond, one share =	$ 1,388
WD 111, two shares =	$ 2,775
Auburn, Kent, Covington WD, Lakehven UD, Or Soos Creek W&SD, three shares =	$ 4,163

Reimbersement for Development and initial use (to Covington, WD 111,and Auburn)

$ 16,652 Cost for development.

Covington	WD 111	Auburn	
$ 8,326	$ 8,326	$ -	development cost
$ 6,244	$ 4,163	$ 6,244	use charge IA2
$ 2,081	$ 4,163	$ (6,244)	
$ 2,081	$ 4,163	$ -	recovery charge IA2 (Auburn)
$ 6,244	$ 4,163	$ 6,244	
$ 4,163	$ 2,775	$ 4,163	ultimate use charge
$ 2,081	$ 1,388	$ 2,081	remaining reimb.
$ 463	$ 463	$ 463	recovery charge IA3 (Algona)
$ 1,619	$ 925	$ 1,619	remaining reimb.

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REVISED BYLAWS
of
REGIONAL WATER ASSOCIATION OF SOUTH KING COUNTY

I. MEMBERSHIP

A. Regular Members. Governmental Bodies providing water service in South King County are entitled to regular membership in this Corporation, upon approval by the Board of Directors and payment of any then required fees and/or dues.

The term "member" as used in these Bylaws shall mean "regular member" unless otherwise designated.

B. Affiliate Members. Any governmental body, Association of Water Purveyors, water purveyor, individual or business, may become an Affiliate Member upon approval by the Board of Directors and payment of any then required fees and/or dues,

Affiliate Members have no proprietary or other interest in the Corporation; are not entitled to vote: are not entitled to attend meetings as a matter of right: and have no right to participate in any distributions, in dissolution or otherwise, by the Corporation.

Affiliate Members may, with the approval of the Board of Directors, attend any regular meeting and participate in all discussions at any regular meeting.

C. Assignment. Neither regular nor affiliate membership in this Corporation is assignable by the member.

II. DIRECTORS

A. Number. The Articles of Incorporation provide for not less than three nor more than twenty-five Directors. At the present, there shall be as many Directors as there shall be regular members, plus the Alternate Directors provided for herein below. The number of Directors and Alternate Directors may be changed by the membership at any regular meeting or at a special meeting called for that purpose.

B. Qualifications. Directors and Alternate Directors must be elected officials or the designee of members of the Corporation. Each regular member shall be entitled to select one Director and two Alternate Directors provided herein below.

C. Selection and Term. Directors and Alternate Directors shall normally be selected by the Regular Member prior to the Annual Meeting and serve for a term of one year, or until such time

thereafter as their successors shall be selected by the Regular Member. Notice of selection shall be in a written form satisfactory to the Board of Directors.

D. Alternate Directors. In the absence of a Director at a meeting of the Board of Directors, or in the event that a Director is unavailable or unable to act on any matter between meetings, an Alternate Director representing the same member may attend the meeting and vote and/or act outside a meeting. Members may designate the order in which their Alternate Directors may act. In the absence of such designations it shall be as agreed by that member's Alternate Directors.

E. Vacancies. The Regular Member in accordance with the Selection requirements of these Bylaws shall fill any vacancies occurring among its Directors and Alternate Directors.

F. Board of Directors. The Director from each Regular Member, or in the absence of the Director, the Alternate Director shall constitute the Board of Directors of the Corporation.

No one need look beyond the fact that a vote or act was performed by either a Director or an Alternate Director. All such votes and actions shall be binding on the Corporation and may be relied upon as the act of the Board of Directors and the Corporation by all persons dealing with the Corporation.

G. Compensation. Directors shall not receive any compensation for acting as such but may be reimbursed for expenses incurred in the business of the Corporation, provided the expenses were approved in advance by the Board of Directors or Executive Committee.

III. AFFILIATE DELEGATES

A. Affiliate Delegates. Each Affiliate Member shall be entitled to an Affiliate Delegate and an Alternate Affiliate Delegate.

A. Qualifications. Affiliate Delegates and Alternate Affiliate Delegates may be elected officials of or a designee of the Affiliate Member.

C. Selection and Term. Affiliate Delegates and Alternate Affiliate Delegates shall be selected by the Affiliate Member and serve until such time thereafter as their successors shall be selected by the Affiliate Member. Notice of selection shall be in a written form satisfactory to the Board of Directors.

D. Vacancies. The Affiliate Member in accordance with the selection requirements of these Bylaws shall fill any vacancies occurring among its Affiliate Delegates and Alternate Affiliate Delegates.

F. Compensation. Affiliate Delegates and Alternate Affiliate Delegates shall not receive any compensation from the Corporation.

IV. OFFICERS AND COMMITTEES

A. Number. The Officers of the Corporation shall be a President, Vice- President, Secretary and a Treasurer. In addition to the foregoing, the Board of Directors may elect such assistant or other Officers as the Board, from time to time, deems appropriate.

B. Term. Officers shall be elected by the Board of Directors at the Annual Meeting of the Board of Directors, and shall serve for a term of one year, commencing on their election, or until such time as their successors are elected.

C. Vacancies. The Board of Directors may fill a vacancy in any office for the un-expired portion of the term.

D. Qualifications. No person may serve as an Officer of the Corporation unless he/she is also a Director or Alternate Director.

E. President. The President shall be the managing Executive Officer of the Corporation and shall be subject to the ultimate authority of the Board of Directors and/or any Executive or other committees appointed by it, have general charge of the business of the Corporation.

The President shall, together with the Secretary, execute all documents and instruments which are required in the ordinary course of the Corporation's business or which are required by law to be executed by the Corporation.

F. Vice-President. In the absence of the President, or his/her inability or refusal to act, the Vice-President shall perform the duties of the President, and, when so acting, shall have all the powers of and be subject to all of the restrictions upon the President.

G. Secretary. The Secretary shall, in person or through any Assistant Secretary or authorized employee: (a) Keep the minutes of all meetings; (b) give all notices which must be given under these Bylaws or by statute: (c) be custodian of the corporate records and seal; and (d) in general, perform all of the duties incident to the office of Secretary and such other duties as, from time to time, may be assigned to him/her by the President or by the Board of Directors.

H. Treasurer. The Treasurer shall, in person or through any Assistant Treasurer or authorized employee: (a) Have charge and custody of all funds and securities of the Corporation; (b) deposit all corporate moneys in the name of the Corporation in such Banks as shall be selected by the Board Of Directors: and (c) in general, perform all of the duties incident to the office of Treasurer

and such other duties as, from time to time, may be assigned to him/her by the President or by the Board of Directors.

I. **Assistant Secretary and Assistant Treasurer**. Any Assistant Secretary or Assistant Treasurer, when elected, may act in the absence, death, inability or refusal to act, of the Secretary or Treasurer, respectively. In addition, any Assistant Secretary or Treasurer shall perform such duties as shall be assigned to him/her, from time to time, by the Board of Directors or the Secretary or Treasurer.

J. **Executive Committee.** The President, Vice-President, Secretary and Treasurer shall constitute the Executive Committee of the Corporation and shall be allowed to act on behalf of the Board of Directors whenever action is required and it is not practicable for the Board of Directors to call a meeting and act. Any action of the Executive Committee shall require the votes of three of the Executive Committee members. Actions taken by the Executive Committee shall be brought to the next Regular Meeting of the Board of Directors for ratification.

K. **Audit Committee.** The President shall annually appoint an Audit Committee. The Audit Committee shall review the financial condition and financial transactions of the Corporation at the end of each calendar year. The Audit Committee shall include the Treasurer, as chair, and at least two additional Delegates or Alternate Delegates from different Members. The Audit Committee shall report its findings to a Regular Meeting of the Board of Directors.

K. **Evaluation Committee.** The President shall annually appoint an Evaluation Committee. The Evaluation Committee shall complete a performance review and evaluation of any employees of the Corporation. Employee reviews and evaluations shall normally be completed by December 1, and shall generally cover the previous 12 months. The President shall serve as chair of the Evaluation Committee and the committee shall include at least two additional Delegates or Alternate Delegates from different Members. The Evaluation Committee shall report its findings to a Regular Meeting of the Board of Directors.

L. **Other Committees.** The President, with the approval of the Board of Directors, may establish other committees as may be appropriate to conduct the business of the Corporation. The President shall appoint the members of and the chair for any committee established under this paragraph. Committees shall consist of at least three Delegates or Alternate Delegates from different Members. Affiliate Members may serve on committees established under this paragraph, with full participation in discussion and other committee work, however Affiliate Members shall have no vote in the committee. Committees established under this paragraph shall terminate in 12 months from the time of formation, unless reestablished by the Board of Directors. Committees formed under this paragraph shall report to the Board of Directors at a Regular Meeting of the Board of Directors.

V. MEETINGS

A. Regular Meetings. The Board of Directors shall generally meet monthly at a regularly scheduled time and place as necessary to conduct the business of the Corporation. The Board of Directors may change the time and place of Regular Meetings or cancel a Regular Meeting as necessary to meet the needs of the Directors and the Corporation. The Directors shall be notified in writing of the time and place of regular meetings. Upon each Director being so notified, no further notice of regular meetings need be given unless the time and place thereof is changed.

B. Annual Meeting. The Annual Meeting of the Board of Directors shall be the January Regular Meeting of the Board of Directors.

C. Joint Operating Agreement Annual Meeting. The Regular Members who are signatory members of the Joint Operating Agreement shall normally hold a Joint Operating Agreement Annual Meeting in September. The Board of Directors shall set the time and place for the Joint Operating Agreement Annual Meeting and the President shall preside. All business of the Joint Operating Agreement Annual Meeting shall be conducted with the same procedures and manner as other meetings of the Corporation, except as required by the terms of the Joint Operating Agreement. The Directors of signatory members of the Board of Directors shall be notified in writing of the time and place of the Joint Operating Agreement. Upon each Director being so notified, no further notice of regular meetings need be given unless the time and place thereof is changed.

D. Special Meetings. Special meetings of the Board of Directors may be called at any time by or at the request of the President or any three Directors. The President or Directors calling the special meeting shall give notice of the purpose thereof to the Corporation. The Secretary shall then fix the date, place and time of the meeting and give notice thereof, and of its purpose to all of the Directors at least five days in advance of the meeting.

E. Quorum. A majority of the Regular Members of the Corporation, present in person or by proxy shall constitute a quorum for the transaction of business at any meeting of the Board of Directors.

The vote of a majority of the Regular Members present, in person or by proxy, shall be necessary for the adoption of any matters unless a greater percentage is required by state law.

F. Informal Action. Any action which must or might be taken at a meeting of the Board of Directors, or any committee thereof, may be taken without a meeting if a consent in writing, setting forth the action so taken, shall be signed by all of the Directors or committee members as the case may be.

VI. VOTING

A. General. Each Regular Member shall be entitled to one vote on each matter submitted to a vote at a meeting of the Corporation. .

B. Proxies. Regular Members may vote in person or by proxy. A proxy, to be valid, must be in writing; signed by the member; and submitted to the Corporation prior to voting. No proxy shall be valid after thirteen months from the date of its execution, unless otherwise provided in the proxy

C. Mail Voting. At the discretion of the Board of Directors, voting may be conducted by mail. In such case, a written ballot shall be sent to each Regular Member at least twenty days in advance of the date for canvass of the votes. The written ballot shall contain and describe the issues or persons to be voted upon and shall provide space for the Regular Member to vote for or against the issue or for the candidates of his or her choice.

VII. CORPORATION FUNDS

A. Deposits. All funds of the Corporation, other than a reasonable amount for petty cash, shall be deposited, in the name of the Corporation, in such banks or other depositories as the Board of Directors shall select.

B. Checks. All disbursements by the Corporation, other than small amounts from petty cash, shall be by check, drawn direct to the ultimate payees and signed by at least two Directors of the Corporation.

VIII. EMPLOYEES

A. Employees. The Board of Directors may employ or appoint such organizations and persons, as it deems appropriate, and shall establish or approve salaries and/or other charges for such services. Employees shall not be elected or appointed officials, or employees of any regular member entity, and shall serve at the will of the Board of Directors. The Regional Water Association of South King County is an at will employer.

B. Annual Review. Annually, the Board of Directors, with the assistance of the Evaluation Committee, shall review the performance and compensation of any employees of the Corporation.

IX. MEMBER AGREEMENTS

A. Member Agreements. From time to time, the Board of Directors may offer member agreements to members for consideration and or participation. Approval or participation in any agreement so offered shall not be a condition of membership in the Corporation.

B. Joint Operating Agreement. The South King County Regional Water Association Joint Operating Agreement is a Member Agreement as defined in these Bylaws. As such, participation in the Joint Operating Agreement is not a condition of membership in the Corporation.

X. AMENDMENTS

The Board of Directors, may adopt new Bylaws, or may alter, amend or repeal these Bylaws, at a Regular Meeting, or at a Special Meeting, provided such meeting is held with proper notice as required by these Bylaws or through the mail voting procedures of the Corporation.

XII. DUES AND CHARGES

Membership fees, dues and/or other charges; the time for payment thereof; and procedures in the event of delinquency; shall be as established, from time to time, by the Board of Directors.

XII. CONTRACTS, LOANS AND CHECKS

A. Contracts. The Board of Directors may authorize any Officer or Officers, agent or agents, to enter into any contract or execute and deliver any instrument in the name of and on behalf of the Corporation, and such authority may be general or confined to specific instances.

A. Loans. No loans shall be contracted on behalf of the Corporation and no evidences of indebtedness shall be issued in its name unless authorized by a resolution of the Board of Directors, or the Executive Committee, if such authority is delegated it by the Board of Directors. Such authority when granted may be general or confined to specific instances.

C. Loans to Directors and Officers. The Corporation shall make no loans to its Directors or Officers. Any director who votes for or assents to the making of a loan to a Director or Officer of the Corporation, and any Officer or Officers participating in the making of such loan, shall be jointly and severally liable to the Corporation for the amount of such loan until repayment thereof.

XIII. SEAL

The Board of Directors shall provide for a corporate seal, which shall have inscribed thereon the name of the Corporation and the words. "State of Washington', and "Corporate Seal". Until changed by the Board of Directors, the Corporations seal shall be that affixed to this page.

ADOPTED this 21 day of January, 2002

DIRECTOR

DIRECTOR

DIRECTOR

DIRECTOR

DIRECTOR

DIRECTOR

RESOLUTION NO. 3434

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR AND CITY CLERK TO EXECUTE AN EMERGENCY WATER SYSTEM INTERTIE AGREEMENT BETWEEN THE CITY OF AUBURN AND THE CITY OF BONNEY LAKE.

WHEREAS, pursuant to RCW 35A.11.040, Auburn and Bonney Lake have legal authority to exercise their powers and perform any of their functions as set forth in RCW 39.34; and

WHEREAS, pursuant to RCW 39.34, the Interlocal Cooperation Act, Auburn and Bonney Lake have legal authority to cooperate with other localities on the basis of mutual advantage and provision of services; and

WHEREAS, the City of Auburn and the City of Bonney Lake currently have water facilities in the vicinity; and

WHEREAS, both cities can increase fire protection and emergency water supply reliability for their customers; and

WHEREAS, both cities are willing to provide the necessary services to increase fire fighting and emergency supply reliability upon the terms and conditions set for in the Emergency Water System Intertie Agreement.

NOW, THEREFORE, THE COUNCIL OF THE CITY OF AUBURN, WASHINGTON, IN A REGULAR MEETING DULY ASSEMBLED, HEREWITH RESOLVES THAT:

Section 1. Pursuant to RCW 39.34, the Interlocal Cooperation Act, Auburn and Bonney Lake have legal authority to cooperate with other localities on the basis of mutual advantage and provision of services.

Section 2. The Mayor and City Clerk of the City of Auburn are herewith authorized to execute an Emergency Water System Intertie Agreement between the City and the City of Bonney Lake. A copy of said Agreement is attached hereto, denominated as Exhibit "A" and made a part hereof as though set forth in full herein.

Section 3. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

DATED this 19 day of MARCH, 2002.

CITY OF AUBURN

PETER B. LEWIS
MAYOR

ATTEST:

Danielle E. Daskam,
City Clerk

APPROVED AS TO FORM:

Daniel B. Heid,
City Attorney

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PACIFIC NW TIT IAG
PAGE 001 OF 005
07/16/2002 11:25
KING COUNTY, WA
0.00

Return Address:
Auburn City Clerk
City of Auburn
25 West Main St.
Auburn, WA 98001

RECORDER'S COVER SHEET 5/03

Document Title(s) (or transactions contained therein):

FILED BY ONWC
W3474-12

Interlocal Agreement – Emergency Water System Intertie Agreement

Reference Number(s) of Documents assigned or released:
☐ Additional reference #'s on page _____ of document

Grantor(s)/Borrower(s) (Last name first, then first name and initials)
Auburn, City of

Grantee/Assignee/Beneficiary: (Last name first)
Bonney Lake, City of

Legal Description (abbreviated: i.e. lot, block, plat or section, township, range)

PER RCW 39.34

☐ Additional legal is on page of document.

Assessor's Property Tax Parcel/Account Number

N/A

☐ Assessor Tax # not yet assigned

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EXHIBIT A

EMERGENCY WATER SYSTEM INTERTIE AGREEMENT
Bonney Lake/Auburn Intertie Agreement No. 3

THIS AGREEMENT made and entered into by and between the City of Auburn, hereinafter referred to as Auburn, and, the City of Bonney Lake, hereinafter referred to as Bonney Lake, for the purposes of planning, designing, constructing, maintaining, and operating an emergency system intertie between the respective parties,

WITNESSETH:

WHEREAS, both Cities have water facilities in the vicinity, and

WHEREAS, both Cities can increase fire protection and emergency water supply reliability for their customers, and

WHEREAS, the Cities are willing to provide the necessary services to increase fire fighting and emergency supply reliability upon the terms and conditions set forth herein,

NOW, THEREFORE, IT IS MUTUALLY AGREED as follows:

1. The emergency water system intertie is designed to be operated manually as a two way emergency supply between the Auburn and Bonney Lake Systems. The facility shall be located in Evergreen Way SE at the Water Service Area Boundaries between the two cities. Final location and configuration of the facilities shall be determined at the time of final design. Initially the Intertie is assumed to be a one-way supply from Bonney Lake to Auburn.

2. The emergency water system intertie shall be operated only in the event of an emergency. For purposes of this agreement, an emergency shall be defined as resulting from a water shortage, a major water line break, fire demand, contamination to the water supply system, mechanical equipment failure, electrical equipment failure or Puget Sound Energy facility failure, or any other agreed upon emergency within the water supply system.

3. Auburn will design and administer the contract for the construction of the metering station. The facility will be designed and constructed in accordance with reasonably accepted water utility standards for similar municipal water utilities. Auburn will own and maintain the piping, interior equipment, emergency meter and interior appurtenances, and all piping up to the Bonney Lake side of the vault for the metering station.

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4. Upon completion of construction, Auburn will transfer ownership of all exterior appurtenances, and all piping, which is located on the Bonney Lake side of the vault, to Bonney Lake. Bonney Lake will own and maintain the exterior appurtenances and all piping on Bonney Lake's side of the vault.

5. Each City will each have unlimited access to the vault via a dual padlock or ownership of keys to the vault.

6. Each City will operate the respective normally locked valve inside of the vault. Auburn will solely unlock and operate the locked valve on Auburn's side of the meter and Bonney Lake will solely unlock and operate the locked valve on Bonney Lake's side of the meter.

7. The procedure for operating the intertie in the event of such emergency shall be as follows:

   A. Each City shall determine that an emergency of sufficient magnitude has occurred which warrants the need to request that the intertie be activated.

   B. The Public Works Director or appointed person or authorized personnel shall provide a verbal request to the other City's Public Works Director or appointed person. Upon agreement that an emergency exists which shall allow for the intertie to be opened, the intertie will be activated as soon as reasonably possible. Both Cities' personnel shall be present at the vault to open the valves to activate the facility.

   C. The City requesting the activation shall provide a written confirmation of the request not less than 24 hours after the verbal request, or on the first day of normal business after the verbal request.

   D. The intertie shall remain activated until the City requesting activation determines that the need for activation of the emergency intertie has ceased and shall request in writing to close the intertie.

   E. In case of emergency or whenever the public health, safety, or the equitable distribution of water so demands, the City supplying the water may change, reduce or limit the time for or temporarily discontinue the supply of water without notice; water service may be temporarily interrupted, limited for purposes of making repairs, extensions or doing other necessary work; and the City supplying the water shall not be responsible for any damage resulting from interruption, change or failure of the water supply, and the City

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receiving the water (City requesting activation) shall save and hold harmless the City supplying the water from any loss, damages or suites to or by customers of the City receiving the water resulting from interruption, change or failure of water supply provided by this Agreement, except damages arising out of the City supplying the water's negligence. Prior to a planned interruption or limiting of service, the City supplying the water will notify the City receiving the water of such not less than three days prior to the service disruption. The City supplying the water agrees to use best efforts and reasonable diligence to notify the City receiving the water as soon after it becomes aware of the need for service disruption and further will, to the extent practical, limit the service disruption to daylight hours.

8. Auburn shall read the meter upon activation and upon deactivation of the intertie. The city supplying the water shall verify the information and shall then calculate and invoice the other city for the water used during the request. The invoice shall be calculated by the total water used during the event. The rate shall be at the current Auburn Wholesale Rate or the lowest Bonney Lake retail rate depending on which city is supplying the water. This shall be complete payment for the water, labor, and administration of activating the intertie.

9. The total project costs shall include costs for consulting design service, and construction. Auburn shall bear the total project costs, until and unless it can be demonstrated that Bonney Lake can benefit from the intertie. At such time, the parties agree to negotiate the fair share of the total actual project costs that correspond to the benefit Bonney Lake could receive. Bonney Lake agrees to pay such fair share of the total project costs upon billing for same by Auburn. Bonney Lake will have the right to build an intertie from Auburn to Bonney Lake at another location. Bonney Lake will bear the cost of building a separate intertie. Each City is responsible for associated staff, administration and legal costs associated with the implementation of the agreement.

10. To the extent allowed by law, the City of Bonney Lake shall defend, indemnify, and hold harmless the City of Aubum, its elected officials, employees and agents from and against any and all suits, claims, actions, losses, costs, expenses of litigation, attorney's fees, penalties and damages of whatsoever kind or nature arising out of or in connection with or incident to an act or omission of the City of Bonney Lake, its employees, agents, and contractors in the performance of the City of Bonney Lake's obligations under the Agreement and this Amendment. This indemnification provision shall include, but is not limited to, all claims against the City of Auburn by an employee or former employee of the City of Bonney Lake or its contractors and, as to such claims, the City of

Bonney Lake expressly waives all immunity and limitation of liability under Title 51 RCW.

To the extent allowed by law, the City of Auburn shall defend, indemnify and hold harmless the City of Bonney Lake, its elected officials, employees and agents from and against any and all suits, claims, actions, losses, costs, expenses of litigation, attorney's fees, penalties, and damages or whatsoever kind or nature arising our of, in connection with or incident to an act or omission of the City of Auburn, its employees, agents, and contractors in the performance of the City of Auburn's obligations under this Agreement. This indemnification obligation shall include, but is not limited to, all claims against the City of Bonney Lake by an employee or former employee of the City of Auburn or its contractors and, as to such claims, the City of Auburn expressly waives all immunity and limitation of liability under Title 51 RCW.

11. This Agreement shall remain in force until terminated by either party hereto upon 60-days written notice to the other party. Any project costs, incurred up to the date of such notice, as described herein, shall be shared in accordance with the provisions of this Agreement.

IN WITNESS WHEREOF, we have hereunto set our hands and seals.

CITY OF AUBURN
King County, Washington

By: _____
Mayor Date

Approved as to form:

By: _____
City Attorney Date

CITY OF BONNEY LAKE
Pierce County, Washington

By: _____
Mayor Date

Council Auth 4-9-02 Res 940

Approved as to form:

By: _____
City Attorney Date

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RESOLUTION NO. 3444

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR AND CITY CLERK TO EXECUTE AN EMERGENCY WATER SYSTEM INTERTIE AGREEMENT BETWEEN THE CITY OF AUBURN AND COVINGTON WATER DISTRICT AND WATER DISTRICT #111.

WHEREAS, pursuant to RCW 39.34, the Interlocal Cooperation Act, Auburn, Covington Water District (Covington) and Water District #111 (#111) have legal authority to cooperate with other localities on the basis of mutual advantage and provision of services; and

WHEREAS, Auburn has existing water interties and associated water supply agreements with Covington and #111, and

WHEREAS, Auburn will enter into Emergency Water Supply Agreement No. 1 with Lakehaven Utility District, hereinafter referred to as "LUD", whereby LUD can provide water it has available, in the event of an emergency, and

WHEREAS, the LUD Intertie No. 1 and agreement can increase the reliability of Auburn's water supply for Covington and #111 if water is available from LUD in the event of an emergency,

WHEREAS, it is in the public interest for the parties herein to enter into an emergency water supply agreement,

NOW, THEREFORE, THE COUNCIL OF THE CITY OF AUBURN, WASHINGTON, IN A REGULAR MEETING DULY ASSEMBLED, HEREWITH RESOLVES THAT:

Section 1. Pursuant to RCW 39.34, the Interlocal Cooperation Act, Auburn, Covington and #111 have legal authority to cooperate with other localities on the basis of mutual advantage and provision of services.

Section 2. The Mayor and City Clerk of the City of Auburn are herewith authorized to execute the Emergency Water System Intertie Agreement between the City and Covington Water District and Water District #111 with minor administrative changes if required. A copy of said Agreement is attached hereto, denominated as Exhibit "A" and made a part hereof as though set forth in full herein.

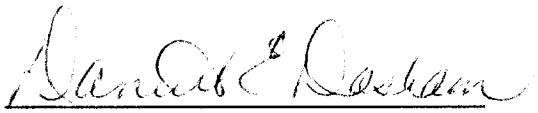
Section 3. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

DATED this 1st day of April, 2002.

CITY OF AUBURN

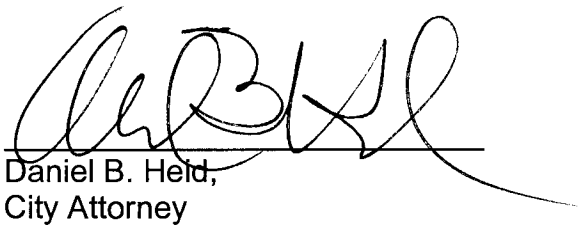
PETER B. LEWIS
MAYOR

ATTEST:



Danielle E. Daskam,
City Clerk

APPROVED AS TO FORM:



Daniel B. Heid,
City Attorney

EMERGENCY WATER SUPPLY AGREEMENT
Auburn/Covington/Water District #111

THIS AGREEMENT made and entered into by and between the City of Auburn, hereinafter referred to as "Auburn", and Covington Water District, hereinafter referred to as "Covington", and Water District #111, hereinafter referred to as "#111".

WITNESSETH:

WHEREAS, Auburn has existing water interties and associated water supply agreements with Covington and #111, and

WHEREAS, Auburn has entered into Emergency Water Supply Agreement No. 1 with Lakehaven Utility District, hereinafter referred to as "LUD", whereby LUD can provide water it has available, in the event of an emergency, and

WHEREAS, the LUD Intertie No. 1 and agreement can increase the reliability of Auburn's water supply for Covington and #111 if water is available from LUD in the event of an emergency,

WHEREAS, it is in the public interest for the parties herein to enter into an emergency water supply agreement,

NOW, THEREFORE, IT IS MUTUALLY AGREED as follows:

1. **Intertie Project Description.** LUD has granted to Auburn the right to connect, for the purposes described herein, an emergency intertie and appurtenances to the end of the 16-inch water main located in the vicinity of 15th Street Northwest and Terrace Drive in Auburn, Washington, more specifically shown on Exhibit A. The intertie facility shall be sited on property owned by Auburn.

2. **Intertie Project Payment.** Covington and #111 agree to pay for the design and construction of the emergency intertie described in Paragraph No. 1, and the replacement of +/- 140 linear feet of existing water main with a 16-inch transmission line in 15th St NW, between "R" St. NW and the proposed intertie vault. Covington will act as the contracting agency, paying for purchase and installation of the facilities described herein. Water District #111 will act as the design agency, providing design and construction support services. At the completion of construction, the total of design, construction support, purchase, and installation costs shall be summed and divided evenly between Covington and #111. The intertie facilities and piping are to be designed and constructed in accordance with Auburn's design standards. The emergency intertie shall comply with all LUD resolutions and rules applicable to a connection to LUD's water system including, but not limited to, the requirements that the LUD provide written approval of plans and specifications for the connection of intertie facilities prior to construction. Upon completion of the emergency intertie project, Covington will transfer to

Auburn through Bill of Sale all facilities constructed under this Agreement. Auburn will transfer through Bill of Sale to LUD ownership of and maintenance responsibility for the meter, associated appurtenances necessary to monitor emergency use of the intertie, the gate valve upstream of the vault and all piping upstream of that gate valve. Auburn will retain ownership of and maintenance responsibility for the vault, control valve, and all other piping and appurtenances.

3. **Intertie Project Purpose.** The emergency intertie described in Paragraph No. 1 herein is being installed to provide an emergency water supply. In the event Auburn perceives that curtailment of water supply to Covington or #111 will be necessary, Auburn will notify the parties of the situation and request whether or not the parties would like the LUD intertie activated. If Covington or #111 would like the LUD intertie activated, the requesting party must submit such request to Auburn in writing. Upon receipt of a request from Covington or #111, Auburn will submit a written request to LUD. Water shall not be withdrawn from the supply without the prior written approval of LUD. At the time approval is sought, Auburn shall state the requested time of commencement of use, the expected duration of withdrawal and quantity of water to be withdrawn. Auburn shall request an extension or termination of intertie operation in writing, if the duration of expected withdrawal is extended or shortened.

4. **Payment of Service and Quantity Charges.** Covington and #111 shall pay Auburn all monthly service charges, and quantity charges for any water received from LUD for the benefit of Covington and #111. Monthly service and quantity charge rates shall be established by LUD resolution for the use of an 8-inch meter and the applicable water rate. The rate for emergency water use will be the greater of LUD's rate to Auburn plus a wheeling charge, or the Auburn Wholesale rate for Covington and #111 as established by City Ordinance. These rates may be revised without notice to Covington and #111 and such revised rates shall apply to emergency water deliveries made pursuant to this agreement. Examples of the current rates are included in Exhibit B.

5. **Conditions of Use.**

   (a.) In the event LUD determines that the use of the emergency intertie is or will impose a negative impact to the public health, safety, or the equitable distribution of water within LUD, LUD may change, reduce or limit the time of use, or temporarily discontinue the supply of water without notice;
   (b.) In the event LUD must change, reduce, limit or temporarily discontinue service, Auburn may be required to change, reduce or limit the time of use, or temporarily discontinue the supply of water without notice to Covington and #111;
   (c.) Water service may be temporarily interrupted, limited for purposes of making repairs, extensions or doing other necessary work; and
   (d.) Prior to a planned interruption or limiting of service as set forth in (c) above the City will notify Covington and #111 of such planned

interruption or limiting of service. The City agrees to use best efforts to notify Covington and #111 as soon after it becomes aware of the need for such a service disruption.

(e.) Activation procedures are as described in Exhibit C

6. **Water Quality.** Water available to the parties to this Agreement shall be in compliance with all applicable state and federal drinking water laws, regulations and standards.

7. **Discontinuation of Use.** In the event of non-performance of any provision herein by Covington and/or #111, Auburn may shut off water supplied pursuant to this Agreement.

8. **Hold Harmless.** Covington and #111 agree to indemnify, defend and hold harmless Auburn, its officers, directors, employees and agents, and their successors and assigns, from any and all costs or claims arising out of or in any way resulting from Covington's and #111's default, failure of performance, or negligent conduct associated with this Agreement, and any failure of the Auburn water system to deliver flow to Covington and #111, in whole or in part, as described in this Agreement. This indemnification provision shall include, but is not limited to, all claims against Auburn by an employee or former employee of Covington and #111 or their contractors and, as to such claims, Covington and #111 expressly waive all immunity and limitation of liability under Title 51 RCW.

   Auburn agrees to indemnify, defend and hold harmless Covington and #111, their officers, directors, employees and agents, and their successors and assigns, from any and all costs or claims arising out of or in any way resulting from Auburn's default, or negligent conduct associated with this Agreement. This indemnification provision shall include, but is not limited to, all claims against Covington and #111 by an employee or former employee of Auburn or its contractors and, as to such claims, Auburn expressly waives all immunity and limitation of liability under Title 51 RCW.

9. **Agreement Termination.** This Agreement may be terminated by mutual agreement of all parties hereto upon 60-days written notice to the other parties.

10. **Dispute Resolution.** The parties shall make good faith efforts to resolve by informal discussion any dispute arising under or in connection with this Agreement. If at any time a party to this Agreement determines that such informal discussions will not result in a resolution of the dispute, such party may request formal discussion by all parties identified in Paragraph 11. If formal discussion by the parties identified in Paragraph 11 does not resolve the dispute, a settlement conference shall be held within thirty (30) days of the unsuccessful resolution meeting. The settlement conference will be held at the Seattle office of Judicial Arbitration and Mediation Services, Inc. ("JAMS"). The complaining party must contact JAMS to schedule the conference. The parties may agree on a retired judge from the JAMS panel.

If they are unable to agree, JAMS will provide a list of three available judges and each party may strike one. The remaining judge will serve as the mediator at the settlement conference.

11. **Notices.** Notices should be sent to the parties at the following addresses:

Public Works Director
City of Auburn
25 West Main Street
Auburn, WA 98001

General Manager
Covington Water District
18631 SE 300th Place
Covington, WA 98042

General Manager
Water District #111
27224 144th Avenue SE
Covington, WA 98042

IN WITNESS WHEREOF, we have hereunto set our hands and seals.

CITY OF AUBURN
King County, Washington

By:_____ 4/1/02
Mayor Date

Approved as to form:

By:_____ 3/14/02
City Attorney Date

COVINGTON WATER DISTRICT
King County, Washington

By:_____
General Manager Date

Approved as to form:

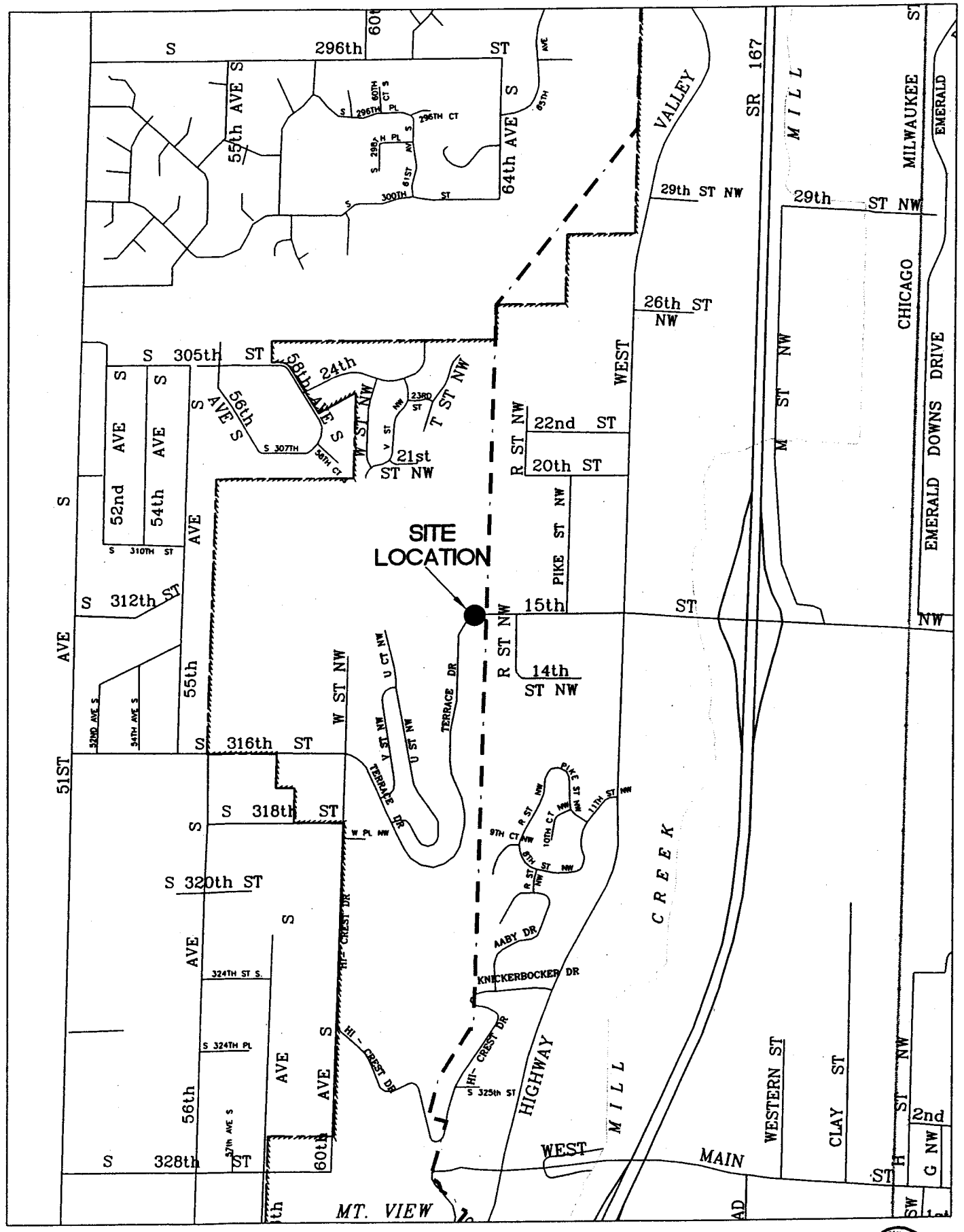
By:_____
General Counsel Date

WATER DISTRICT #111
King County, Washington

By:_____
General Manager Date

Approved as to form:

By:_____
General Counsel Date



LEGEND

AUBURN CITY LIMITS

WATER SERVICE AREA BOUNDARY

EXHIBIT A

GENERAL VICINITY MAP
OF INTERTIE FACILITIES

Plotted: OCTOBER 10, 2001

KAREN ● D:\STORM\FLOODN.DWG

Exhibit B

EMERGENCY WATER SUPPLY AGREEMENT
Auburn/ Covington/Water District #111

Example of Monthly Meter Cost:

In accordance with Auburn/LUD Emergency Intertie Agreement #1, LUD currently does not have an adopted monthly rate for an 8" meter, and would use Tacoma Public Utilities' (TPU) monthly meter rate until such time as Lakehaven adopts a rate for this size meter.

TPU's rate for an 8" meter is	$804.00 (Effective 4/23/01)
Cost to Covington and #111	$402.00 each

Example of Emergency Water Rates in 2002

Emergency Intertie Water Use Rate (based on LUD rate to Auburn)	$1.092 /ccf in 2002
Auburn Wheeling Rate	$0.15 /ccf
Total	$1.242 /ccf

Auburn Water Utility Rates (Ord 5291)	
Wholesale #111 (and Covington)	$1.10 /ccf*
Covington and #111 Water Use Rate equals	$1.242 /ccf in 2002

* Rate subject to change due to a proposed take or pay agreement between Auburn and Covington and #111

Exhibit C

EMERGENCY WATER SUPPLY AGREEMENT

Auburn/ Covington/Water District #111

Operation Procedures

1. Water supply requests of Covington and/or #111, or any combination of the two, plus Auburn water use exceeds available supply from Auburn due to an emergency.

2. Auburn determines that it can not provide requested supply and therefore must curtail flow to Covington and/or #111. Auburn notifies Covington and #111 of need to curtail.

3. Covington and/or #111 request Lakehaven Intertie be activated by Auburn.

4. Auburn notifies Lakehaven of emergency and asks how much water Lakehaven can supply and for how long.

5. Lakehaven responds with rate and duration.

6. Auburn requests Intertie be activated for a given flow rate and duration.

7. a) If Lakehaven plus Auburn supply will be greater or equal to the supply requested by Covington and #111

   Flush line, read the meter and open the intertie
   When the emergency is over, close intertie and read meter

   b) If Lakehaven plus Auburn supply still is less than the requested supply, Auburn notifies Covington and #111 of available supply and requests a breakdown of how the LUD supply plus the Auburn supply is to be distributed. When this information is received:

   Flush line, read the meter and open the intertie
   When the emergency is over, close intertie and read meter

Deactivation

8. If Auburn determines that the water supply emergency is over and it can supply Auburn plus Covington and #111's requested water supply without use of the LUD intertie, Auburn will request of LUD that the intertie be closed.

9. If LUD determines that it must reduce or terminate supply, LUD will notify Auburn (subject to Paragraph 5 (a) of this Agreement). Auburn will notify Covington and #111 (subject to Paragraph 5 (b) of this Agreement) that flow will be curtailed, and request how the parties would like any available water distributed.

RESOLUTION NO. 3443

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR AND CITY CLERK TO EXECUTE AN EMERGENCY WATER SYSTEM INTERTIE AGREEMENT BETWEEN THE CITY OF AUBURN AND LAKEHAVEN UTILITY DISTRICT.

WHEREAS, pursuant to RCW 39.34, the Interlocal Cooperation Act, Auburn and Lakehaven Utility District (LUD) have legal authority to cooperate with other localities on the basis of mutual advantage and provision of services; and

WHEREAS, the City has water facilities in the vicinity of a water main of LUD, and

WHEREAS, the City can increase the reliability of water for its customers, including Covington Water District and Water District No. 111, if water is available from LUD in the event of an emergency, and

WHEREAS, LUD is willing to provide to the City emergency service upon the terms and conditions set forth herein,

NOW, THEREFORE, THE COUNCIL OF THE CITY OF AUBURN, WASHINGTON, IN A REGULAR MEETING DULY ASSEMBLED, HEREWITH RESOLVES THAT:

Section 1. Pursuant to RCW 39.34, the Interlocal Cooperation Act, Auburn and Lakehaven Utility District have legal authority to cooperate with other localities on the basis of mutual advantage and provision of services.

Section 2. The Mayor and City Clerk of the City of Auburn are herewith authorized to execute the Emergency Water System Intertie Agreement between

the City and Lakehaven Utility District with minor administrative changes if required. A copy of said Agreement is attached hereto, denominated as Exhibit "A" and made a part hereof as though set forth in full herein.

Section 3. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

DATED this 1st day of April, 2002.

CITY OF AUBURN

PETER B. LEWIS
MAYOR

ATTEST:

Danielle E. Daskam,
City Clerk

APPROVED AS TO FORM:

Daniel B. Heid,
City Attorney

200307150007 07

PACIFIC NW TIT AG 27.00
PAGE 001 OF 009
07/15/2003 10:15
KING COUNTY, WA

Return Address:
Auburn City Clerk
City of Auburn
25 West Main St.
Auburn, WA 98001

RECORDER'S COVER SHEET

Document Title(s) (or transactions contained therein):

Interlocal Agreement – Emergency Water Supply Agreement

9/27 PNWT
WR131-12

Reference Number(s) of Documents assigned or released:
☐Additional reference #'s on page _____ of document

Grantor(s)/Borrower(s) (Last name first, then first name and initials)
Auburn, City of

Said Covenants were filed for record by Pacific Northwest Title as accommodation only. It has not been examined as to its regularity or as to its effect upon the

Grantee/Assignee/Beneficiary: (Last name first)
1. Lakehaven Utility District

Legal Description (abbreviated: i.e. lot, block, plat or section, township, range)

PER RCW 39.34

☐ Additional legal is on page of document.

Assessor's Property Tax Parcel/Account Number
N/A

☐ Assessor Tax # not yet assigned

EMERGENCY WATER SUPPLY AGREEMENT
Lakehaven/Auburn Intertie No. 1

THIS AGREEMENT made and entered into by and between the City of Auburn, hereinafter referred to as "City", and Lakehaven Utility District, hereinafter referred to as "District".

WITNESSETH:

WHEREAS, the City has water facilities in the vicinity of a water main of the District, and

WHEREAS, the City can increase the reliability of water for its customers, including Covington Water District and Water District No. 111, if water is available from the District in the event of an emergency, and

WHEREAS, the District is willing to provide to the City emergency service upon the terms and conditions set forth herein,

NOW, THEREFORE, IT IS MUTUALLY AGREED as follows:

1. The District hereby grants to the City the right to connect, for the purposes described herein, a water meter and appurtenances to the end of the 16-inch water main located in the vicinity of 15th Street Northwest and Terrace Drive in King County, Washington, more specifically shown on Exhibit A. The intertie facility shall be sited on property owned by the City.

2. The meter described in Paragraph No. 1 herein is installed to provide an emergency water supply. Water shall not be withdrawn from the supply without the prior written approval of the District. At the time approval is sought, the City shall state the requested time of commencement of use, the expected duration of withdrawal and the quantity of water to be withdrawn. The City shall request in writing an extension of, or reduction in the duration of the withdrawal if the duration of the withdrawal is expected to vary from the original estimate. The District and City shall read the meter upon activation and upon deactivation of the intertie. The District may periodically bill the City for water used while the intertie is in operation or may bill for all such use after the withdrawal has ended.

3. It is anticipated by the parties that because the facility will be funded by agencies with emergency or interruptible water supply agreements with the City (specifically Covington Water District and Water District #111), the City may be called upon by adjoining agencies to provide an emergency supply of water beyond the City's ability to produce such supply, and therefore requests for emergency service under this Agreement may originate on behalf of those adjoining agencies.

4. Upon completion of the Emergency Intertie construction, the District will own and maintain the meter, associated appurtenances necessary to monitor emergency use of the intertie, the gate valve upstream of the vault and all piping upstream of the meter. The City will own and maintain the vault, control valve, and all other piping and appurtenances downstream of the meter (see Exhibit B). The City and the District shall have mutual access to the vault for periodic inspection and maintenance or repair of their respective facilities.

5. The City shall comply with all District resolutions and rules applicable to a connection to the District's water system including, but not limited to, the requirement that the District provide written approval of plans and specifications for the connection of intertie facilities prior to construction.

6. The City shall pay to the District the base monthly service charge and quantity charge for any water received. Monthly service and quantity charge rates shall be established or amended by District resolution for the use of an eight (8)-inch meter and the applicable water rate. The rate for emergency water use will be the greater of the District's adopted summer non-residential (Commercial/Public Authority) water rate or the City of Tacoma's (Tacoma) adopted wholesale water rate plus a District wheeling rate determined by the District. Examples of the current rates are included in Exhibit C. The District or Tacoma may revise these rates from time to time without notice to the City and such revised rates shall apply to emergency water deliveries made pursuant to this agreement.

7. This Agreement shall not authorize or permit the City to take water from the connection described herein beyond what is described in paragraph 2, 3, and Exhibit D.

8. Conditions
   (a.) In the event the District determines that the use of the emergency intertie is or will impose a negative impact to the public health, safety, or the equitable distribution of water within the District, the District may change, reduce or limit the time for, or temporarily discontinue, the withdrawal of water without notice;
   (b.) Water service may be temporarily interrupted or otherwise limited for purposes of making repairs, extensions or doing other necessary work to the water system; and
   (c.) Prior to a planned interruption or limiting of service as set forth in (b) above the District will notify the City of such planned interruption or limiting of service. The District agrees to use best efforts to notify the City as soon after it becomes aware of the need for such a service disruption.
   (d.) Operating conditions are as described in Exhibit C

9. Payment of all invoices for services and charges from the District shall be paid within 45 days of the invoice date.

10. In the event of non-performance of any provision herein by the City, District may shut off water supplied pursuant to this Agreement.

11. The use of this intertie is contingent upon receiving approval of same from the Department of Health pursuant to applicable regulations.

12. The City agrees to indemnify, defend and hold harmless the District, its officers, directors, employees and agents, and their successors and assigns, from any and all costs or claims arising out of or in any way resulting from the City's default, failure of performance, or negligent conduct associated with this Agreement. This indemnification provision shall include, but is not limited to, all claims against the District by an employee or former employee of the City or their contractors and, as to such claims, the City expressly waives all immunity and limitation of liability under Title 51 RCW.

The District agrees to indemnify, defend and hold harmless the City, its officers, directors, employees and agents, and their successors and assigns, from any and all costs or claims arising out of or in any way resulting from the District's default, failure of performance or negligent conduct associated with this Agreement. This indemnification provision shall include, but is not limited to, all claims against the City by an employee or former employee of the District or its contractors and, as to such claims, the District expressly waives all immunity and limitation of liability under Title 51 RCW.

13. The parties shall make good faith efforts to resolve by informal discussion any dispute arising under or in connection with this Agreement. Should a dispute arise between the parties that cannot be resolved satisfactorily, a mediator mutually acceptable to the parties shall resolve the dispute through the use of mediation at equal cost to each party. Should the Parties not be able to satisfactorily resolve the dispute through mediation, the forum for resolution shall be the King County Superior Court. The prevailing party shall be entitled to attorney fees and costs.

14. This Agreement may be terminated by either party hereto upon 60-days written notice to the other party.

15. Notices should be sent to the City and the District at the following addresses:

Public Works Director
City of Auburn
25 West Main Street
Auburn, WA 98001

General Manager
Lakehaven Utility District
P.O. Box 4249
Federal Way, WA 98003

IN WITNESS WHEREOF, we have hereunto set our hands and seals.

CITY OF AUBURN
King County, Washington

By: _____ 6/13/03
Mayor Date

Approved as to form:

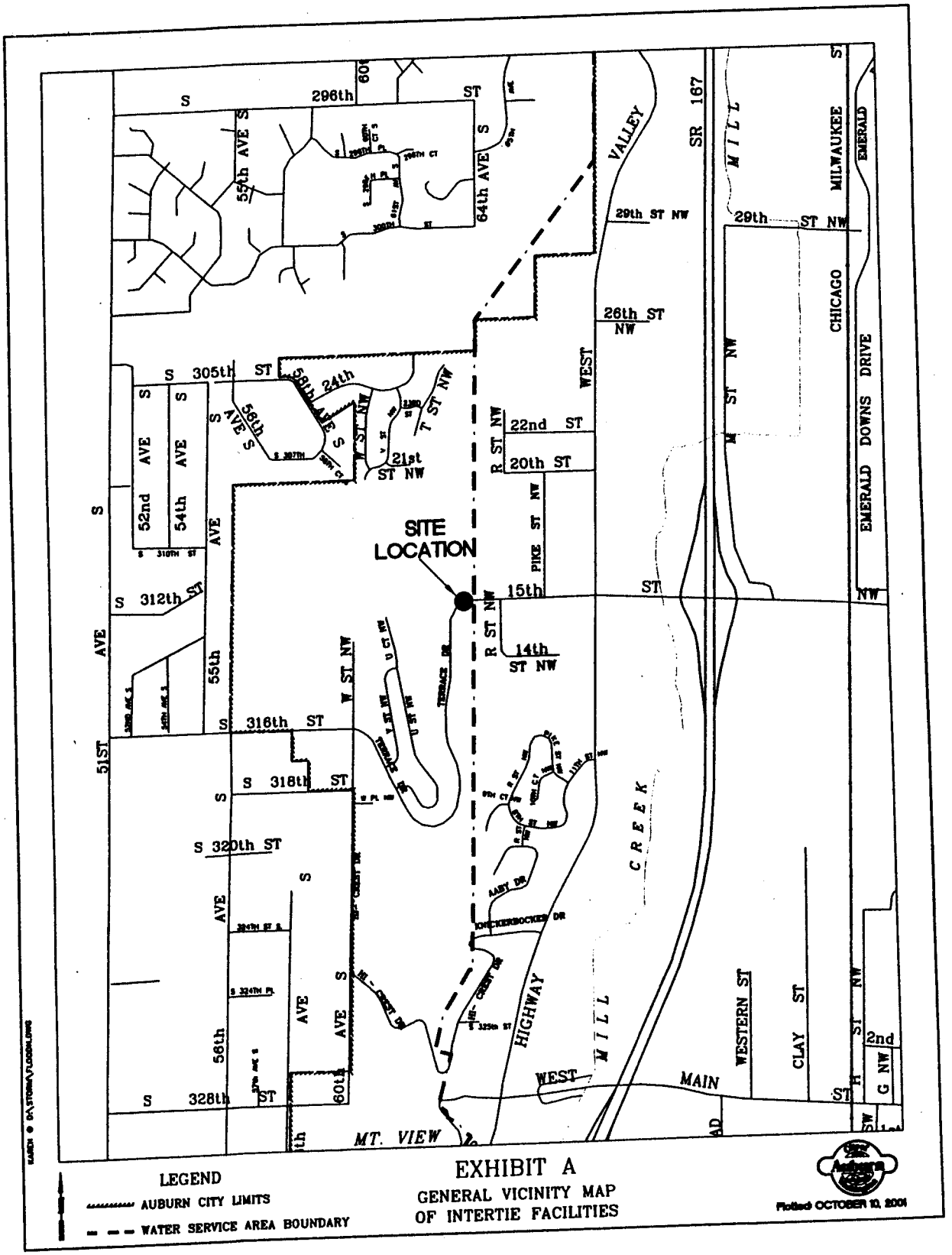
By: _____ 6/10/03
City Attorney Date

LAKEHAVEN UTILITY DISTRICT
King County, Washington

By: _____ 6/25/03
General Manager Date

Approved as to form:

By: _____ 6/25/03
General Counsel Date



LEGEND

AUBURN CITY LIMITS

WATER SERVICE AREA BOUNDARY

EXHIBIT A

GENERAL VICINITY MAP OF INTERTIE FACILITIES

Plotted OCTOBER 10, 2001

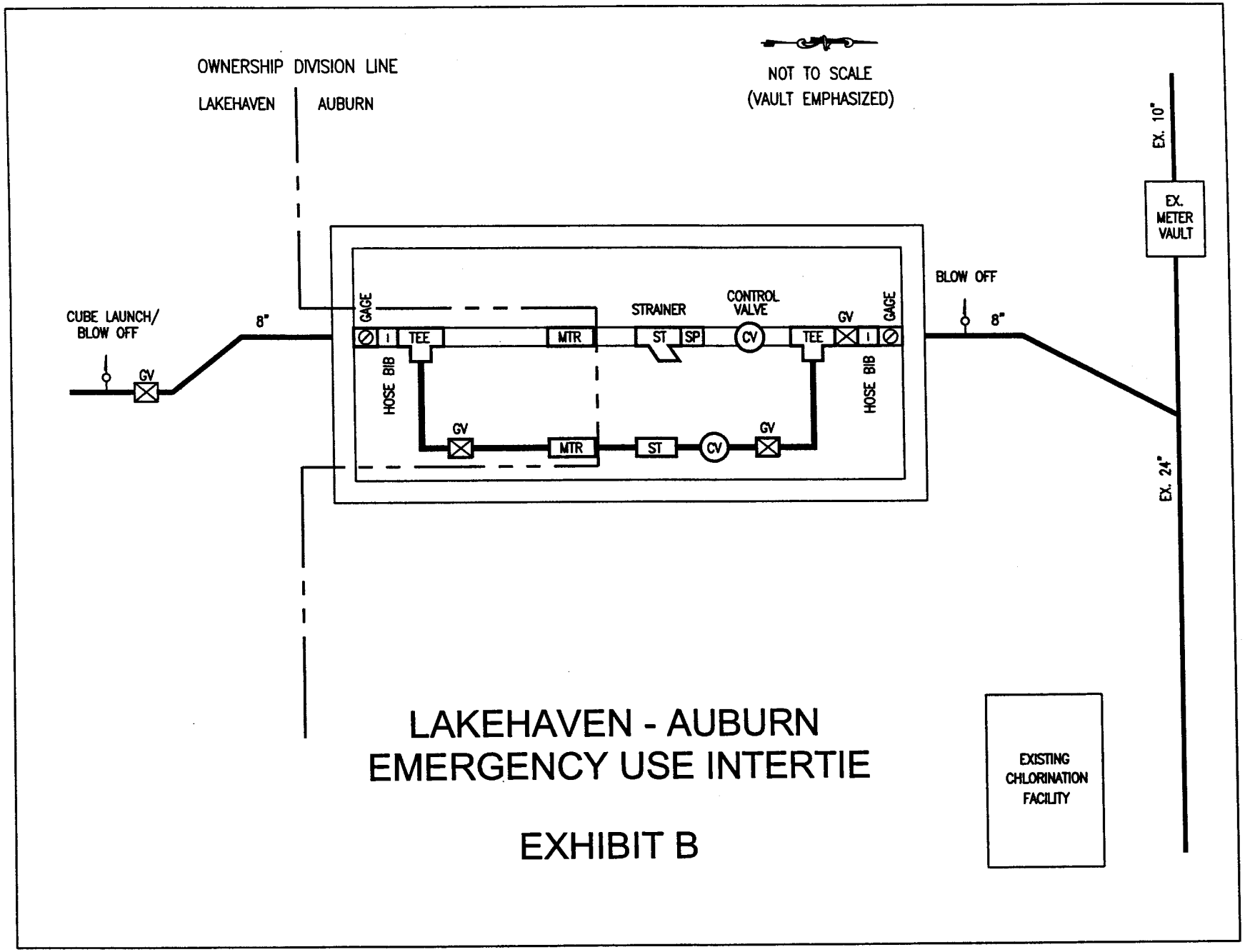

OWNERSHIP DIVISION LINE
LAKEHAVEN
AUBURN
NOT TO SCALE
(VAULT EMPHASIZED)
EX. 10"
EX. METER VAULT
BLOW OFF
8"
CUBE LAUNCH/ BLOW OFF
GV
8"
GAGE
I
TEE
MTR
STRAINER
ST
SP
CONTROL VALVE
CV
TEE
GV
I
GAGE
HOSE BIB
GV
MTR
ST
CV
GV
HOSE BIB
EX. 24"
EXISTING CHLORINATION FACILITY
LAKEHAVEN - AUBURN
EMERGENCY USE INTERTIE
EXHIBIT B

Exhibit C

Example of Monthly Meter Cost:

Lakehaven currently does not have an adopted monthly rate for an 8" meter, and would use an amount near Tacoma's monthly meter rate until such time as Lakehaven adopts a rate for this size meter.

Tacoma's rate for an 8" meter is	$815.04 (Effective 4/23/01)
Lakehaven's proposed starting monthly rate:	$804.00

Example of Emergency Water Rates in 2002

Lakehaven Utility District Rates (Resolution 99-906)

Commercial/Public Authority Water Rate	1.060 $/ccf (Effective 1/1/2000)

City of Tacoma Rates (Ordinance No. 26800) plus Lakehaven Wheeling Rate

Summer Wholesale Water Rate to Lakehaven	0.912 $/ccf (Effective 4/22/02)
Lakehaven Wheeling Rate	0.180 $/ccf (Current Estimate)
Total	1.092 $/ccf

Emergency Water Use Rate equals	1.092 $/ccf in 2002

Exhibit D
Operating Conditions

1. Prior to intertie activation the 16" water main upstream of the District's meter shall be flushed by the District. Any costs incurred by the District beyond labor time and the cost of water used for the flushing operation shall be paid by the City.

2. The City will maintain a back pressure-sustaining feature within the metering facility in order to maintain adequate pressure within the District's service area while also preventing uncontrolled flows. The District will maintain the right to authorize or direct the City to change the minimum up-stream pressure setting if an adjustment is warranted to increase flow capacity or maintain adequate pressure in the District's distribution system. The initial settings for the pressure-sustaining valve shall be noted on the approved construction plans and shall be stored in a waterproof container in the vault. Records of any future revised pressure settings shall be maintained and noted on the "record drawings" for the metering facility retained by the parties, and the information stored in the vault shall be updated.

3. The City will control the delivery flow rate from Lakehaven. The current estimated maximum allowable flow rate from Lakehaven is 1750 gpm (or 2.5 mgd) more or less, so long as Lakehaven customers are not impacted. The City's system has the capacity to receive water at a maximum instantaneous rate of up to approximately 5 mgd.

4. The District and City will coordinate the telemetry system so each will receive the signal required for its operation and monitoring.

ORDINANCE NO. 5592

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR AND CITY CLERK TO EXECUTE A FRANCHISE AGREEMENT BETWEEN THE CITY OF BONNEY LAKE AND THE CITY OF AUBURN, ALLOWING THE CITY OF BONNEY LAKE TO CONNECT, INSTALL, OPERATE, MAINTAIN AND REPAIR A WATER SYSTEM, FACILITIES, AND APPURTENANCES IN, OVER, ALONG, ACROSS AND UNDER THE FRANCHISE AREA FOR THE PURPOSE OF PROVIDING WATER SERVICE.

WHEREAS, the City of Auburn and the City of Bonney Lake have entered into a Settlement Agreement, executed March 5, 1998 pursuant to Resolution 2925 adopted March 2, 1998, related to water service to the Lakeland Hills South development in which, according to Section 3, Auburn recognizes and agrees to Bonney Lake's exclusive right to serve with water all portions of Bonney Lake's water service area as designated by the 1995 Pierce County Coordinated Water System Plan; and

WHEREAS, the City of Auburn and the City of Bonney Lake have entered into a Service Area Agreement, executed December 10, 1998 pursuant to Resolution 3018 adopted December 7, 1998, which revised the boundary between their respective water service areas; and

WHEREAS, the City of Auburn has annexed portions of the City of Bonney Lake's water service area; and

WHEREAS, according to Section 7 of said Settlement Agreement, the City of Auburn guaranteed the City of Bonney Lake the right to transport water through Auburn's corporate boundaries within Pierce County; and

WHEREAS, Section 7 of said Settlement Agreement states that the guarantee to transport water shall be effectuated by the execution of easements, agreements, franchises, licenses or other documents as are appropriate; and

WHEREAS, the City of Bonney Lake desires to connect, install, operate, maintain and repair a water system, facilities, and appurtenances in, over, along, across and under the franchise area for the purpose of providing water service.

WHEREAS, in order to maintain control over the use of City of Auburn right-of-ways by utilities operating within the City of Auburn, it is appropriate to enter into franchise agreements with such utilities; and

WHEREAS, City of Bonney Lake is such a utility, and has negotiated this franchise agreement with the City of Auburn acceptable to both parties; and

WHEREAS, the City of Auburn has determined that it is in the best interests of the public to grant the City of Bonney Lake a franchise on the terms and conditions set forth in this Agreement.

NOW, THEREFORE, CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, IN A REGULAR MEETING DULY ASSEMBLED, DO ORDAIN AS FOLLOWS:

Section 1. The Mayor and City Clerk of the City of Auburn are herewith authorized to execute a Franchise Agreement between the City of Bonney Lake and the City. A copy of said Agreement is attached hereto, denominated as Exhibit "A" and made a part hereof as though set forth in full herein.

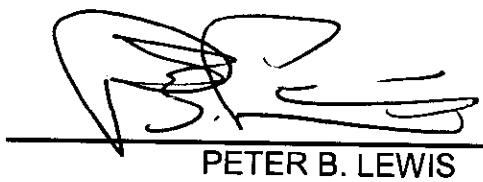
Section 2. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

Section 3. This Ordinance shall take effect and be in force five (5) days from and after its passage, approval and publication, as provided by law.

INTRODUCED: May 6, 2002

PASSED: May 6, 2002

APPROVED: May 6, 2002



PETER B. LEWIS
MAYOR

ATTEST:

Danielle Daskam
City Clerk

APPROVED AS TO FORM:

Daniel B. Heid
City Attorney

Published: 5/10/02

2

200212300566 16 PGS
12-30-2002 10:22am $34.00
PIERCE COUNTY, WASHINGTON

Return Address:
Auburn City Clerk
City of Auburn
25 West Main St.
Auburn, WA 98001

RECORDER'S COVER SHEET

Document Title(s) (or transactions contained therein):

Franchise Agreement

16/34
PNWT
P-W4866-12

Reference Number(s) of Documents assigned or released:

☐ Additional reference #'s on page _____ of document

Grantor(s)/Borrower(s) (Last name first, then first name and initials)
Auburn, City of

Grantee/Assignee/Beneficiary: (Last name first)
Bonney Lake, City of

Legal Description (abbreviated: i.e. lot, block, plat or section, township, range)

Portion of Section 6, Section 5, Section 7 and Section 8, Township 20 North, Range 5 East WM

☐ Additional legal is on page of document.

Assessor's Property Tax Parcel/Account Number

N/A

☐ Assessor Tax # not yet assigned

EXHIBIT "A"

CITY OF AUBURN, WASHINGTON
FRANCHISE AGREEMENT WITH THE CITY OF BONNEY LAKE

WHEREAS, the City of Auburn and the City of Bonney Lake have entered into a Settlement Agreement, executed March 5, 1998 pursuant to Resolution 2925 adopted March 2, 1998, related to water service to the Lakeland Hills South development in which, according to Section 3, Auburn recognizes and agrees to Bonney Lake's exclusive right to serve with water all portions of Bonney Lake's water service area as designated by the 1995 Pierce County Coordinated Water System Plan; and

WHEREAS, the City of Auburn and the City of Bonney Lake have entered into a Service Area Agreement, executed December 10, 1998 pursuant to Resolution 3018 adopted December 7, 1998, which revised the boundary between their respective water service areas; and

WHEREAS, the City of Auburn has annexed portions of the City of Bonney Lake's water service area; and

WHEREAS, according to Section 7 of said Settlement Agreement, the City of Auburn guaranteed the City of Bonney Lake the right to transport water through Auburn's corporate boundaries within Pierce County; and

WHEREAS, Section 7 of said Settlement Agreement states that the guarantee to transport water shall be effectuated by the execution of easements, agreements, franchises, licenses or other documents as are appropriate; and

WHEREAS, the City of Bonney Lake desires to connect, install, operate, maintain and repair a water system, facilities, and appurtenances in, over, along, across and under the franchise area for the purpose of providing water service.

WHEREAS, in order to maintain control over the use of City of Auburn right-of-ways by utilities operating within the City of Auburn, it is appropriate to enter into franchise agreements with such utilities; and

WHEREAS, City of Bonney Lake is such a utility, and has negotiated this franchise agreement with the City of Auburn acceptable to both parties; and

WHEREAS, the City of Auburn has determined that it is in the best interests of the public to grant the City of Bonney Lake a franchise on the terms and conditions set forth in this Agreement.

NOW, THEREFORE THE CITY OF AUBURN AND THE CITY OF BONNEY LAKE AGREE AS FOLLOWS:

SECTION 1 DEFINITIONS

Where used in this franchise ("Franchise"), the following definitions shall apply:

1.1 "Franchisee" means the City of Bonney Lake, a Washington municipal corporation, and its respective successors and assigns.

1.2 "City" means the City of Auburn, a Washington municipal corporation.

1.3 "Franchise Area" means all of the public roads, streets, avenues, alleys, highways, and other rights-of-way of the City as now laid out, platted, dedicated or improved; and any and all public roads, streets, avenues, alleys, highways, and other rights-of-way that may hereafter be laid out, platted, dedicated or improved within the area as described with Exhibit "1" attached hereto, which is by this reference incorporated, as if fully set forth herein; provided, that the Franchise Area shall not include or convey any right to Franchisee to install facilities on or to otherwise use City owned or leased properties outside the Franchise Area.

1.4 "Facilities" means the Franchisee's water system, lines, mains, appurtenances, and all other necessary or convenient facilities for the purpose of providing water service.

1.5 "Ordinance" means this ordinance setting forth the terms and conditions of the franchise granted to the Franchisee.

SECTION 2 FRANCHISE GRANT

Subject to the terms and conditions set forth in this ordinance, the City grants to the Franchisee the right to construct and install water pipelines and appurtenances and to excavate trenches in City roads for the purposes of constructing, installing, operating, maintaining, removing, and replacing mains and pipes and making connections between the same to the dwellings and other buildings of the consumers. In exercising the foregoing rights, the Franchisee shall be governed by and conform to the general rules adopted by the Public Works Department of the City of Auburn, and the Franchisee, at no expense to the City, shall complete all work and shall replace and restore the City roads to the condition of the City roads existing immediately prior to such disturbance; PROVIDED, HOWEVER, that no such work shall be done prior to the obtaining of a permit therefor issued by the City's Public Works Director (hereinafter "Director"), which permit shall set forth conditions pertaining to the work to be done and specifications for the restoration of the roads to the same condition as they were prior to such work. If the Franchisee does not repair the City roads to the satisfaction of the Director, the City may, at its sole discretion, repair such City roads, or cause them to be repaired, and the Franchisee hereby agrees to reimburse the City for the cost of such work, including overhead costs.

SECTION 3 FRANCHISE TERM

This Franchise is and shall remain in full force and effect from the effective date of this Ordinance forward, for a period not to exceed seven (7) years from the effective date of any Aubum annexation of any area within the boundary defined in Exhibit 1, for said area, but subject to earlier termination in accordance with the terms and conditions of the Settlement Agreement, provided, that this Franchise shall not take effect and the Franchisee shall have no rights under this Franchise unless the Franchisee files a written acceptance of this Franchise with the City pursuant to Section 4 of this Agreement.

SECTION 4 ACCEPTANCE BY GRANTEE OF TERMS AND CONDITIONS
The full acceptance of this Franchise and all of its terms and conditions shall be filed with the City Clerk within forty-five (45) days from the date of this Ordinance, by the Franchisee. Full acceptance of this Franchise is a condition precedent to its taking effect, and unless this Franchise is accepted within the time specified, this grant will be null and void and have no force or effect.

SECTION 5 NON-EXCLUSIVE FRANCHISE
This Franchise is not exclusive. It does not prohibit the City from granting franchises for other public or private utilities in, over, along, across, and under any City property, including the Franchise Area. This Franchise does not prevent or prohibit the City from constructing, altering, maintaining or using any of the Franchise Area. The City retains full power to make all changes, relocations; repair, maintenance or other work to or in the Franchise Area as the City deems fit.

SECTION 6 JURISDICTION
This Franchise is intended to convey limited rights and interest only as to those roads and rights-of-way in which the City has an actual interest. It is not a warranty of title or of interest in City road rights-of-way. None of the rights granted to the Franchisee shall affect the jurisdiction of the City over City road rights-of-way or the City's power to perform work upon its roadways, rights-of-way or appurtenant drainage facilities including by constructing, altering, renewing, paving, widening, grading, blasting or excavating.

SECTION 7 REGULATION OF USE AND CONTROL
This Franchise does not deprive the City of any powers, rights, or privileges it now has or may later acquire in the future to regulate the use of and to control the City road rights-of-way covered by this Franchise. The City reserves the right and power at all times to exercise its police powers with respect to the time, manner and location of the placement of the Franchisee's Facilities.

SECTION 8 EMINENT DOMAIN
This Franchise and the limited rights and interests granted by this Franchise are subject to the exercise of eminent domain. In the event of an exercise of eminent domain by the City, the value to be attributed to all the rights and interests granted under this Franchise shall not exceed the actual amount the Franchisee paid to the City in obtaining this Franchise.

SECTION 9 VACATION
If at any time the City vacates any City rights-of-way covered by this Franchise, the City will not be held liable for any damages or loss to the Franchisee by reason of such vacation. The City may, after giving thirty (30) days written notice to the Franchisee terminate this Franchise with respect to any City road or rights-of-way vacated.

SECTION 10 ENFORCEMENT
The City's failure to enforce any provision of this Franchise does not constitute a waiver of its right to enforce that provision or any other provision of this Franchise.

SECTION 11 INDEMNITY AND HOLD HARMLESS

11.1 The Franchisee shall defend, indemnify and hold harmless the City, its appointed and elected officials, and its employees and agents from and against liability for all claims, actions, injuries, demands, liabilities, losses, costs, damages and judgments, including costs of defense thereof, (collectively referred to as "damages") for injury to persons, death or property damage caused by, arising out of, or incidental to the Franchisee's exercise of the rights and privileges granted by this Franchise, except for damages caused by or arising out of the City's sole negligence. In the event that any such claim or demand for damages is presented to or filed with the City, or if any suit or action is initiated against the City based on such claims or demands for damages, the City shall promptly notify the Franchisee of the claim, demand, suit or action and the Franchisee shall have the right, at its election and its sole cost and expense, to settle and compromise such claim, demand, suit or action, or defend the same at the Franchisee's sole cost and expense.

11.2 If it is determined that RCW 4.24.115 applies to this Franchise, the Franchisee agrees to defend, hold harmless and indemnify the City to the maximum extent permitted under that statute, and specifically for the Franchisee's negligence concurrent with that of the City to the full extent of the Franchisee's negligence.

SECTION 12 INSURANCE

12.1 The Franchisee shall keep a policy of insurance in force with a minimum limit of five million dollars ($5,000,000.00). Verification of insurance coverage is a condition precedent to the effectiveness of this Agreement.

12.2 The insurance shall be maintained in full force and effect at the Franchisee's sole expense throughout the term of the Franchise, and, should such insurance be terminated, this Agreement shall terminate as of the date of the termination of insurance coverage.

12.3 The coverage provided by the Franchisee's insurance policies shall be primary to any insurance maintained by the City except as to losses or damages attributable to the sole negligence of the City. Any insurance maintained by the City that might relate to this Franchise shall be in excess to the Franchisee's insurance and shall not contribute with or to it. The City has no obligation to report occurrences to the insurance companies unless a claim is filed with the City's City Council; and the City has no obligations to pay the Franchisee's premiums.

12.4 The Franchisee shall be solely and completely responsible to perform all work related to this Franchise in compliance with all applicable federal, state, county and city statutes, rules, regulations, ordinances, orders and codes. The Franchisee's attention is directed to the requirements of the Washington Industrial Safety and Health Act, Chapter 49.17 RCW. The Franchisee shall be solely and completely responsible for safety and safety conditions on its job sites and for its work within the Franchise Area, including the safety of all persons and property during performance of any works therein. The services of the City or City's consultant personnel in conducting construction review of the Franchisee's work relating to the Franchise is not intended to include review of the adequacy of the Franchisee's work methods, equipment, scaffolding, or trenching, or safety measures in, on or near such Franchise Area or job site. The Franchisee shall provide

safe access for the City and its inspectors to adequately inspect the work and its conformance with applicable statutes, ordinances, rules, regulations, and the Franchise.

SECTION 13 INSTALLATION, REPAIR, REMOVAL OR RELOCATION

13.1 The Franchisee shall, at no expense to the City, expeditiously repair all existing Facilities that it owns within the Franchise Area, including any damage caused directly or indirectly by its Facilities, all appurtenant Facilities and service lines connecting its system to users, if the City requires such repair for any reasonable purpose.

13.2 The Franchisee shall, at no expense to the City, adjust, remove or relocate existing Facilities within the Franchise Area, including all appurtenant Facilities and service lines connecting its system to users, if the City determines such adjustment, removal or relocation is reasonably necessary to allow for an improvement or alteration planned by the City. The City shall give the Franchisee written notice of such requirement as soon as practicable. The written notice shall include all available information, such as plans and specifications, as is reasonably necessary for the Franchisee to plan for such adjustment, removal or relocation.

13.3 Franchisee's Facilities shall be constructed, installed, maintained and repaired within the Franchise Area so as to provide safety of persons and property, and not interfere with the free passage of traffic, all in accordance with the laws of the State of Washington, and the ordinances, resolutions, rules and regulations of the City.

13.4 For projects that are a part of the City's capital improvement program, in addition to any other notice given to the Franchisee, the City shall provide a copy of the capital improvement plan and six (6) year transportation improvement plan when requested. Further the City shall provide a vertical and horizontal profile of the roadway and drainage facilities within it, both existing and as proposed by the City, and the proposed construction schedule. The initial design information shall be given at least one hundred and eighty (180) days before construction is scheduled to begin, except in cases of urgent construction or emergencies. The Franchisee shall respond to this notice, and to any later notices of revised designs, within twenty (20) days of the date of the notice, by providing to the City the Franchisee's best available information as to the location of all the Franchisee's Facilities, including all appurtenant Facilities and service lines connecting its system to users and all Facilities that it has abandoned, within the area proposed for the project.

13.5 The City shall offer the Franchisee the opportunity to participate in the preparation of bid documents for the selection of a contractor to perform the public works project as well as all required adjustments, removals or relocations of the Franchisee's Facilities. The City shall have sole authority to choose the contractor to perform such work. Such bid documents shall provide for an appropriate cost allocation between the parties. In addition to the Franchisee's allocation of contractor costs, the Franchisee shall reimburse the City for all costs, to include but not be limited to legal, engineering, inspections, administration and/or soils testing, related to the Franchisee's work and reasonably incurred by the City in the administration of such joint construction contracts. Such costs shall include the direct salary cost of the time of City professional and technical personnel, including the City's consultants, spent productively engaged in such work, plus overhead costs at the standard rate charged by the City on other similar projects.

13.6 It is understood that emergency situations may arise that could threaten public health and/or continued operation of the Franchisee's utility system and the Franchisee may be unable to notify the City in the manner prescribed in Section 14 of this Franchise. In such a situation the Franchisee shall immediately correct the hazardous situation and continue to use best efforts to contact the City staff. The Emergency Phone Number for the City of Auburn is (253) 931-3053, and the City of Bonney Lake is (253) 862-8602. Dialing 911 is advised for emergency situations.

SECTION 14 REQUIREMENT OF CONSTRUCTION PERMITS

14.1 The Franchisee has the right, privilege and authority to enter the City road rights-of-way for the purpose of constructing, installing, operating, maintaining, replacing or repairing its Facilities on the condition that it obtains construction, excavation, and right-of-way use permits issued by the City. Any work performed, whether by Franchisee, its contractors, or third parties, shall include necessary paving, patching, grading and any other reasonably necessary repair or restoration to the City rights-of-way. All work shall be done to the City's satisfaction.

14.2 All equipment, pipelines and appurtenances which are used in the construction, installation, operation, maintenance or repair of the Franchisee's Facilities and which are located within the City road rights-of-way and owned by the Franchisee shall be considered to be part of the Franchisee's system and shall be the responsibility of the Franchisee. All permits for the construction, installation, operation, maintenance or repair of the Franchisee's system shall be applied for and given in the name of the Franchisee, who will be responsible for all work done under the permit. The Franchisee remains responsible whether the work is performed by the Franchisee, its contractors, or by third parties.

14.3 When required by the Public Works Director, the Franchisee shall post a bond to the City in the amount sufficient for any road repair or restoration. The amount of the bond shall be set by the City and must be filed with the City before a permit will be issued.

SECTION 15 PERFORMANCE OF WORK

15.1 Any work performed by the Franchisee in the Franchise Area shall conform to all City ordinances and requirements including, but not limited to, Auburn City Code and the City's Design and Construction Standards in force when the work is performed. All traffic control shall conform to the current edition of the Uniform Traffic Control Devices in force when the work is performed.

15.2 If work performed under this Franchise makes it necessary to turn off or diminish water pressure to any fire hydrant, the Franchisee shall notify the City's Fire Department by telephone and by written notice, that water pressure or fire flow conditions have been affected. Except in the case of an emergency, the notice shall be provided at least 48 hours prior to the water pressure being turned off or diminished. If more than one fire hydrant will be affected, the Franchisee shall provide a map of the affected area to the Fire Department. Out-of-service fire hydrants must be identified as not operational by covering with a properly secured burlap or plastic bag. Fire hydrants should be returned to full service as soon as reasonably possible or no longer than two working days from the

date service was diminished. The Franchisee shall notify the City's Fire Department when the hydrant is returned to full service.

SECTION 16 RESTORATION OF CITY RIGHTS-OF-WAY

After performing work on, under or adjacent to City road rights-of-way, the Franchisee is responsible for and shall leave all City road rights-of-way in the condition of the City roads rights-of-way existing immediately prior to such disturbance. If the Franchisee, its contractors, or third parties working under permit should fail to diligently restore City road rights-of-way to the satisfaction of the City, the City may make such repairs or restorations as are necessary to return the City road rights-of-way to a condition reasonably comparable to the condition of the City roads rights-of-way existing immediately prior to such disturbance. Upon presentation of an itemized bill for repairs or restorations, including all applicable costs, both direct and indirect, to include but not be limited to the cost of labor, tools, materials and equipment, the Franchisee shall pay the bill within sixty-five (65) days.

SECTION 17 GUARANTEE

The Franchisee shall guarantee work and materials furnished and completed by the Franchisee under this Franchise for a period of two (2) years from the date the City approves the work and/or restoration.

SECTION 18 INFORMATION ON LOCATION OF FACILITIES

Prior to the effective date of this ordinance, the Franchisee shall provide the City with all information requested by the City regarding the location of the Franchisee's current Facilities, including but not limited to copies of all record drawings for such Facilities. If the Franchisee performs any work to install, repair, reconstruct, or replace Facilities in the Franchise Area after this ordinance's effective date, the Franchisee shall provide the City with all information requested by the City regarding the location of those Facilities, including but not limited to copies of record drawings.

SECTION 19 COORDINATION OF WORK IN FRANCHISE AREA

To facilitate the coordination of work in City rights-of-way, if either the Franchisee or the City plans to make excavations in the Franchise Area, the party planning such excavation shall provide written notice to the other of the planned excavation, affording the other party the opportunity to share in the excavation; provided, that (1) such joint use shall not unreasonably delay the work of the party causing the excavation to be made, (2) such joint use shall be arranged and accomplished on terms and conditions satisfactory to both parties, and (3) either party may deny such request for safety reasons.

SECTION 20 BLASTING REQUIREMENTS

The Franchisee's right to construct, install, operate, maintain and repair Facilities does not preclude the City, its agents or contractors from blasting, grading, or doing other road work contiguous to the Franchisee's Facilities. When practical, the City shall give the Franchisee forty-eight (48) hours notice of blasting or excavating.

SECTION 21 SURVEY MARKERS AND MONUMENTS

Before any work is performed under this Franchise, the Franchisee shall establish two or more reference marks to all monuments and markers of every nature relating to

subdivisions, plats, rights-of-way, and all other surveys. The reference points shall be located so that they will not be disturbed during any of Franchisee's operations under this Franchise. The method of referencing monuments or other markers or points shall be approved by the City before placement. The replacement of all markers or monuments disturbed during any construction of the Franchisee shall be made as promptly as conditions permit. The cost of monuments or markers lost, destroyed, or disturbed and the expense or replacement with approved markers or monuments shall be borne by the Franchisee.

SECTION 22 RESERVATION OF RIGHTS

22.1 The City reserves the right to impose a utility tax on the Franchisee, and/or to charge the Franchisee a reasonable fee for services provided or rights granted under this Franchise, to the extent authorized by law.

22.2 The Franchisee agrees that it shall be subject to all authority now or later possessed by the City or any other governing body having competent jurisdiction to fix just, reasonable and compensatory rates for services under this Franchise.

22.3 The City reserves the right, upon thirty (30) days written notice to the Franchisee, to amend or modify the provisions or conditions of this Franchise to conform to any state, county, federal, or City statute, ordinance, rule or regulation. The City may terminate this Franchise upon thirty (30) days written notice to the Franchisee if the Franchisee fails or refuses to comply with such amendment or modification.

SECTION 23 ASSIGNMENT

The Franchisee shall not have the right to assign this Franchise without the written consent of the City. No assignment shall be effective unless an acceptance by the assignee of all rights, conditions, terms, provisions and responsibilities contained within the Franchise, as well as surety bonds which the City deems necessary to be posted, are received as allowed by law. The City's approval of the assignment may be made subject to the assignee's acceptance of new or modified terms of the Franchise.

SECTION 24 PENALTY FOR VIOLATION OF CONDITIONS

If the Franchisee fails to comply with any material term, condition or responsibility under this Franchise, the City may provide the Franchisee with written notice of the City's intent to revoke the Franchise if the Franchisee's failure is not cured within thirty (30) days of the date of the notice. During the thirty (30) days following the date of the notice, the Franchisee shall have the opportunity to remedy the failure to comply. A public hearing shall be scheduled before the Auburn City Council at least thirty (30) days following the notification on the issue of the revocation. If at the hearing, the City Council finds that grounds exist to revoke the Franchise under this paragraph and that the revocation is in the public interest, the City Council may by ordinance revoke the Franchise. The revocation shall be effective ninety (90) days after the public hearing.

SECTION 25 EXPIRATION AND RENEWAL

25.1 If the Franchisee requests a renewal of this Franchise prior to its expiration date, the City may, at the City's sole discretion, extend the term of this Franchise for up to one year beyond the expiration date to allow for processing of the renewal. If the

City elects to extend the term of this Franchise, written notice of the extension shall be provided to the Franchisee prior to the Franchise expiration date.

25.2 If the Franchisee has not requested a renewal of this Franchise prior to its expiration date, the City has the right, upon thirty (30) day's prior notice to the Franchisee, to remove or relocate any of the Franchisee's Facilities as is reasonably necessary for the public's health, welfare or safety, or for the construction, alteration, or improvement of the Franchise Area, or for the construction or installation of lines or facilities of other franchise holders. The Franchisee shall be liable for costs incurred in any removal or relocation of the Franchisee's Facilities under this section.

25.3 Upon the expiration of this Franchise, the Franchisee shall continue to be responsible for the operation and maintenance of the Franchisee's existing facilities in the Franchise Area, but shall not have the right to provide additional services. This Section and Sections 11, 13, 14, 15, 16, 19, and 21 of this Franchise shall continue in force until such time as the Franchisee's Facilities are abandoned to the City in accordance with the terms and conditions of the Settlement Agreement.

SECTION 26 COMPLIANCE WITH LAWS

The Franchisee shall conform to all applicable federal, state and local laws and regulations including, but not limited to, the State Environmental Policy Act and the City's Environmental Standards and Ordinances.

SECTION 27 NON-DISCRIMINATION CLAUSE

In all hiring or employment made possible or resulting from this Franchise, there shall be no discrimination against any employee or applicant for employment because of sex, sexual orientation, age, race, color, national origin, marital status or the presence of any sensory, mental, or physical handicap, unless based upon a bona fide occupation qualification. No person shall be denied or subjected to discrimination in receipt of the benefit of any services or activities made possible by or resulting from this agreement on the grounds of sex, sexual orientation, race, color, national origin, age, except minimum age and retirement provisions, marital status, or the presence of any sensory, mental or physical handicap.

SECTION 28 NOTICE

Any notice or information required or permitted under this Franchise may be sent to the following addresses unless otherwise specified:

City of Auburn:
City Engineer
25 West Main Street
Auburn, WA 98001-4998
253-931-3010

City of Bonney Lake:
Public Works Director
19306 Bonney Lake Blvd.
Bonney Lake, WA 98390-0944
253-862-8602

SECTION 29 ATTORNEYS' FEES

If either party commences litigation against the other party relating to the performance or alleged breach of this Franchise, the prevailing party shall be entitled to all costs, including reasonable attorneys' fees incurred, relating to such litigation, including those incurred in any appeal.

SECTION 30 SEVERANCE

If any term, provision, condition or portion of this Franchise is held to be invalid, such invalidity shall not affect the validity of the remaining portions of this Franchise which shall continue in full force and effect, unless the dominant purpose of the Franchise would be prevented or the public interest would no longer be served, as determined by the City.

SECTION 31 EFFECTIVE DATE

This ordinance having been introduced at least five days prior to its date of passage and submitted to the city attorney, and being approved by at least a majority of the entire city council at a regular city council meeting, shall take effect and be in force five days after its passage, approval and publication as required by law.

SECTION 32 EXISTING UTILITIES

This Franchise shall govern City of Bonney Lake, new and existing water Facilities within the City of Auburn.

PASSED by Auburn's City Council this 6th day of May, 2002.

APPROVED by Auburn's Mayor this 6th day of May, 2002.

PETER B. LEWIS, Mayor
City of Auburn

ATTEST/AUTHENTICATE:

DANIELLE E. DASKAM, Auburn City Clerk — 5/7/02 Date

APPROVED AS TO FORM:

DANIEL B. HEID, Auburn City Attorney — Date

THE CITY OF BONNEY LAKE, a municipal corporation of the State of Washington, accepts all the rights, privileges and duties of this franchise subject to all terms, conditions, stipulations and obligations contained herein.

PASSED by Bonney Lake's City Council this 26th day of March, ~~199~~ 2002.

APPROVED by Bonney Lake's Mayor this 27th day of March, ~~199~~ 2002.

~~ROBERT L. YOUNG~~, Mayor
City of Bonney Lake

ATTEST:

~~Gayle Blatcher~~, Bonney Lake City Clerk Date 3/27/02

APPROVED AS TO FORM:

~~James Dionne~~, Bonney Lake City Attorney Date 3/26/02

FILED WITH THE CITY CLERK: _____

PASSED BY AUBURN'S CITY COUNCIL: _____

PUBLISHED: _____

EFFECTIVE DATE: _____

AUBURN ORDINANCE NO: 5592

BONNEY LAKE ~~ORDINANCE~~ Resolution NO: 965

Exhibit 1

AUBURN/BONNEY LAKE WATER FRANCHISE AREA LEGAL DESCRIPTION

THAT PORTION OF SECTION 6, TOWNSHIP 20 NORTH, RANGE 5 EAST, W.M., SECTION 5, TOWNSHIP 20 NORTH, RANGE 5 EAST, W.M., SECTION 8, TOWNSHIP 20 NORTH, RANGE 5 EAST, W.M., SECTION 7, TOWNSHIP 20 NORTH, RANGE 5 EAST, W.M., PIERCE COUNTY, WASHINGTON; DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTH QUARTER CORNER OF SAID SECTION 6; THENCE NORTH 01°12'59" EAST A DISTANCE OF 713.61 FEET TO THE NORTHERLY MARGIN OF LAKE TAPPS PARKWAY EAST; THENCE IN A NORTHWESTERLY DIRECTION ALONG THE NORTH LINE OF SAID PARKWAY, NORTH 71°22'39" WEST A DISTANCE OF 440.58 FEET TO THE BEGINNING OF A CURVE TO THE RIGHT HAVING A RADIUS POINT BEARING NORTH 18°37'21" EAST A DISTANCE OF 960.00 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE RIGHT THROUGH A CENTRAL ANGLE OF 11°22'29", AN ARC DISTANCE OF 190.59 FEET; THENCE LEAVING SAID MARGIN NORTH 01°28'45" WEST A DISTANCE OF 2,629.81 FEET; THENCE NORTH 58°56'04" EAST A DISTANCE OF 532.96 FEET; THENCE NORTH 37°29'20" EAST A DISTANCE OF 178.29 FEET; THENCE NORTH 49°21'27" EAST A DISTANCE OF 410.04 FEET TO A POINT OF A NON-TANGENT CURVE TO THE LEFT HAVING A RADIUS POINT BEARING NORTH 49°37'08" EAST HAVING A DISTANCE OF 454.00 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE LEFT THROUGH A CENTRAL ANGLE OF 27°21'25" AN ARC DISTANCE OF 216.77 FEET; THENCE SOUTH 67°44'15" EAST A DISTANCE OF 47.08 FEET TO A POINT OF A NON-TANGENT CURVE TO THE LEFT HAVING A RADIUS POINT BEARING SOUTH 69°16'55" EAST A DISTANCE OF 927.50 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE LEFT THROUGH A CENTRAL ANGLE OF 10°09'01" AN ARC DISTANCE OF 164.31 FEET; THENCE SOUTH 10°34'04" WEST A DISTANCE OF 163.57 FEET; THENCE IN A NORTHEASTERLY DIRECTION ALONG THE NORTH LINE OF LOT G OF BOUNDARY LINE ADJUSTMENT RECORDED UNDER AUDITOR'S FILE #9808310329, NORTH 75°13'36" EAST A DISTANCE OF 548.99 FEET TO THE EASTERLY LINE OF LOT G; THENCE NORTH 11°28'56" WEST A DISTANCE OF 56.64 FEET TO THE SOUTHERLY LINE OF LOT B PER SAID BOUNDARY LINE ADJUSTMENT; THENCE NORTH 75°13'36" EAST A DISTANCE OF 560.63 FEET TO THE WESTERLY MARGIN OF LAKELAND HILLS WAY SE; THENCE NORTH 14°46'24" WEST A DISTANCE OF 138.04 FEET; THENCE LEAVING SAID WESTERLY MARGIN NORTH 75°13'36" EAST A DISTANCE OF 63.00 FEET TO THE EASTERLY MARGIN OF LAKELAND HILLS WAY SE; THENCE IN A NORTHWESTERLY DIRECTION ALONG SAID MARGIN NORTH 14°46'24" WEST A DISTANCE OF 353.16 FEET TO THE BEGINNING OF A CURVE TO THE LEFT HAVING A RADIUS POINT BEARING SOUTH 75°13'36" WEST A DISTANCE OF 545.67 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE LEFT THROUGH A CENTRAL ANGLE OF 19°07'09" AN ARC DISTANCE OF 182.08 FEET TO THE POINT OF A CURVE TO THE RIGHT HAVING A RADIUS POINT BEARING NORTH 60°27'56" EAST A DISTANCE OF 35.00 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE RIGHT THROUGH A CENTRAL ANGLE OF 84°32'04" AN ARC DISTANCE OF 51.64 FEET; THENCE NORTH 55°00'00" EAST A DISTANCE OF 208.52 FEET; THENCE NORTH 53°05'27" EAST A DISTANCE OF 150.08 FEET; THENCE NORTH 55°00'00' EAST A DISTANCE OF 166.23 FEET TO THE BEGINNING OF A CURVE TO THE LEFT HAVING A RADIUS POINT BEARING NORTH 35°00'00" WEST A DISTANCE OF 430.00 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE LEFT THROUGH A CENTRAL ANGLE OF 37°44'40" AN ARC DISTANCE OF 283.27 FEET TO THE POINT OF A CURVE TO THE LEFT HAVING A RADIUS POINT BEARING NORTH 72°44'00" WEST A DISTANCE OF 1,030.00 FEET; THENCE ALONG THE ARC OF SAID CURVE TO THE LEFT THROUGH A CENTRAL ANGLE OF 00°56'13" AND AN ARC DISTANCE OF 16.84 FEET TO THE NORTHERLY SECTION LINE OF SECTION 6, TOWNSHIP 20 NORTH, RANGE 5 EAST; THENCE ALONG THE NORTH LINE OF SECTION 6, SOUTH 88°34'43" EAST A DISTANCE OF 808.23 FEET TO THE NORTHEAST CORNER OF SAID SECTION 6; THENCE EASTERLY ALONG THE NORTH BOUNDARY OF SAID SECTION 5 TO THE NORTHEAST CORNER THEREOF; THENCE SOUTHERLY ALONG THE EAST BOUNDARY OF SAID SECTION 5 TO THE SOUTHEAST CORNER

THEREOF; THENCE WESTERLY ALONG THE SOUTH BOUNDARY OF SAID SECTION 5 TO THE SOUTH QUARTER CORNER THEREOF; THENCE WESTERLY ALONG THE NORTH BOUNDARY OF SAID SECTION 8 TO THE NORTHEAST CORNER OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 8; THENCE SOUTHERLY ALONG THE EAST BOUNDARY OF SAID NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 8 TO THE SOUTH BOUNDARY OF THE NORTH HALF OF SAID NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 87; THENCE WESTERLY ALONG SAID SOUTH BOUNDARY TO THE EAST BOUNDARY OF SAID SECTION 7; THENCE NORTHERLY ALONG SAID EAST BOUNDARY TO THE SOUTH BOUNDARY OF THE NORTH 330.00 FEET OF THE NORTHEAST QUARTER OF SAID SECTION 7; THENCE WESTERLY ALONG SAID SOUTH BOUNDARY OF THE NORTH 330.00 FEET OF THE NORTHEAST QUARTER OF SAID SECTION 7 TO THE WEST BOUNDARY OF SAID NORTHEAST QUARTER OF SECTION 7; THENCE NORTHERLY ALONG SAID WEST BOUNDARY TO THE SAID SOUTH QUARTER CORNER OF SECTION 6 AND THE POINT OF BEGINNING

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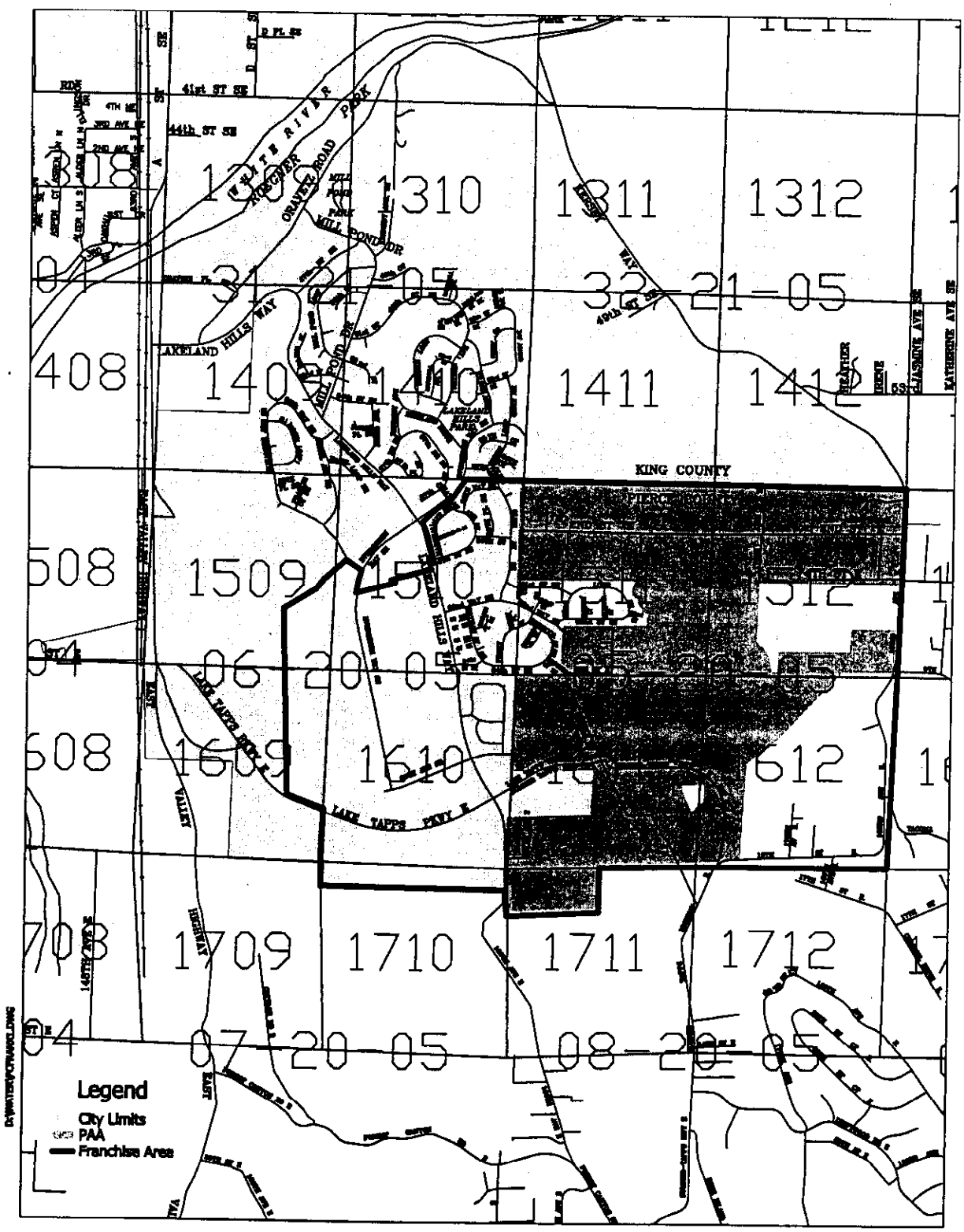

KING COUNTY
LAKELAND HILLS WAY
LAKE TAPPS PKWY E
Legend
City Limits
PAA
Franchise Area

Exhibit 1

RESOLUTION NO. 3482

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR AND CITY CLERK TO EXECUTE AN INTERIM WATER SALES AGREEMENT BETWEEN THE CITY OF AUBURN AND COVINGTON WATER DISTRICT AND WATER DISTRICT No. 111.

WHEREAS, Covington Water District (Covington), King County Water District No. 111 (WD 111) and the City of Auburn (Auburn) are authorized to enter into this Agreement under the authority of their respective enabling legislation and under the authority of Chapter 39.34 RCW, the Interlocal Cooperation Act; and

WHEREAS, the parties desire to avoid unpredictable water sales and create a predictable and reliable cost for wholesale water to be sold by Auburn to Covington and WD 111, and

WHEREAS, it is in the public interest for the parties herein to enter into an interim water sales agreement,

NOW, THEREFORE, THE COUNCIL OF THE CITY OF AUBURN, WASHINGTON, IN A REGULAR MEETING DULY ASSEMBLED, HEREWITH RESOLVES THAT:

Section 1. Pursuant to RCW 39.34, the Interlocal Cooperation Act, Auburn, Covington and WD 111 have legal authority to cooperate with other localities on the basis of mutual advantage and provision of services.

Section 2. The Mayor and City Clerk of the City of Auburn are herewith authorized to execute the Interim Water Sales Agreement between Auburn and Covington and WD 111 with minor administrative changes if required. A copy of said

Agreement is attached hereto, denominated as Exhibit "A" and made a part hereof as though set forth in full herein.

Section 3. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

Section 4. This resolution shall be in full force and affect upon passage and signatures hereon.

DATED this 17th day of June, 2002.

CITY OF AUBURN

PETER B. LEWIS
MAYOR

ATTEST:

Danielle E. Daskam,
City Clerk

APPROVED AS TO FORM:

Daniel B. Heid,
City Attorney

20030714002731
PACIFIC NW TIT IAG 26.00
PAGE 001 OF 008
07/14/2003 15:21
KING COUNTY, WA

Return Address:
Auburn City Clerk
City of Auburn
25 West Main St.
Auburn, WA 98001

RECORDER'S COVER SHEET

Document Title(s) (or transactions contained therein):

Interlocal Agreement (RES 3482) Interim Water Sales Agreement

3/26 PN LWT
W6178.12

Reference Number(s) of Documents assigned or released:
☐Additional reference #'s on page _____ of document

Grantor(s)/Borrower(s) (Last name first, then first name and initials)
Auburn, City of

Grantee/Assignee/Beneficiary: (Last name first)
1. Covington Water District
2. King County Water District 111

Legal Description (abbreviated: i.e. lot, block, plat or section, township, range)

PER RCW 39.34

☐ Additional legal is on page of document.

Assessor's Property Tax Parcel/Account Number

N/A

☐ Assessor Tax # not yet assigned

Exhibit "A"

INTERIM WATER SALES AGREEMENT
between
COVINGTON WATER DISTRICT,
KING COUNTY WATER DISTRICT NO. 111
and the
CITY of AUBURN

This Agreement ("Agreement") is made and entered into this 14 day of June, 2002, by and between Covington Water District (Covington) a Municipal Corporation, King County Water District No. 111 (WD lll), a Municipal Corporation (collectively referred to herein as "the Districts") and the City of Auburn (Auburn), a Municipal Corporation.

Recitals:

A. The parties to this Agreement are also parties to "Interlocal Agreement 2 for the Lea Hill Intertie Project between Covington Water District, King County Water District #111, and the City of Auburn" ("IA2").

B. The parties desire to avoid unpredictable water sales and create a predictable and reliable cost for wholesale water to be sold by Auburn to the Districts.

C. By guaranteeing a minimum purchase of water for a given period of time, i.e., a take or pay approach, the cost of water, which to a significant extent is based on peaking factors, can be minimized for all of Auburn's customers.

D. This Agreement is intended to establish a rate for a fixed block of water for the mutual benefit of the parties of this Agreement.

E. It is in the interest of the Districts to have a predictable supply of water available, and in Auburn's interest to have a predictable and consistent source of revenue from the sale of such water.

F. The parties are authorized to enter into this Agreement under the authority of their respective enabling legislation and under the authority of Chapter 39.34 RCW, the Interlocal Cooperation Act.

G. The 1.5 million gallons of water per day ("MGD") take or pay water provided for in this Agreement is a portion of and not in addition to the 5 MGD as addressed in IA2.

Now, therefore, in consideration of the mutual covenants and promises contained herein, and for other good and valuable consideration, the adequacy of which is hereby acknowledged, the parties hereby agree as follows:

1) **TAKE OR PAY:** The Districts agree to purchase an average of 1.5 MGD of water from Auburn on a take or pay basis. Take or pay shall mean that the Districts shall pay for 1.5 MGD whether or not the water is actually taken by the Districts (the "take or pay" water also referred to in this Agreement as "the Block" of water; provided the Block of water may be modified as set forth in Paragraph 4 "Annual Review and Adjustment" herein). If the Districts cannot accept 1.5 mgd due to an emergency, as

defined in Paragraph 6, they will be billed for the water they receive at the Block rate.

2) **CHARGES FOR WATER:** The Districts shall pay the rate per one hundred cubic feet of water ("CCF") for the 1.5 MGD Block shown in Exhibit 1, attached hereto, which is by this reference incorporated, except as further addressed in Paragraph 3 herein. Any water taken in excess ("Excess Water") of the Block during the winter (October 1 through May 31) shall be billed at the winter overage rate shown in Exhibit 1 and during the summer (June 1 through September 30) shall be billed at the summer overage rate shown in Exhibit 1. Any water taken during an emergency within the Covington and/or WD 111 systems, as defined in Paragraph 6, shall be billed at the 1.5 mgd Block rate. Auburn shall send one monthly bill to WD 111 for all water purchased by the Districts.

3) **QUANTITY AVAILABLE / DELIVERED:** The 1.5 MGD Block of water shall be defined as a block of water to be delivered at an average rate of 1.5 MGD measured over a rolling 3 day period with total quantities delivered within any single day being no more than 10% more or less than 1.5 MGD. If the Districts are unable for any reason to accept the Block of water, the minimum monthly payment shall be 1.5 MGD multiplied by the rate then in effect pursuant to Paragraph 2 above. If Auburn is unable to deliver the amount of water requested by the Districts, up to the Block of water, then Auburn will bill the Districts for the amount of water actually delivered at the

block rate pursuant to Paragraph 2 above. For the take or pay water Block provided for herein, the Districts will be served on the same basis and with the same reliability as service is provided to Auburn's retail customers, and any curtailment, restrictions or limitations on delivery shall be on same basis as curtailment, restrictions or limitations on delivery to Auburn's retail customers.

4) **ANNUAL REVIEW AND ADJUSTMENT:** The initial Block of 1.5 MGD shall remain in effect through December 31, 2005. Each year, the "take or pay" Block may be adjusted by mutual agreement. By September 1 of each year the Districts shall notify Auburn of their intent to continue without change or request an increase in the Block quantity. Any requested change in the Block quantity would be effective January 1 of the year following the request. In the event that neither party communicates its intent under this provision, the Block shall be deemed to continue unchanged.

5) **TERM:** This Agreement shall remain in full force and effect from the first day of the month following the execution of this Agreement through December 31, 2005; provided that this Agreement shall automatically be renewed for an additional year at the conclusion of the term of this Agreement or any extension thereof unless any party provides the others with notice of an intent not to extend this Agreement, which notice shall be received by the other parties not less than one year prior to the expiration of the term of this Agreement or any extension thereof. The termination of this Agreement shall

not affect any rights or obligations under IA2.

6) **EMERGENCIES:** For purposes of this Agreement, an emergency shall be defined as resulting from a water shortage, a major water line break, fire demand, contamination to the water supply system, mechanical equipment failure, electrical equipment failure or Puget Sound Energy facility failure, or any other mutually agreed upon emergency within the water supply system. An emergency period shall be for no more than five (5) working days without written request by the Districts and approval by Auburn in writing to extend the emergency period.

The City may change, reduce or limit the time for or temporarily discontinue any water supplied for an emergency in excess of the Block quantity without notice. Prior to a planned interruption or limiting of emergency service, the City will notify the Districts of such not less than three days prior to the service disruption. The City agrees to use best efforts and reasonable diligence to notify the Districts as soon after it becomes aware of the need for emergency service disruption and further will, to the extent practical, limit the service disruption to daylight hours.

7) **JOINT AND SEVERAL OBLIGATION:** The obligation of the Districts as set forth therein shall be a Joint and Several obligation of the Districts. Allocation of the take or pay Block of water and the payment for such water shall be negotiated between the Districts outside of this Agreement.

In witness whereof the participants hereto have caused this Agreement to be executed by their proper officers on the 17th day of June, 2002.

City of Auburn by: _____

Title: Mayor

Approved as to form by: _____

Title: Daniel B. Heid, City Attorney

Covington Water District by: _____

Title: General Manager

King County
Water District #111 by: _____

Title: GENERAL MANAGER

Exhibit "A"
Resolution 3482

Interim Water Sales Agreement
Between
Covington Water District,
King County Water District No. 111
And the
City of Auburn

Exhibit 1

Take or Pay Monthly Rates				
Year	Base Charge*	1.5 MGD Rate	Winter Overage	Summer Overage
2002	$175.00	$0.70	$0.80	$1.85
2003	$175.00	$0.75	$0.85	$2.00
2004	$175.00	$0.80	$0.90	$2.10
2005	$175.00	$0.85	$0.95	$2.20

* Covington and WD 111 are each responsible for paying a Base Charge of $175.00 per month per district.

Exhibit "A"
Resolution 3482

STATE OF WASHINGTON

DEPARTMENT OF HEALTH

20435 72nd Ave. S., Suite 200, K17-12 • Kent, Washington 98032-2358

COPY

Chris T.

FYI

RECEIVED
JUL 12 2002
MAYOR'S OFFICE

July 10, 2002

PETER B LEWIS, MAYOR
CITY OF AUBURN
25 W MAIN ST
AUBURN WA 98001

Subject: Auburn Water System (ID# 03350)
King County
Bilateral Compliance Agreement Amendment No. 2 - Revision of Schedule Only

Honorable Mayor Lewis:

We have discussed schedule modifications to our Bilateral Compliance Agreement (BCA) with Duane Huskey of your staff. The Department is in agreement with the proposed modifications. The BCA was last revised on March 6, 2000 with Amendment No. 1. With your permission and by way of this letter, the BCA is hereby modified with Amendment No. 2 as noted below:

8. Schedule for Stage 1.

Complete Construction of Facilities	**September 18, 2002**
Monitoring Report – 2 Rounds	**September 17, 2003**
Submit Report to Determine if System is Optimized	**December 23, 2003**

The City of Auburn agrees to perform the following:

Construct corrosion control treatment facilities. Complete the installation of Stage 1 corrosion control treatment facilities in accordance with Department approved construction documents prior to **September 18, 2002.**

Monitor water quality parameters. Monitor water quality parameters in accordance with Title 40 CFR Chapter 1 Part 141.87 (c), (d), and (e) beginning on **September 19, 2002.**

Monitor tap water quality for lead and copper. Monitor tap water quality in accordance with Title 40 CFR Chapter 1 Part 141.86 (d) and complete two six-month monitoring compliance periods prior to **September 19, 2003.**

If you have any questions or comments, please call me at (253) 395-6764.

Sincerely,

James Nilson PE
Regional Engineer
NW Drinking Water Operations

cc: Public Health – Seattle & King County
Karen Heneghan – DOH
Ingrid Salmon – DOH

RESOLUTION NO. 3534

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR AND CITY CLERK TO EXECUTE A REVISED WATER SYSTEM INTERTIE AGREEMENT NO. 3A BETWEEN THE CITY OF AUBURN AND THE CITY OF ALGONA.

WHEREAS, pursuant to RCW 39.34, the Interlocal Cooperation Act, Auburn and Algona have legal authority to cooperate with other localities on the basis of mutual advantage and provision of services; and

WHEREAS, the City of Auburn and the City of Algona executed Interlocal Agreement No. 3 (IA No. 3), dated August 19, 1996; and

WHEREAS, information and exhibits in IA No. 3 need to be updated to reflect current status; and

WHEREAS, the Algona well and water right were not completely conveyed by Algona to Auburn as intended under IA No. 3; and

WHEREAS, it is the desire of Algona and Auburn to finalize the IA No. 3 agreement with respect to facilities constructed and agree on a method of payment for constructed and proposed facilities.

NOW, THEREFORE, THE COUNCIL OF THE CITY OF AUBURN, WASHINGTON, IN A REGULAR MEETING DULY ASSEMBLED, HEREWITH RESOLVES THAT:

Section 1. Pursuant to RCW 39.34, the Interlocal Cooperation Act, Auburn and Algona have legal authority to cooperate with other localities on the basis of mutual advantage and provision of services.

Section 2. The Mayor and City Clerk of the City of Auburn are herewith authorized to execute a revised Water System Intertie Agreement No. 3A between the City and the City of Algona. A copy of said Agreement is attached hereto, denominated as Exhibit "1" and made a part hereof as though set forth in full herein.

Section 3. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

DATED this 21st day of October, 2002.

CITY OF AUBURN

PETER B. LEWIS
MAYOR

ATTEST:

Danielle E. Daskam,
City Clerk

APPROVED AS TO FORM:

Daniel B. Heid,
City Attorney

200301130000705
PACIFIC NW TIT AG 50.00
PAGE 001 OF 032
01/13/2003 09:44
KING COUNTY, WA

Return Address:
Auburn City Clerk
City of Auburn
25 West Main St.
Auburn, WA 98001

RECORDER'S COVER SHEET

Document Title(s) (or transactions contained therein):

31/49
PNWT
W4881-12

Interlocal Agreement

Reference Number(s) of Documents assigned or released:

☐ Additional reference #'s on page _____ of document

Grantor(s)/Borrower(s) (Last name first, then first name and initials)
Auburn, City of

Grantee/Assignee/Beneficiary: (Last name first)
Algona, City of

Legal Description (abbreviated: i.e. lot, block, plat or section, township, range)

PER RCW 39.34

☐ Additional legal is on page of document.

Assessor's Property Tax Parcel/Account Number

N/A

☐ Assessor Tax # not yet assigned

WATER SYSTEM INTERTIE AGREEMENT
Algona/Auburn Intertie Agreement No. 3A

THIS AGREEMENT made and entered into by and between the City of Auburn, hereinafter referred to as "Auburn", and, the City of Algona, hereinafter referred to as "Algona", for the purposes of modifying Interlocal Agreement 3 between Algona and Auburn and establishing a payment schedule for the system intertie between the respective parties,

WITNESSETH:

WHEREAS, both Cities have executed Interlocal Agreement 3 (IA#3) for the Algona Intertie Project dated August 19, 1996; and

WHEREAS, both Cities agreed that the following facilities were to be built and funded in part or in whole by Algona as a part of IA#3:

1. Five (5) Meter Stations
2. A Future Reservoir in Lakeland Hills
3. Wells 6 and 7; and

WHEREAS, this agreement identifies one time capital facilities charges for the above referenced projects that serve to increase the capacity of service to the City of Algona; and

WHEREAS, Algona agreed to deed over its primary Water Right(s) (instantaneous flow rate (Qi) of 500 gpm, annual flow rate (Qa) of 175 acre feet per year), well facilities and well property protection zone easement to Auburn in exchange for Auburn providing a portion of the Algona long term water supply; and

WHEREAS, the Cities agreed to terminate a number of preexisting agreements; and

WHEREAS, Algona agreed to implement a water conservation program consistent with Auburn's conservation program; and

WHEREAS, Algona agreed to maintain its 100,000 gallons of system storage, participate in an additional 100,000 gallons of storage in the Auburn system or provide for the storage otherwise; and

WHEREAS, Algona granted Auburn permission to construct, own, operate, maintain, repair and replace Auburn water facilities within Algona right of way at Auburn expense; and

WHEREAS, the Boeing Company "Welded Duct Facility" was transferred to Algona as a direct service customer and the existing meter was converted to a master meter; and

WHEREAS, a 180,000 gallon share of the IA#3 proposed 1.7 million gallon Lakeland Hills Reservoir was to be financed by Algona in accordance with the Algona January 1997 Water

System Plan and with Auburn storage criteria in accordance with the schedule contained in Exhibit D of IA#3; and

WHEREAS, Auburn agreed to provide Algona up to 525,000 gallons of average day demand (ADD) and 1,114,000 gallons of maximum day demand (MDD) through 2014; and

WHEREAS, the estimated project costs were shown in Exhibit D of IA#3 and those estimated costs were understated; and

WHEREAS, the Algona City well and associated water rights were not completely conveyed by Algona to Auburn as intended under IA#3, and

WHEREAS, it is the desire of Algona and Auburn to finalize the IA#3 agreement with respect to facilities constructed and agree on a method of payment for constructed and proposed facilities

NOW, THEREFORE, IT IS MUTUALLY AGREED as follows:

In order to provide for the construction and operation of water supply facilities, piping and meters for a water supply intertie, and reservoir capacity, all between Auburn and Algona, the Participants mutually agree:

1. Interlocal Agreement 3 (IA#3) for the Algona Intertie Project between the City of Algona and the City of Auburn, dated August 19, 1996 and adopted by City of Auburn Resolution No. 2770 is hereby superceded by this Agreement.

2. Algona shall convey to Auburn Algona's City well and any and all associated water rights by Bill of Sale, included as Exhibit F. The well location is depicted on Exhibit A. In addition, Algona shall convey a Well Site Easement included as Exhibit G, and Access Easement included as Exhibit H for the aforementioned well. All costs for said conveyances will be included within the costs of projects planned under this Agreement. In event of future well abandonment by Auburn, any and all related easements shall be vacated by Auburn, and Algona and others shall no longer be bound thereby.

3. Algona shall have and implement a conservation program. The conservation program shall, at a minimum, be consistent with Auburn's conservation program and include field testing for leak detection, repair of leaks and public information actions equal to Auburn's public information actions. Algona's water conservation plan shall be included in the 2002 Algona Water System Plan.

4. So long as it continues to purchase wholesale water from Auburn, Algona shall continue to maintain and provide no less than the existing storage in its 100,000 gallon reservoir in its westerly service area. Alternately, Algona may elect to increase participation by 100,000 gallons within the future Auburn reservoir per Exhibit B herein, or acquire storage otherwise (such as

from Lakehaven Utility District) and terminate the continued operation of the existing reservoir in its westerly service area.

5. Algona hereby grants Auburn the right to construct, own, operate, maintain, repair, and replace Auburn's municipal water system including pipes, fire hydrants, valves, meters, and other appurtenances located within Algona right-of-way as shown on Exhibit A, in perpetuity per the terms and conditions herein.

5.1. Auburn shall provide to Algona copies of available record drawings showing the location of Auburn's water system within Algona right-of-way.

5.2. Except for the normal operation of Auburn's water system, Auburn shall notify Algona prior to any major waterline improvements or replacements which may interfere with or disrupt any other utilities and/or passage of traffic within Algona. Algona shall notify Auburn prior to any street or other utility improvement which may interfere or disrupt Auburn's water system.

5.3. Auburn shall be responsible to pay for costs associated with improvements to Auburn's water system including necessary street patches. In the event that Algona constructs any street improvements on those rights-of-way containing Auburn's water system, Auburn shall be responsible to adjust all water system appurtenances to finish grade, including lowering or raising said pipelines at conflict with Algona improvements.

6. Algona agrees to financially participate in the supplemental supply development of a portion of Auburn's Well # 6 and Well # 7, in accordance with Exhibit D.

7. This Agreement shall include construction and operation of up to five individual master meter stations. Three master meter stations, including the one currently serving the Boeing "Welded Duct Facility", and two installed under IA#3 are as shown on Exhibit A. The remaining two meter stations will be located and constructed at the discretion of Algona. For adequate water distribution to be obtained, it may also be necessary for Algona to construct additional piping and connections, at its own expense.

8. Algona agrees to transfer title to Auburn for any water lines between existing master meter stations and the existing Auburn mains. Any piping between future master meter stations and Auburn mains will be similarly transferred by Algona to Auburn. Title will be transferred with a bill of sale and the water pipe will be regulated under Paragraphs 5 and 13 of this Agreement.

9. This Agreement shall include future construction of a reservoir by Auburn within the Lakeland Hills development area within Pierce County, Washington. The volume of the new reservoir is presently estimated to be approximately 2.65 million gallons, and this capacity is to be shared with Algona. Financial participation is to be based on a capacity percentage basis by any and all municipalities sharing in the capacity, whether the actual storage volume usage for

any such municipality is directly derived from the reservoir or not. Algona's capacity shall be 180,000 gallons, exclusive of the provision of Paragraph 4 of this Agreement.

10. Algona projects the need for supply source in the following quantities:

Year	Average Daily Demand (mgd)	Maximum Daily Demand (mgd)
2004	0.457	0.945
2009	0.491	1.029
2014	0.525	1.114

11. Additional water supply may be available as mutually agreed to in writing by the Auburn City Council and the Algona City Council.

12. Respective facility ownership, capacity rights, and responsibility for operation, maintenance, and renewal and/or replacement (r/r) are as specifically described in Exhibit B. Operational parameters shall be as specifically defined in Exhibit C.

13. Distribution water pipelines within the city limits of a Participant shall be owned and the responsibility of that Participant, with the exception of Auburn facilities specifically identified on Exhibit A, and permitted by Paragraph 5.

14. Retail customers whose property lies within the city limits of a Participant shall be the retail customers of that Participant.

15. For Auburn facilities within Algona, as specifically identified on Exhibit A, Algona hereby grants a franchise to Auburn.

16. Auburn shall design, construct and maintain its facilities constructed under this Agreement in accordance with the design standards described in the 2001 Auburn Comprehensive Water Plan, and the updates thereto.

17. Both Participants shall exercise good faith and use best efforts in estimating project costs. However, the foregoing notwithstanding, each Participant shall be responsible for and shall pay for one hundred percent (100%) of its actual, proportionate share of the project costs, regardless of the estimate. The project costs are estimated as shown in Exhibit D. The Participants shall maintain individual cost records of their expenses for the project. Auburn will maintain overall coordinated project cost records. Algona has the right to review the design of each project in Exhibit D, prior to the project being bid. Auburn shall allow sufficient time in the project schedule for this review. Should potential cost savings to the design be identified that are not in conflict with accepted industry design standards, Algona and Auburn shall work in good faith and cooperatively to incorporate the potential cost savings into the final design.

18. The Participants shall fully finance and pay for their proportionate share of cost as shown in Exhibit D. Algona shall deposit funds with Auburn to perform the project work for the proposed facilities in accordance with the schedule shown in Exhibit E. As future actual costs of projects in Exhibit D are determined, Auburn will notify Algona of such updates and the authorized representatives will execute an update to Exhibit D which will supercede all prior dated versions of Exhibit D.

19. Auburn has prepared a cost of service study to determine the cost of service to its customers. A customer classification for "wholesale-Algona" has been created, and rates for service charges are based on a rate study for this customer classification. Auburn will regularly update the cost of service analysis. Wholesale water rates to Algona will be based on costs of providing the service.

20. For purposes of this Agreement, each Participant identifies its authorized representative as the "Mayor" of Algona and as the "City Engineer" of Auburn.

21. The Participants shall meet as needed for project coordination.

22. The Participants shall be responsible for design, construction management, and commissioning of all facilities to be constructed in accordance with ownership of the facility. Responsibilities may be assigned otherwise by agreement of the Participants' authorized representatives.

23. It is acknowledged and agreed that in the event Auburn experiences any system failure or decreased capacity for any reason, the supply to Algona may be curtailed to an equal percentage of use as Auburn's curtailment is implemented. Such curtailment shall be imposed by Algona on Algona retail customers immediately and simultaneously as such curtailment is imposed by Auburn on Auburn retail customers.

24. It is the intent of Auburn to provide the water described in Paragraph 10 whenever it is available subject to the limitations described in Paragraph 23. Auburn shall use reasonable diligence and best efforts to provide immediate notice in the event it becomes aware that it may not be able to fulfill the requirements of Paragraph 10 for any reason.

25. Auburn possesses the short-term (approximately five (5) years) capacity to meet the storage requirements for Algona. Long-term storage requirements for Algona shall be met by Algona financial participation within the next increment of storage to be constructed by Auburn. Algona's minimum financial participation shall provide for construction of storage volume capacity of 180,000 gallons, inclusive of standby, equalization, and fire protection volume storage. Such 180,000 gallon capacity is in addition to Algona's existing 100,000 gallon reservoir storage in its westerly service area.

26. Algona's water supply needs above the 0.525 mgd average daily demand, and the 1.114 mgd maximum daily demand, both identified in Paragraph 10 will be dependent upon negotiation of an amendment to this Agreement.

27. This Agreement shall remain in full force unless terminated by mutual agreement of the Participants.

28. This Agreement may be amended only in writing by approval signed by the Participants.

29. The authorized representatives shall have authority to update Exhibits attached hereto. The Exhibits shall be updated and/or revised only upon written agreement signed by the Participants' authorized representatives. Updates must be ratified by each Participant's City Council.

30. Algona agrees to indemnify, defend and hold harmless Auburn, its officers, directors, employees and agents, and their successors and assigns, from any and all costs or claims arising out of or in any way resulting from Algona's default, failure of performance, or negligent conduct associated with this Agreement. It is further agreed that Auburn shall provide water to Algona consistent with its provision of water to all of its retail water customers, and the failure of the Auburn water system to deliver flow to Algona, in whole or in part, as described in this Agreement, so long as Auburn is providing water to Algona consistent with its provision of water to the rest of its retail water customers, and consistent herewith, shall not give rise to an action against Auburn, and Algona agrees to indemnify, defend and hold harmless Auburn, its officers, directors, employees and agents, and their successors and assigns, from any and all costs or claims arising out of or in any way resulting from any such failure of the Auburn water system to deliver flow to Algona, in whole or in part. This indemnification provision shall include, but is not limited to, all claims against Auburn by an employee or former employee of Algona or their contractors and, as to such claims, Algona expressly waives all immunity and limitation of liability under Title 51 RCW.

Auburn agrees to indemnify, defend and hold harmless Algona, their officers, directors, employees and agents, and their successors and assigns, from any and all costs or claims arising out of or in any way resulting from Auburn's default, or negligent conduct associated with this Agreement. This indemnification provision shall include, but is not limited to, all claims against Algona by an employee or former employee of Auburn or its contractors and, as to such claims, Auburn expressly waives all immunity and limitation of liability under Title 51 RCW.

31. The parties shall make good faith efforts to resolve by informal discussion any dispute arising under or in connection with this Agreement. If at any time either party to this Agreement determines that such informal discussions will not result in a resolution of the dispute, such party may request formal discussion by both parties. If formal discussion by the parties does not resolve the dispute, a settlement conference shall be held within thirty (30) days of the unsuccessful resolution meeting. The settlement conference will be held at the Seattle office of Judicial Arbitration and Mediation Services, Inc. ("JAMS"). The complaining party must contact JAMS to schedule the conference. The parties may agree on a retired judge from the JAMS panel. If they are unable to agree, JAMS will provide a list of three available judges and each party may strike one. The remaining judge will serve as the mediator at the settlement conference.

32. If any provision of this Agreement is invalid or unenforceable the remaining provisions shall remain in force and effect.

IN WITNESS WHEREOF, the Participants hereto have caused this Agreement to be executed by their proper Officers on the date shown below.

City of Auburn

By: _____

Its: Mayor

Date: 10/21/02

Attest by: _____

Approved as to Form by: _____

City of Algona

By: _____

Its: Mayor

Date: 11-6-02

Attest by: _____

Approved as to Form by: _____

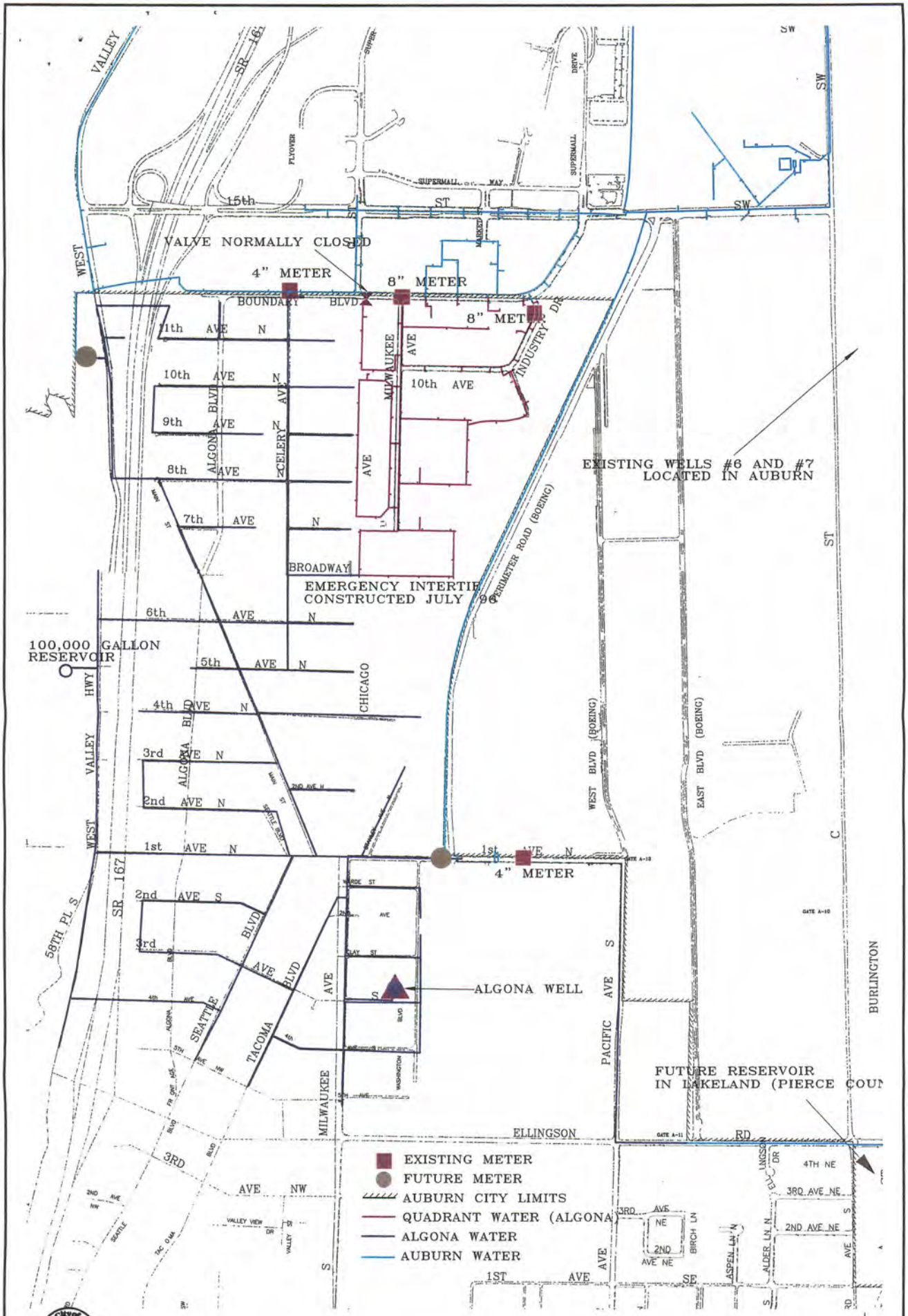


EXHIBIT A – FACILITIES LAYOUT PLAN
IA #3A
ALGONA INTERTIE PROJECT

SCALE: 1"=800'

Exhibit A
Facilities Layout Plan

WATER SYSTEM INTERTIE AGREEMENT
Algona/Auburn Intertie Agreement No. 3A
(continued)

Update Approval

1. Auburn: _____, Dated: _____

   Algona: _____, Dated: _____

2. Auburn: _____, Dated: _____

   Algona: _____, Dated: _____

3. Auburn: _____, Dated: _____

   Algona: _____, Dated: _____

Exhibit B
Facility Ownership, Capacity Rights, Operation, Maintenance, and Renewal and Replacement Responsibilities
to
WATER SYSTEM INTERTIE AGREEMENT
Algona/Auburn Intertie Agreement No. 3A

Facility	Location	Facility Ownership	Capacity Rights	Operation, Maintenance, & Renewal/Replacement Responsibility
Meter Station 1, existing for Boeing	200' easterly of the Intersection of 1st Avenue North and Perimeter Road	Auburn	100% Algona	Auburn
Meter Station 2, existing	Intersection of Milwaukee Avenue and Boundary Boulevard	Auburn	100% Algona	Auburn
Meter Station 3, existing	Intersection of Industry Drive North and Boundary Boulevard	Auburn	100% Algona	Auburn
Meter Station 4 future	Presently unknown, but probably near intersection of West Valley Highway and Boundary Boulevard extended	Auburn	100% Algona	Auburn
Meter Station 5 future	Presently unknown, but probably near intersection of UP RR and 1st Avenue North	Auburn	100% Algona	Auburn
Algona Well, existing	+/-150' northwesterly of intersection of Washington Boulevard and 3rd Ave South	Auburn	100% Auburn	Auburn
Lakeland Hills Reservoir, future	Lakeland Hills, Pierce County	Auburn	180,000 gallons Algona; remainder Auburn	Auburn
Supply (Qi) existing supplemental water rights	Well #6, Fulmer Field Well #7, City Park	Auburn	1,114,000 gpd Algona; remainder Auburn	Auburn

Exhibit B
Facility Ownership, Capacity Rights, Operation, Maintenance, and Renewal and Replacement Responsibilities
to
WATER SYSTEM INTERTIE AGREEMENT
Algona/Auburn Intertie Agreement No. 3A
(continued)

Update Approval

1. Auburn: _____, Dated: _____

   Algona: _____, Dated: _____

2. Auburn: _____, Dated: _____

   Algona: _____, Dated: _____

Exhibit C
Project Criteria
to
WATER SYSTEM INTERTIE AGREEMENT
Algona/Auburn Intertie Agreement No. 3A

Project Criteria:

- Meter Stations to be sized on flow volume criteria as opposed to line size.
- Maximum (Qi) daily demand flow is 1.114 million gallons per day for total of all meter stations supply to Algona, except in case of fire or emergency.
- Maximum annual (Qa) average daily demand flow is 0.525 million gallons per day for total of all meter stations supply to Algona.
- Each meter station shall be calibrated annually for the first three years of operations, and thereafter at the discretion of Auburn.
- Reservoir capacity for Algona is 180,000 gallons of the estimated 2.65 mg total capacity in the proposed Lakeland Hills Reservoir.
- Total of all meter stations supply to Algona necessary for peak hourly flow and fire flow shall be determined by Algona, and such data provided to Auburn for meter station design and/or station design review.

Update Approval

1. Auburn: _____, Dated: _____

   Algona: _____, Dated: _____

2. Auburn: _____, Dated: _____

   Algona: _____, Dated: _____

Exhibit D
Project Cost Estimate
to
WATER SYSTEM INTERTIE AGREEMENT
Algona/Auburn Intertie Agreement No. 3A

	IA#3		Incurred Costs To Date	
Description	Estimated Cost	Expenditures to Date	Auburn	Algona
METER STATIONS	(includes allied costs)			
2-inch @ Boeing	N/A	N/A	N/A	N/A
8-inch @ Industry Drive	$25,740	$76,723	$31,757	$44,966
8-inch @ Milwaukee	$25,740	$76,723	$31,757	$44,966
8-inch (Future)	$28,600	N/A	0%	100%
8-inch (Future)	$31,460	N/A	0%	100%
Subtotal Meter Stations	**$111,540**	**$153,446**	**$63,514**	**$89,932**
SUPPLY FACILITIES				
Well #6		$1,057,507	$990,514	$66,993
Well #7		$2,387,050	$2,235,829	$151,221
Subtotal Supply Facilities	**$1,787,500**	**$3,444,557**	**$3,226,343**	**$218,214**
PRELIMINARY COSTS				
Algona Well/Water Rights Conveyance	$5,000	$5,000	$5,000	$0
Algona Water Rights	N/A	N/A	$30,000	($30,000)
Well Easements	$2,000	$2,000	$2,000	$0
SKCRWA JOA Development	$5,800	$5,800	$0	$5,800
COS/Rate Study	$1,627	$1,627	$0	$1,627
Subtotal Preliminary Costs	**$14,427**	**$14,427**	**$37,000**	**($22,573)**
COSTS TO DATE	**N/A**	**$3,612,430**	**$3,326,857**	**$285,573**
PAYMENTS TO DATE	**N/A**	**N/A**	**($3,326,857)**	**($85,300)**
BALANCE OWING	**N/A**	**N/A**	**$0**	**$200,273**
STORAGE FACILITIES				
Lakeland Hills Res.	$2,700,000	N/A	$2,520,000	$180,000
Subtotal Storage Facilities	**$2,700,000**	**N/A**	**$2,520,000**	**$180,000**
Estimated Total PROJECT COST	**$4,613,467**	**$6,312,430**	**$5,846,857**	**$465,573**

Update Approval

1. Auburn: _____, Dated: _____

   Algona: _____, Dated: _____

2. Auburn: _____, Dated: _____

   Algona: _____, Dated: _____

Exhibit E - Project Schedule
to
WATER SYSTEM INTERTIE AGREEMENT
Algona/Auburn Intertie Agreement No. 3A

Activity	Date
Execute Interlocal Agreement #3	Completed
Complete master meter stations design for initial two stations	Completed
Algona to provide well, water rights and easements conveyance to Auburn	November 2002
Award master meter stations construction contract	Completed
Complete construction of master meter stations #2 and #3	Completed
Final master meter stations and conveyance project cost accounting	Completed
Interim payment of $85,300 from Algona	Completed
Final Auburn Wells 6 and 7 cost accounting	Completed
Execute Interlocal Agreement #3A	November 2002
Future construction of master meter stations #4 and #5	To be determined
Algona to provide $200,273 to Auburn for partial payment of cost incurred to date	31 March 2003
Algona to provide $180,000 to Auburn for partial payment for future Reservoir	Due at Construction Contract Award
Final project cost accounting	31 March 2008
Final IA #3A balancing payment from Algona	30 April 2008

Exhibit E - Project Schedule
to
WATER SYSTEM INTERTIE AGREEMENT
Algona/Auburn Intertie Agreement No. 3A

Update Approval

1. Auburn: _____, Dated: _____

   Algona: _____, Dated: _____

2. Auburn: _____, Dated: _____

   Algona: _____, Dated: _____

Exhibit F – Bill of Sale for Algona's Well
to
WATER SYSTEM INTERTIE AGREEMENT
Algona/Auburn Intertie Agreement No. 3A
(follows)

Return Address:
City of Auburn
City Clerk
25 West Main
Auburn, WA 98001

Above this line reserved for recording information.

BILL OF SALE

Reference # (if applicable):	N/A	Additional on page: _____
Grantor/Borrower:	1) City of Algona	2)
		Additional on page: _____
Grantee/Assignee/Beneficiary:	**City of Auburn**	
Legal Description/STR:	NW, SW1/4, 25-21-4E	Additional on page: _____
Assessor's Tax Parcel ID#:	954300-0570	

KNOW ALL MEN BY THESE PRESENTS that for and in consideration of the sum of ONE DOLLAR ($1.00), and for the consideration of incorporating the facilities into the City system, and other good and sufficient consideration, receipt whereof is hereby acknowledged, the undersigned Grantor City of Algona, a Municipal Corporation in King County, Washington, do by these presents hereby convey, setover, assign, transfer and warrant to the City of Auburn, a Municipal Corporation in King County, Washington, a well and waterworks supplying water for public use, the associated ground water right (EXHIBIT 'A', Certificate Number GI-22769C), and all appurtenances or any other associated public facility generally consisting of a ten (10) inch casing to approximately 65 feet below ground surface. Situated within the following described real property.

See EXHIBIT 'B' ATTACHED HERETO AND BY THIS REFERENCE MADE A PART HEREOF.

and the said Grantor(s) hereby warrant(s) that they are the sole owner(s) of all the property above conveyed; that they have full power to convey the same and that they will defend the title of the said Grantee against any and all persons lawfully making claim thereto, and indemnify the City of Auburn for any costs, including Attorney fees in defending title.

IN WITNESS WHEREOF the Grantor(s) has/have executed these presents this _____ day of _____, 2002.

City of Algona, GRANTOR

_____

GLENN WILSON, MAYOR

STATE OF WASHINGTON)
)ss.
County of King)

I certify that I know or have satisfactory evidence that _____ _____ is the person who appeared before me, and said person acknowledged that he/she signed this instrument, on oath stated that he/she was authorized to execute the instrument and acknowledged it as the _____ of _____ _____, a Municipal Corporation, to be the free and voluntary act of such party for the uses and purposes mentioned in this instrument.

Dated _____

_____

_____
Notary Public in and for the State of Washington
residing at _____
My appointment expires_____

File: 4.1
REF. H:\FORMS\FC089 (R 4/01)

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

CERTIFICATE OF WATER RIGHT

☐ Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

☒ Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
December 10, 1976	G1-22769	G1-22769P	G1-22769C

NAME
CITY OF ALGONA

ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
402 Warde Street	Algona	Washington	98002

This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown.

PUBLIC WATER TO BE APPROPRIATED

SOURCE
Well

TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
	500	175.0

QUANTITY, TYPE OF USE, PERIOD OF USE
Municipal supply - continuously

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION—WITHDRAWAL
400 feet east and 1200 feet south from west quarter corner of Sec. 25

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE, E. OR W. W.M.	W.R.I.A.	COUNTY
NW¼SW¼	25	21	4 E.	10	King

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)
28	4	Woods Algona Add. Div. 1

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

Area served by City of Algona

PROVISIONS

The right to the use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in RCW 90.03.380, 90.03.390, and 90.44.020.

This certificate of water right is specifically subject to relinquishment for nonuse of water as provided in RCW 90.14.180.

Given under my hand and the seal of this office at Redmond *Washington, this* 15th *day of* November, *19* 78

Department of Ecology

ENGINEERING DATA
OK

by ROBERT K. McCORMICK, Regional Manager

FOR COUNTY USE ONLY

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

PROOF OF APPROPRIATION OF WATER

APPLICATION NUMBER	PERMIT NUMBER
	GI - 22769P

NAME OF PERMITTEE: CITY OF ALGONA

POST OFFICE ADDRESS	CITY	STATE	ZIP CODE
402 Warde Street	Algona	WA	98002

ACTUAL WORKS OF APPROPRIATION: Mill

PURPOSE OF WHICH WATER IS USED FOR: Municipal Water Supply

DATE WATER WAS ORIGINALLY APPLIED TO BENEFICIAL USE	IF USED FOR IRRIGATION, NUMBER OF ACRES ACTUALLY IRRIGATED
April 27, 1977	
IF SOURCE IS A CITY, IS AN ACCESS PORT NOW INSTALLED: [Y] YES [ ] NO	MONTHS DURING WHICH WATER IS USED: All

PUMP SIZE: 500 gal per minute

ACTUAL AMOUNT WITHDRAWN OR DIVERTED FROM PERMANENT SYSTEM	
Average 17,564 GF per day	[ ] GPM [ ] CFS
HAVE ALL PROVISIONS AS REQUIRED BY PERMIT BEEN ACCOMPLISHED: [XX] YES [ ] NO	IF NOT, EXPLAIN

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS USED (USE ADDITIONAL SHEET IF NECESSARY)

Well site: Block 4, Lots 23-30; Woods Algona Division No. 1 as recorded in book of Plats, Vol 19 Page 36, records of King County, Washington

Water used in City of Algona; Washington.
Description of City Limits: All that portion of Sections 23, 24, 25, 26 and 35 and 36 Township 21 North, Range 4 East, W.M. described as follows:
BEGINNING at the northeast corner of the southeast one-quarter of Section 23, Township 21 North, Range 4 East W.M. and running thence easterly along the North line of said southeast one-quarter to the northeast corner thereof: thence easterly along the north line of the southwest one-quarter of Section 24, Township 21 north, Range 4 east, W.M. to a point on the easterly margin of the joint C.M. & St. P. & O.W.R.R. Railway's right-of-way: thence southwesterly along said easterly margin to an intersection with the northerly margin of the right-of-way of South 360th Street: thence easterly along said northerly margin of South 360th Street to an intersection with the easterly margin of the right-ofsway of 76th Avenue South: thence southerly along said easterly margin of 76th Avenue South to an intersection with the northerly line of the Southwest one-quarter of the Southeast one-quarter of Section 25, Township 21

STATE OF WASHINGTON,
County of King } ss.

OK FEES
ISSUE CERTIFICATE
PER PERMIT
10-29-78

I, John E. Mallett, being first sworn, depose and say that I have read the above and foregoing proof of appropriation; that I know the contents thereof; and that the facts therein stated are true.

USE LEGAL ON PERMIT

IN WITNESS WHEREOF, I have hereunto set my hand this 10th day of October, 19 78

John E. Mallett
Permittee Signature

Subscribed and sworn to before me this 10th day of October, 19 78

Margaret J. Grace
Notary Public

rrr nhn-1-76

Exhibit G – Well Site Easement

to

WATER SYSTEM INTERTIE AGREEMENT

Algona/Auburn Intertie Agreement No. 3A

(follows)

Return Address:
City of Auburn
City Clerk
25 West Main
Auburn, WA 98001

Above this line reserved for recording information.

EASEMENT

Well Site Easement

Reference # (if applicable):	N/A	Additional on page: _____
Grantor/Borrower:	1) City of Algona	2)
		Additional on page: _____
Grantee/Assignee/Beneficiary:	**City of Auburn**	
Legal Description/STR:	NW, SW1/4, 25-21-4E	Additional on page: _____
Assessor's Tax Parcel ID#:	954300-0570	

For and in consideration of the sum of one dollar ($1.00) and other good and valuable consideration in hand paid, receipt of which is hereby acknowledged, and for benefits to be derived by the Grantor herein, Grantor, City of Algona, a municipal corporation of King County, Washington, hereby conveys and warrants to the City of Auburn, Grantee herein, a municipal corporation of King County, Washington, its successors and assigns, a perpetual Nonexclusive Easement under, over, through and across the following described real property for the purpose of operating, maintaining, installing and decommissioning a well and waterworks supplying water for public use AND APPURTENANCES THEREOF, said real property being described as follows:

SEE EXHIBITS "A" AND "B" ATTACHED HERETO AND BY THIS REFERENCE MADE A PART HEREOF.

This easement is given under the threat of and in lieu of Eminent Domain.

Said Grantee shall have the absolute right, at times as may be necessary, for immediate entry upon said Easement for the purpose of maintenance, inspection, construction, repair, reconstruction or decommissioning of the above improvements without incurring any legal obligation or liability therefore.

Said Grantee shall have the absolute right to place any type of driving surface within said Easement deemed necessary by the Grantee.

Said Grantor shall not in any way block, restrict or impede access and egress to or from said Easement, and/or in any way block, restrict or impede full use of the real property within the above-described Easement by said Grantee for the above-described purposes. Said Grantor may fence across said Easement and/or along the boundaries of said Easement provided that a gate is constructed in said fence. Said gate shall be of sufficient length and location to allow the Grantee full use of, and access and egress to and from the real property within the above-described Easement. If said gate is to be locked, keys shall be provided to the Grantee.

This Easement shall be a covenant running with the above-described real property and burden said real estate, and shall be binding on the successors, heirs and assigns of all parties hereto.

Dated this _____ day of _____, 2002.

City of Algona, GRANTOR

_____

GLENN WILSON, MAYOR

STATE OF WASHINGTON)
)ss.
County of King)

I certify that I know or have satisfactory evidence that _____ _____and _____ is/are the person(s) who appeared before me, and said individual(s) acknowledged that he/she/they signed this instrument and acknowledged it to be his/her/their free and voluntary act for the uses and purposes mentioned in this instrument.

Dated _____

_____

_____
Notary Public in and for the State of Washington
residing at _____
My appointment expires _____

REF. H:\FORMS\FC087 (4/98)

EXHIBIT "A"

ALGONA WATER WELL EASEMENT
3RD AVENUE SOUTH AND WASHINGTON BOULEVARD

THAT PORTION OF LOTS 23 AND 24 AND 25 AND 26 AND 27 AND 28 AND 29 AND 30, ALL IN BLOCK 4 OF WOOD'S ALGONA ADDITION, DIVISION NUMBER 1 TO THE CITY OF SEATTLE AS RECORDED IN VOLUME 19 OF PLATS, PAGE 36, RECORDS OF KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF SAID LOT 30; THENCE NORTH 01°31'15" EAST ALONG THE WEST BOUNDARY OF SAID LOT 30, A DISTANCE OF 13.12 FEET; THENCE SOUTH 88°28'45" EAST, 49.52 FEET TO THE TRUE POINT OF BEGINNING; THENCE NORTH 01°31'15" EAST, 100.00 FEET; THENCE SOUTH 88°28'45" EAST, 100.00 FEET; THENCE SOUTH 01°31'15" WEST, 80.00 FEET; THENCE SOUTH 88°28'45" EAST, 117 FEET MORE OR LESS TO THE WEST MARGIN OF WASHINGTON BOULEVARD; THENCE SOUTHERLY 20.00 FEET MORE OR LESS ALONG SAID WEST MARGIN OF WASHINGTON BOULEVARD TO A POINT WHICH BEARS SOUTH 88°28'45" EAST FROM SAID TRUE POINT OF BEGINNING; THENCE NORTH 88°28'45" WEST, 217 FEET MORE OR LESS TO SAID TRUE POINT OF BEGINNING.

SITUATE IN THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 25, TOWNSHIP 21 NORTH, RANGE 4 EAST, W. M.

EXHIBIT "B"

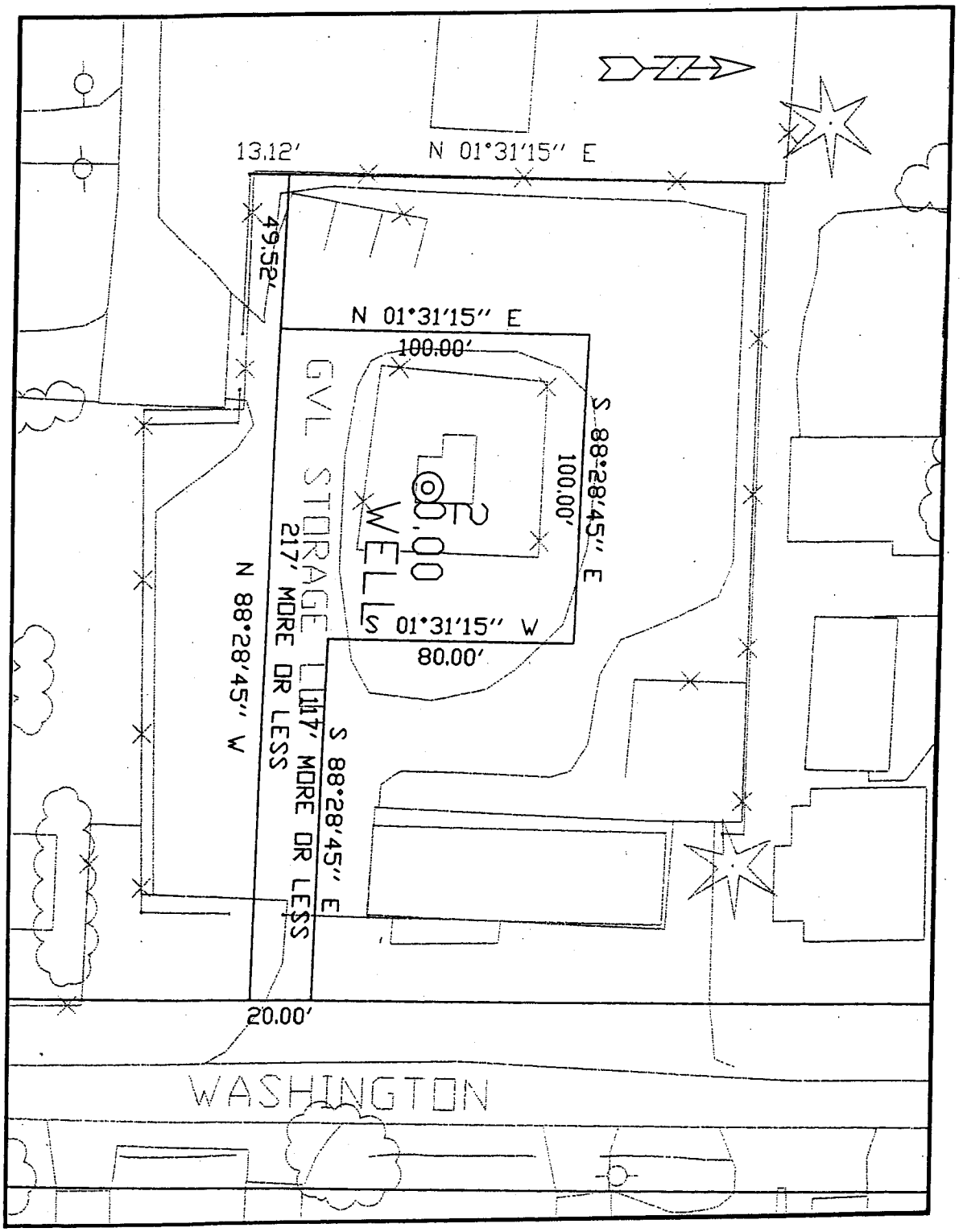

13.12'
N 01°31'15" E
49.52'
N 01°31'15" E
100.00'
S 88°28'45" E
100.00'
WELL
S 01°31'15" W
80.00'
GVL STORAGE
N 88°28'45" W
217' MORE OR LESS
S 88°28'45" E
117' MORE OR LESS
20.00'
WASHINGTON

Exhibit H – Access Easement

to

WATER SYSTEM INTERTIE AGREEMENT

Algona/Auburn Intertie Agreement No. 3A

(follows)

Return Address:
City of Auburn
City Clerk
25 West Main
Auburn, WA 98001

Above this line reserved for recording information.

EASEMENT

Access Easement

Reference # (if applicable):	N/A	Additional on page: _____
Grantor/Borrower:	1) City of Algona	2)
		Additional on page: _____
Grantee/Assignee/Beneficiary:	**City of Auburn**	
Legal Description/STR:	NW, SW1/4, 25-21-4E	Additional on page: _____
Assessor's Tax Parcel ID#:	954300-0570	

For and in consideration of the sum of one dollar ($1.00) and other good and valuable consideration in hand paid, receipt of which is hereby acknowledged, and for benefits to be derived by the Grantor herein, Grantor, City of Algona, a municipal corporation of King County, Washington, hereby conveys and warrants to the City of Auburn, Grantee herein, a municipal corporation of King County, Washington, its successors and assigns, a perpetual Nonexclusive Easement under, over, through and across the following described real property for the purpose of ingress and egress, said real property being described as follows:

SEE EXHIBITS "A" AND "B" ATTACHED HERETO AND BY THIS REFERENCE MADE A PART HEREOF.

This easement is given under the threat of and in lieu of Eminent Domain.

Said Grantee shall have the absolute right, at times as may be necessary, for immediate entry upon said Easement for the purpose of maintenance, inspection, construction, repair or reconstruction of the above improvements without incurring any legal obligation or liability therefore.

Said Grantee shall have the absolute right to place any type of driving surface within said Easement deemed necessary by the Grantee.

Said Grantor shall not in any way block, restrict or impede access and egress to or from said Easement, and/or in any way block, restrict or impede full use of the real property within the

above-described Easement by said Grantee for the above-described purposes. Said Grantor may fence across said Easement and/or along the boundaries of said Easement provided that a gate is constructed in said fence. Said gate shall be of sufficient length and location to allow the Grantee full use of, and access and egress to and from the real property within the above-described Easement. If said gate is to be locked, keys shall be provided to the Grantee.

This Easement shall be a covenant running with the above-described real property and burden said real estate, and shall be binding on the successors, heirs and assigns of all parties hereto.

Dated this _____ day of _____, 2002.

City of Algona, GRANTOR

_____

GLENN WILSON, MAYOR

STATE OF WASHINGTON)
)ss.
County of King)

I certify that I know or have satisfactory evidence that _____ and _____ is/are the person(s) who appeared before me, and said **individual(s)** acknowledged that he/she/they signed this instrument and acknowledged it to be his/her/their free and voluntary act for the uses and purposes mentioned in this instrument.

Dated _____

_____

_____
Notary Public in and for the State of Washington
residing at _____
My appointment expires _____

REF. H:\FORMS\FC087 (4/98)

EXHIBIT "A"

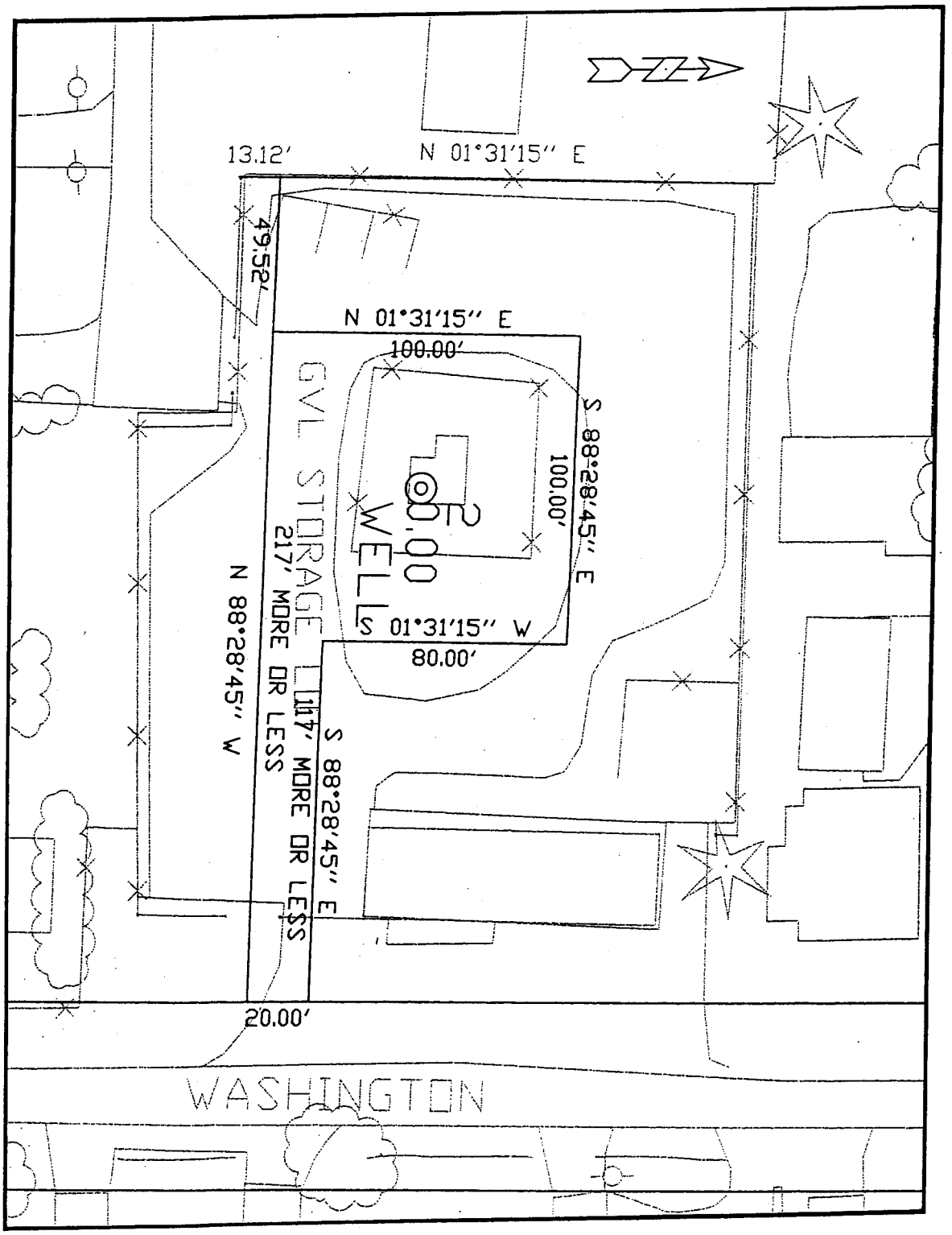
ALGONA WATER WELL EASEMENT
3RD AVENUE SOUTH AND WASHINGTON BOULEVARD

THAT PORTION OF LOTS 23 AND 24 AND 25 AND 26 AND 27 AND 28 AND 29 AND 30, ALL IN BLOCK 4 OF WOOD'S ALGONA ADDITION, DIVISION NUMBER 1 TO THE CITY OF SEATTLE AS RECORDED IN VOLUME 19 OF PLATS, PAGE 36, RECORDS OF KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF SAID LOT 30; THENCE NORTH 01°31'15" EAST ALONG THE WEST BOUNDARY OF SAID LOT 30, A DISTANCE OF 13.12 FEET; THENCE SOUTH 88°28'45" EAST, 49.52 FEET TO THE TRUE POINT OF BEGINNING; THENCE NORTH 01°31'15" EAST, 100.00 FEET; THENCE SOUTH 88°28'45" EAST, 100.00 FEET; THENCE SOUTH 01°31'15" WEST, 80.00 FEET; THENCE SOUTH 88°28'45" EAST, 117 FEET MORE OR LESS TO THE WEST MARGIN OF WASHINGTON BOULEVARD; THENCE SOUTHERLY 20.00 FEET MORE OR LESS ALONG SAID WEST MARGIN OF WASHINGTON BOULEVARD TO A POINT WHICH BEARS SOUTH 88°28'45" EAST FROM SAID TRUE POINT OF BEGINNING; THENCE NORTH 88°28'45" WEST, 217 FEET MORE OR LESS TO SAID TRUE POINT OF BEGINNING.

SITUATE IN THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 25, TOWNSHIP 21 NORTH, RANGE 4 EAST, W. M.

EXHIBIT "B"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49.52'
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WELL
S 01°31'15" W
80.00'
GVL STORAGE
N 88°28'45" W
217' MORE OR LESS
S 88°28'45" E
117' MORE OR LESS
20.00'
WASHINGTON

RESOLUTION NO. 3 6 1 4

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR TO EXECUTE AN EMERGENCY WATER SYSTEM INTERTIE AGREEMENT BETWEEN THE CITY OF AUBURN AND KING COUNTY WATER DISTRICT NO. 111

WHEREAS, Auburn and King County Water District No. 111 have legal authority to exercise their powers and perform any of their functions as set forth in RCW 39.34, the Interlocal Cooperation Act; and

WHEREAS, pursuant to RCW 39.34, Auburn and King County Water District No. 111 have legal authority to cooperate with other localities on the basis of mutual advantage and provision of services; and

WHEREAS, the City of Auburn and King County Water District No. 111 currently have water facilities in the vicinity; and

WHEREAS, both agencies can increase fire protection and emergency water supply reliability for their customers; and

WHEREAS, both agencies are willing to provide the necessary services to increase fire fighting and emergency supply reliability upon the terms and conditions set forth in the Emergency Water System Intertie Agreement.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, HEREBY RESOLVES as follows:

Section 1. Pursuant to RCW 39.34, the Interlocal Cooperation Act, Auburn and King County Water District No. 111 have legal authority to cooperate with other localities on the basis of mutual advantage and provision of services.

Section 2. The Mayor is hereby authorized to execute an Emergency Water System Intertie Agreement between the City and King County Water District No. 111 in the form substantially as the agreement attached hereto, marked as Exhibit "A" and incorporated herein by this reference.

Section 3. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

Section 4. That this Resolution shall take effect and be in full force upon passage and signatures hereon.

DATED this 2nd day of June, 2003.

CITY OF AUBURN

PETER B. LEWIS
MAYOR

ATTEST:

Danielle E. Daskam,
City Clerk

APPROVED AS TO FORM:

Daniel B. Heid,
City Attorney

EMERGENCY WATER SYSTEM INTERTIE AGREEMENT
Water District No. 111/Auburn Intertie Agreement No. 1

THIS AGREEMENT made and entered into by and between the City of Auburn, hereinafter referred to as Auburn, and the Water District No. 111, hereinafter referred to as the District, for the purposes of maintaining and operating emergency system interties between the respective parties.

WITNESSETH:

WHEREAS, Auburn and the District executed an interlocal agreement regarding the Duberry Hill Development Project on July 17, 2000; and

WHEREAS, Section I(b) of that agreement states that a new interlocal agreement shall be adopted for the operation of the emergency interties established under that agreement; and

WHEREAS, both Auburn and the District have water facilities in the vicinity, and

WHEREAS, the District can increase fire protection and emergency water supply reliability for their customers in the Duberry Hill development, and

WHEREAS, Auburn can increase fire protection and emergency water supply reliability for their customers in the vicinity of the Duberry Hill development when the District connects the development to the District water system, and

WHEREAS, Auburn and the District are willing to provide the necessary services to increase fire fighting and emergency supply reliability upon the terms and conditions set forth herein,

NOW, THEREFORE, IT IS MUTUALLY AGREED as follows:

1. Interlocal Agreement regarding the Duberry Hill Development Project between the City of Auburn and Water District No. 111, dated July 17, 2000 and adopted by City of Auburn Resolution No. 3237 is hereby superceded by this Agreement.

2. The emergency water system interties are to be operated manually as a emergency supply whereby Auburn can supply water to the Duberry Hill development for the District and the District can provide water to the Aubum system once the District connects it's system to the Duberry Hill development. There are two intertie facilities, which are located near the intersection of 124th Avenue SE and SE 300th and the intersection of 127th Place SE and SE 300th at the Water Service Area Boundary between Aubum and the District.

3. The emergency water system interties shall be closed during normal operating conditions and will be opened only with prior authorization by Auburn or the District in the event of an emergency. For purposes of this agreement, an emergency shall be defined as resulting from a water shortage (not to exceed seven (7) calendar days), a major water line break, fire demand, contamination to the water supply system, mechanical equipment failure, electrical equipment failure or Puget Sound Energy facility failure, or any other agreed upon emergency within the water supply system.

4. The two valves that constitute the emergency water system interties and all piping leading up to the valves from the Auburn distribution system shall be owned and maintained by Auburn. All piping leading up to the valves from the District distribution system shall be owned and operated by the District.

5. The procedure for operating the intertie in the event of such emergency shall be as follows:

   A. Auburn or the District shall determine that an emergency of sufficient magnitude has occurred which warrants the need to request that the intertie be activated.

   B. Authorized personnel shall provide a verbal request to the system that will be supplying the water. Upon agreement that an emergency exists which shall allow for the intertie to be opened, the intertie will be activated as soon as reasonably possible. Personnel from Auburn and the District shall be present to activate the valve(s).

   C. The party requesting emergency water shall provide a written confirmation of the request not less than 24 hours after the verbal request, or on the first day of normal business after the verbal request.

   D. The intertie shall remain activated until the party requesting emergency water determines that the need for activation of the emergency intertie has ceased and shall request in writing that the intertie be closed.

   E. In case of emergency or whenever the public health, safety, or the equitable distribution of water so demands, either party may change, reduce or limit the time for or temporarily discontinue the supply of water without notice; water service may be temporarily

interrupted, limited for purposes of making repairs, extensions or doing other necessary work; and shall not be responsible for any damage resulting from interruption, change or failure of the water supply, and the receiving party shall save and hold harmless the providing party from any loss, damages or suits to or by customers of the receiving party resulting from interruption, change or failure of water supply provided by this Agreement, except damages arising out of the providing party's negligence. Prior to a planned interruption or limiting of service, the providing party will notify the receiving party of such not less than three days prior to the service disruption. The providing party agrees to use best efforts and reasonable diligence to notify the receiving party as soon after it becomes aware of the need for service disruption and further will, to the extent practical, limit the service disruption to daylight hours.

6. To the extent allowed by law, the District shall defend, indemnify, and hold harmless Auburn, its elected officials, employees and agents from and against any and all suits, claims, actions, losses, costs, expenses of litigation, attorney's fees, penalties and damages of whatsoever kind or nature arising out of or in connection with or incident to an act or omission of the District, its employees, agents, and contractors in the performance of the District's obligations under this Agreement. This indemnification provision shall include, but is not limited to, all claims against Auburn by an employee or former employee of the District or its contractors and, as to such claims, the District expressly waives all immunity and limitation of liability under Title 51 RCW.

   To the extent allowed by law, Auburn shall defend, indemnify and hold harmless the District, its elected officials, employees and agents from and against any and all suits, claims, actions, losses, costs, expenses of litigation, attorney's fees, penalties, and damages or whatsoever kind or nature arising our of, in connection with or incident to an act or omission of Auburn, its employees, agents, and contractors in the performance of Auburn's obligations under this Agreement. This indemnification obligation shall include, but is not limited to, all claims against the District by an employee or former employee of Auburn or its contractors and, as to such claims, Auburn expressly waives all immunity and limitation of liability under Title 51 RCW.

7. This Agreement shall remain in force until terminated by either party hereto upon 60-days written notice to the other party.

IN WITNESS WHEREOF, we have hereunto set our hands and seals.

CITY OF AUBURN
King County, Washington

By: JUN 2 2003
Mayor Date

WATER DISTRICT NO. 111
King County, Washington

By: 6-9-03
District Manager Date

Approved as to form:

By:
City Attorney Date

Approved as to form:

By:
General Counsel Date

H:\WQWATER UTILITY\INTERTIES\WD111\DUBERRY EIA 051403.DOC

RESOLUTION NO. **3637**

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, SUPERCEDING RESOLUTION NO. 3543 AND AUTHORIZING THE MAYOR TO EXECUTE A TURNOUT CONSTRUCTION AGREEMENT BETWEEN THE CITY OF AUBURN AND THE CITY OF TACOMA WATER DIVISION

WHEREAS, Auburn and Tacoma are responsible for operating and maintaining public water systems in accordance with federal, state and local laws and regulations, and

WHEREAS, the parties recognize that water resources are finite and vulnerable, and the prudent use and management of these resources requires cooperation among water utilities, and

WHEREAS, Auburn and Tacoma entered into a Turnout Construction Agreement authorized by City of Auburn Resolution No. 3543, dated November 18, 2002, for the construction of one turnout, and

WHEREAS, Auburn and Tacoma have determined that it would be beneficial to construct two additional turnouts, and

WHEREAS, Auburn has water facilities in the vicinity of the Tacoma Second Supply Project pipeline, and Auburn will have an agreement with one or more SSP Partner to purchase water that will be delivered via the SSP, and

pursuant to this agreement construction of the turnout to the SSP is set forth which turnout will be used for delivering and metering the purchased water, and

WHEREAS, this agreement will supercede the Turnout Construction Agreement authorized by City of Auburn Resolution No. 3543, dated November 18, 2002.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, HEREBY RESOLVES as follows:

Section 1. This resolution shall supercede Resolution No. 3543, and authorizes the Mayor to execute the Turnout Construction Agreement between the City and the City of Tacoma Water Division, in substantial conformity with the agreement attached hereto, marked as Exhibit "A" and incorporated herein by this reference.

Section 2. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

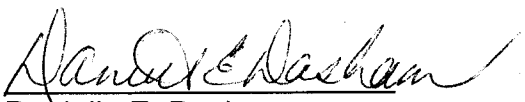
Section 3. That this Resolution shall take effect and be in full force upon passage and signatures hereon.

Dated and Signed this 15th day of September 2003.

CITY OF AUBURN

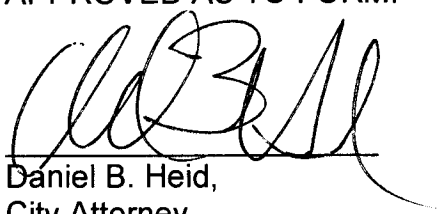
PETER B. LEWIS
MAYOR

ATTEST:



Danielle E. Daskam,
City Clerk

APPROVED AS TO FORM:



Daniel B. Heid,
City Attorney

TURNOUT

CONSTRUCTION AGREEMENT

BETWEEN TACOMA WATER

AND CITY OF AUBURN

This agreement made and entered into this 9th day of Oct, 2003, by and between the City of Auburn (hereinafter referred to as "Auburn") and City of Tacoma Water Division (dba Tacoma Water and hereinafter referred to as "Tacoma"), WITNESSETH THAT:

A. RECITALS:

WHEREAS, Auburn and Tacoma are responsible for operating and maintaining public water systems in accordance with federal, state and local laws and regulations, and

WHEREAS, the parties recognize that water resources are finite and vulnerable, and the prudent use and management of these resources requires cooperation among water utilities, and

WHEREAS, Auburn and Tacoma have previously entered into a Turnout Construction Agreement authorized by City of Auburn Resolution No. 3543, dated November 18, 2002, for the construction of one turnout, and

WHEREAS, Auburn and Tacoma have determined that it would be beneficial to construct two additional turnouts, and

WHEREAS, Auburn has water facilities in the vicinity of the Tacoma Second Supply Project (SSP) pipeline, and Auburn will have an agreement with one or more SSP Partner to purchase water that will be delivered via the SSP, and pursuant to this agreement construction of the turnout to the SSP is set forth which turnout will be used for delivering and metering the purchased water.

NOW THEREFORE, IT IS MUTUALLY AGREED as follows:

B. The Turnout Construction Agreement between Tacoma Water and City of Auburn dated November 8, 2002, and adopted by City of Auburn Resolution 3543 dated November 18, 2002, is hereby superceded by this Agreement.

C. DEFINITIONS:

The definition of certain terms, when used in this agreement, are as follows:

TURNOUT means a physical connection between water mains of the two parties to this agreement, at specifically identified points, where water may be transferred

from the supplies of one system to the transmission or distribution facilities of the other.

ISOLATION VALVE means a positive shut-off valve that shall be installed immediately downstream of the water meter vault at the point in each water system that is used to accept or deliver water through the turnout. The isolation valve is defined as part of the system connected to the turnout and not part of the turnout. Each connected system has sole responsibility for providing and operating their isolation valve.

TURNOUT CAPACITY means the maximum flow capacity for water to be delivered through a turnout as agreed upon by the parties to this agreement. Turnout facilities shall be designed so as to be capable of conveying no less than the maximum agreed upon flow.

SSP means the Second Supply Project (to bring water to the SSP Partners)

SSP ISOLATION VALVE means a positive shut-off valve that shall be installed at the point in each water system that is used to accept or deliver water through the turnout. The SSP isolation valve is defined as part of the system connected to the turnout upstream of the meter vault. Each connected system has sole responsibility for providing the SSP isolation valve. Tacoma will be responsible for operating the SSP isolation valve.

SSP PARTNERS refers to the City of Kent, Tacoma Water, Covington Water District and Lakehaven Utility District.

D. PURCHASE OF WATER FOR THIS TURNOUT:

The purchase of water to be delivered via this subject turnout shall be by a separate agreement with one or more of the SSP Partners and Auburn. This Turnout Construction Agreement does not guarantee any rights to use or purchase water from any of the SSP Partners. Tacoma will only allow Auburn, its successors and assigns, to obtain water via the subject turnout after the applicable SSP partner has advised Tacoma in writing that an acceptable agreement for water purchase has been executed. In delivering water via the subject turnouts, Tacoma will be relying on directions and/or confirmation from the SSP partner as to the timing and quantities of water deliveries and all other aspects of providing water via the subject turnouts. In the event of a disagreement between Auburn and the applicable SSP Partner pertaining to entitlement to continued water delivery via the subject turnouts, Tacoma is entitled to rely on the written directions or instructions of the SSP partner. Therefore, Auburn agrees that it shall not file any claim or legal action against Tacoma when Tacoma's actions are consistent with the written directions or instructions from the applicable SSP partner from which Auburn has contractual arrangements to purchase water.

E. CONDITIONS:

1. The TURNOUTS described in Exhibits A, B-1, B-2 and B-3 attached to this agreement shall be governed by the terms of this agreement. No future TURNOUTS shall be permissible without a subsequent and separate written agreement between the parties.

2. The cost of design and construction of the TURNOUTS and installation of the meters shall be the responsibility of Auburn, and the design and construction shall be subject to Tacoma's review, inspection and approval.

3. By this agreement Auburn agrees that the ownership of the SSP ISOLATION VALVES directly off of the SSP Project, piping from the SSP ISOLATION VALVES to the meters or spools, the meters or spools, meter vaults, pipe stubs out from the vaults and telemetry shall be with Tacoma (see Exhibit A for more information), with all capital costs to be paid by Auburn. Maintenance and operation of the SSP ISOLATION VALVES, piping and meters will be performed solely by Tacoma, and Auburn will be invoiced for such costs and shall reimburse Tacoma. Meter vault maintenance costs and any cost for maintaining any equipment such as pumps, buildings and other appurtenances downstream of the meter shall also be the responsibility of Auburn. In addition, in the event any of the facilities require replacement or upgrading, this cost is Auburn's responsibility. In the event that access or other permits are necessary for Tacoma to operate and maintain the subject facilities, Auburn shall provide the necessary permits, which shall also become an exhibit to this agreement. (See Exhibit A for a plan showing the facilities and the responsibility of the parties).

4. Upon completion of the construction of the Turnouts, Tacoma will own the meters and associated appurtenances necessary to monitor use of the turnouts.

5. Auburn shall comply with all applicable laws and requirements including City of Tacoma ordinances/resolutions and Customer Service Policies and/or other rules applicable to a connection to Tacoma's water system including, but not limited to, the requirements that Tacoma provide written approval of plans and specifications for the connection of turnout facilities prior to construction.

6. Auburn agrees that it shall make payment of all invoices for services and charges from Tacoma within 45 days of the invoice date. Late payment shall result in a late payment charge of 1% on the unpaid balance, and failure to pay any invoice or bill related to this agreement within 60 days of mailing may result in Tacoma's termination of water service at the turnout.

7. Notices should be sent to Auburn and to Tacoma at the following addresses:

Water Superintendent
Tacoma Water
P. O. Box 11007
Tacoma, WA 98411

Public Works Director
City of Auburn
25 West Main
Auburn, WA 98001-4998

8. Neither this Agreement nor any right or privilege herein shall be assigned by any party without the written consent of the other parties.

9. Uncontrollable forces or state or federal law changes may occur during the time this Agreement is in place. Neither of the parties hereto shall be considered to be in default in respect to any obligations hereunder if prevented from fulfilling such obligations by reason or uncontrollable forces or material changes in state or federal law or enforcement thereof. Parties rendered unable to fulfill any obligation hereunder by reason of an uncontrollable force or material change in state or federal law shall exercise due diligence to deal with such uncontrollable force with all reasonable dispatch and to take actions consistent with the purpose of this agreement.

10. This Agreement describes the entire relationship of the parties with regard to the subject matter herein concerned. Except as maybe explicitly provided otherwise herein, the parties are independent agencies and shall not be deemed to be partners, joint ventures, principals, or agents or each other for any purpose whatsoever. Each party shall have and maintain sole and complete control over all of its employees, agents and operations. Except as may otherwise be explicitly provided herein, or in separate agreement, each and all of the obligations, responsibilities, and liabilities of the parties under and in connection with this Agreement are several, and not joint, and no separate legal or administrative entity will be created to fulfill the purposes of this Agreement.

11. Except as expressly set forth in this Agreement, none of the provisions of this Agreement shall inure to the benefit or be enforceable by any third party.

12. The invalidity or unenforceability of any provision of this Agreement shall not affect the other provisions hereof, and this Agreement shall be construed in all respects as if such invalid or unenforceable provisions were omitted.

13. No change, amendment or modification or any provision of this Agreement shall be valid unless set forth in a written amendment to this Agreement signed by all parties.

14. The SSP Partners must approve this Agreement.

IN WITNESS WHEREOF, the following parties have duly executed this agreement on the date written above:

City of Tacoma
Department of Public Utilities
Water Division

By: Kenneth D. Merry
Title: Water Superintendent

Approved as to form & legality:
Asst City Attorney

City of Auburn

By:
Title:

Approved as to form & legality:

Approved by the SSP Project Partners at their Project Committee meeting held on September 12, 2003.

EXHIBIT A

TURNOUT DESCRIPTION

A. TURNOUT #1: A turnout between a 60" diameter water line owned by Tacoma and a 16" diameter water line containing Auburn water. The turnout is located at the intersection of 132nd Avenue SE and SE 296th Street extended. The turnout consists of 12" diameter piping with 12" diameter valves to control flow. A 6-inch diameter water meter will be used to measure the volume of water transferred between the two systems. The meter will be contained in a concrete vault buried in the Second Supply Pipeline right-of-way. Second Supply Pipeline construction drawings 15-19-62 and 15-19-69 are attached and show the detail for the turnout vault construction.

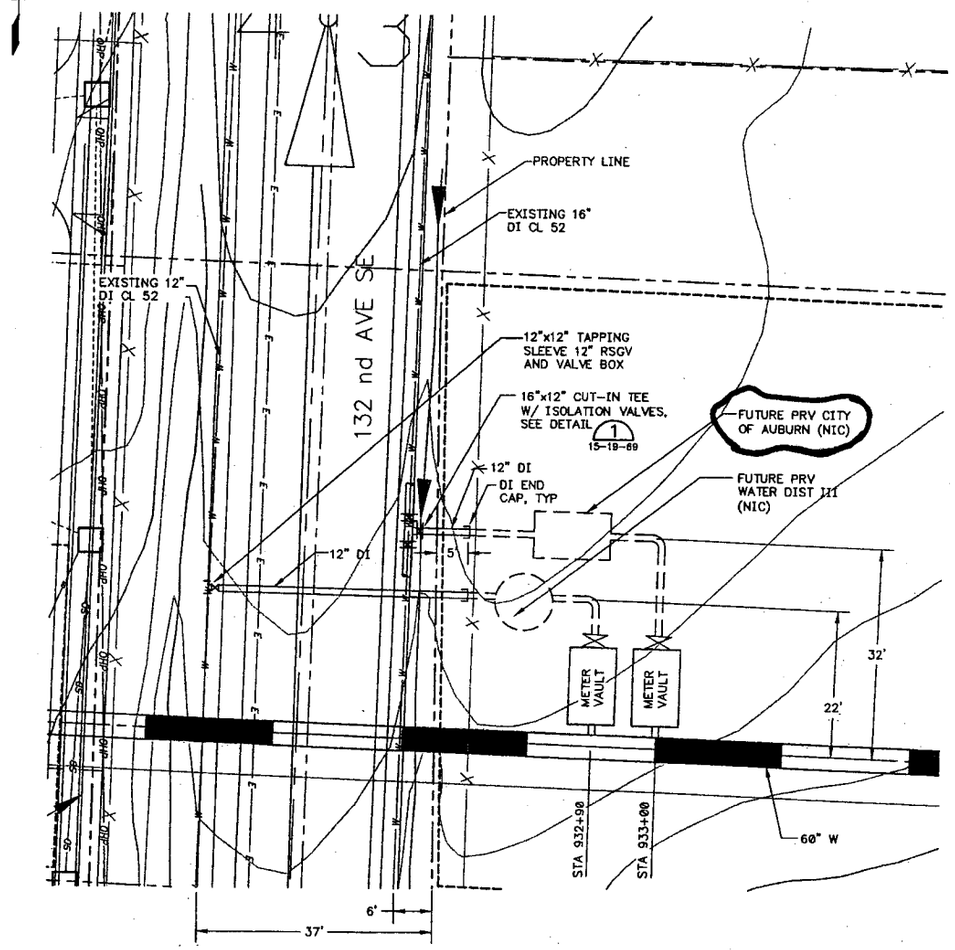
The turnout is designed to be capable of conveying at least 3000 gallons per minute from Tacoma owned facilities to Auburn with approximately 125-foot differential in hydrostatic pressure under normal operating conditions.

B. TURNOUT #2: A 12-inch turnout connection located on the east side of B Street NW and approximately 32nd Street NW between Tacoma's 60"diameter Second Supply Pipeline and Auburn's 16" diameter water line in B Street. An 8-inch diameter water meter will be used to measure the volume of water transferred between the two systems. Second Supply Pipeline construction drawings 15-25-29 and 15-21-62 are attached and show the details for the turnout vault construction.

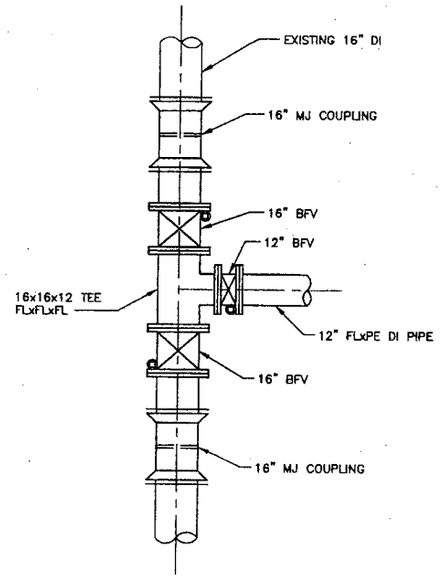
The turnout is designed to be capable of conveying at least 8300 gallons per minute from Tacoma owned facilities to Auburn with approximately 405-foot differential in hydrostatic pressure under normal operating conditions.

C. TURNOUT #3: A 12-inch turnout connection located at approximately K Street NE and approximately 32nd Street NE between Tacoma's 60" diameter Second Supply Pipeline and Auburn's adjacent water line. An 8-inch diameter water meter will be used to measure the volume of water transferred between the two systems. Second Supply Pipeline construction drawings 15-25-29 and 15-21-66 are attached and show the details for the turnout vault construction.

The turnout is designed to be capable of conveying at least 8300 gallons per minute from Tacoma owned facilities to Auburn with approximately 405-foot differential in hydrostatic pressure under normal operating conditions.



SERVICE CINNECTION PLAN
SCALE:1"=20'



16" CONNECTION DETAIL 1 15-19-69
SCALE:1/2"=1'-0"

NOTE:

1. DUCTILE IRON PIPE TO BE CLASS 52 WITH RESTRAINED JOINTS.
2. PROVIDE 14 DAYS NOTICE TO WATER DISTRICT NO III PRIOR TO MAKING INTERCONNECTIONS.
3. TRENCH BACKFILL AND SURFACE RESTORATION SHALL BE PER DETAIL 1 15-20-72
4. BUTTERFLY VALVES SHALL CONFORM TO AWWA/C504 250 PSI RATING. PROVIDE EXTENSION STEM AND VALVE BOX TO GRADE.

DATUM
HORIZONTAL DATUM:
WASHINGTON COORDINATE SYSTEM, NORTH ZONE NAD 83/91
VERTICAL DATUM:
NGVD-29

MICHAEL P. BLANCHETTE STATE OF WASHINGTON 21511 REGISTERED PROFESSIONAL ENGINEER
EXPIRES: 3/13/04

TIMOTHY A. HARRIS STATE OF WASHINGTON 16870 REGISTERED PROFESSIONAL ENGINEER
EXPIRES: 11/04/02

NO.	REVISION	DATE	BY	APP'D.	REV. COMP.
6					
5					
4					
3					
2					
1					

CH2MHILL | MWH MONTGOMERY WATSON HARZA | HDR Engineering, Inc.

REFERENCE

DATE APRIL 16, 2002
DESIGN M. BLANCHETTE
DRAWN B. KEEVER
CHECKED

W.O. 73005
DISTRICT PROJECT NUMB. PLSNA083
DISTRICT FILE NUMB.
FIELD BOOK
DATA FILE

APPROVED
MANAGER

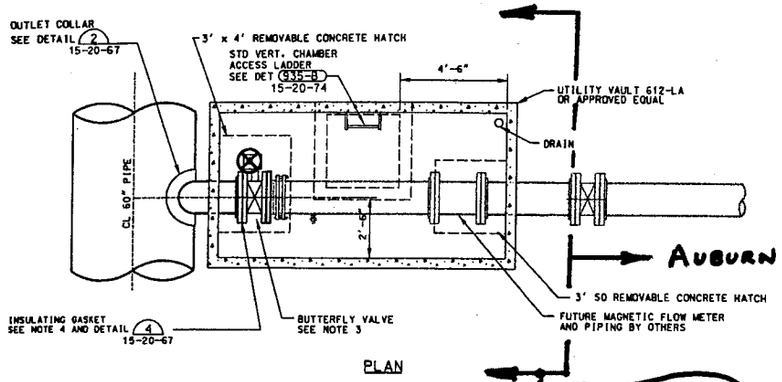
TACOMA WATER
TACOMA PUBLIC UTILITIES

TACOMA SECOND SUPPLY PROJECT

MIDDLE REACH - EASTERN SECTION
SERVICE CONNECTION DETAILS
132ND AVE SE

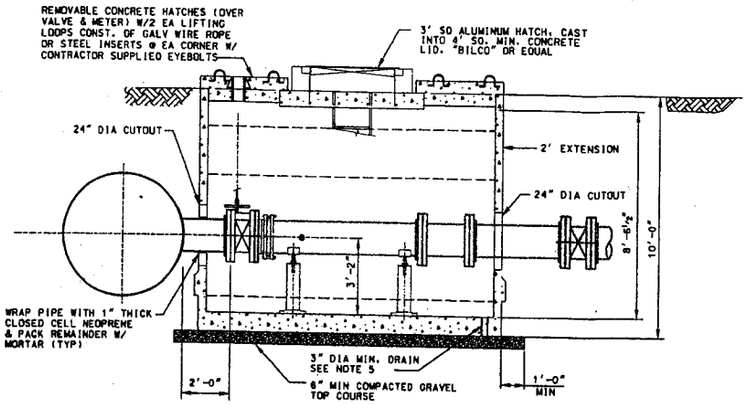
SCALE
HORZ: 1" = 10'
VERT: 1" = 10'
DRAWING NO.
15-19-69
SHEET 50 OF 115

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.



PLAN

CONSTRUCTION, O&M BY TACOMA



SECTION

SERVICE CONNECTION TABLE						
LOCATION	SIZE	WATYER PURVEYOR	CONTACT	TELEPHONE NUMBER	PRV VAULT	LINE TAP SEE NOTE 6
STA 905+35	12	CITY OF KENT	DON WIGSTROM	253-856-5500	FUTURE	FUTURE
STA 933+00	12	CITY OF AUBURN	DUANE HUSKY	253-804-5062	FUTURE	YES
STA 932+90	12	WATER DISTRICT 111	TOM DOZALL	253-631-3770	FUTURE	YES
STA 985+35	12	COVINGTON WATER DISTRICT	JAY GIBSON	253-631-0565	FUTURE	FUTURE
STA 1130+00	12	COVINGTON WATER DISTRICT	JAY GIBSON	253-631-0560	FUTURE	FUTURE

NOTE:

1 GROUNDING MATS FOR VAULTS NOT SHOWN. SEE DETAIL 1/15-20-65

2 ALL FLANGES SHALL BE ANSI/ASME B 16.5 (CLASS 300)

3 BUTTERFLY VALVES SHALL CONFORM TO AWWA/C 504 250 PSI WHERE WORKING PRESSURE IS LESS THAN OR EQUAL TO 250 PSI. USE HIGH PRESSURE 300 PSI VALVES FOR WORKING PRESSURE GREATER THAN 250 PSI. WHERE BURIED, PROVIDE EXTENSION STEM AND VALVE BOX TO GRADE.

4 TYPE "I" TEST STATION TO BE LOCATED AT EACH INSULATING GASKET PER DETAIL 6 ON DRAWING 15-20-64.

5 IN AREAS OF HIGH WATER OR WHEN DIRECTED BY THE ENGINEER, OMIT CHAMBER DRAIN & GRAVEL AND PLACE 12" DIA CONCRETE PIPE 12" LONG IN BASE SLAB. PIPE BOTTOM WITH 3" OF CONCRETE & PLACE 3/8" PLATE COVER RECESS FLUSH WITH SLAB. DRILL 5-1" DIA EQUALLY SPACED HOLES IN PLATE & HOT DIP GALVANIZE.

6 SEE PLAN AND PROFILE DRAWINGS FOR INFORMATION ON REQUIRED LINE TAPS FOR UTILITIES RECEIVING A WATER SERVICE.

SERVICE CONNECTION AND METER TURNOUT VAULT (1)

3/8"=1'-0"

GRADY S. HARRIS — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — EXPIRES: 6/17/04

ELDON L. HOYER — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — EXPIRES: 11/04/02

NO.	REVISION	DATE	BY	APP'D.	REV. COMPL.
6					
5					
4					
3					
2					
1					

CH2MHILL — MWH — HDR Engineering, Inc.

REFERENCE

DATE 04/15/2002
DESIGN TAL/LCS
DRAWN DGP/SRD
CHECKED DRM

W.O. 73005
CADKEY PROJECT NAME PLSNAD83
CADKEY FILE NAME
FIELD BOOK
DATA FILE

APPROVED — MANAGER

TACOMA WATER
TACOMA PUBLIC UTILITIES

TACOMA SECOND SUPPLY PROJECT

MIDDLE REACH - EASTERN SECTION

SERVICE CONNECTION VAULT DETAILS

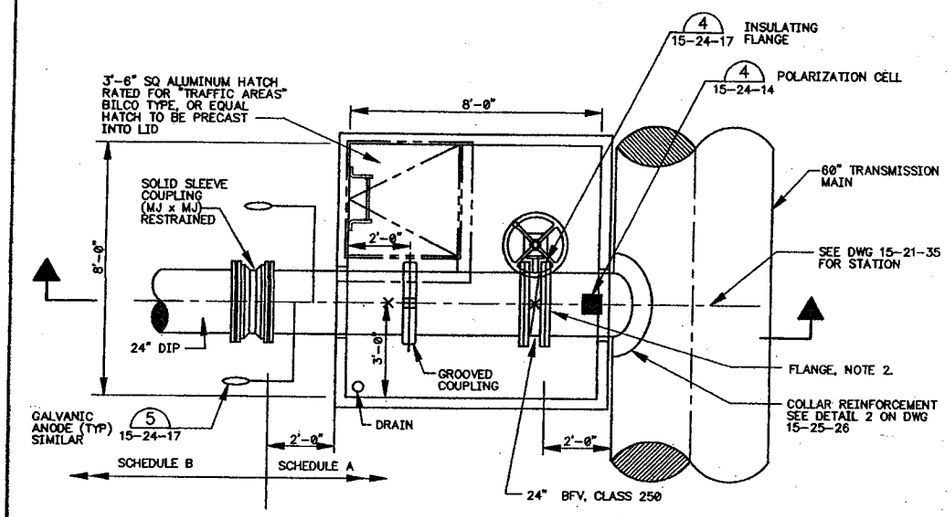
SCALE 3/8"=1'-0"

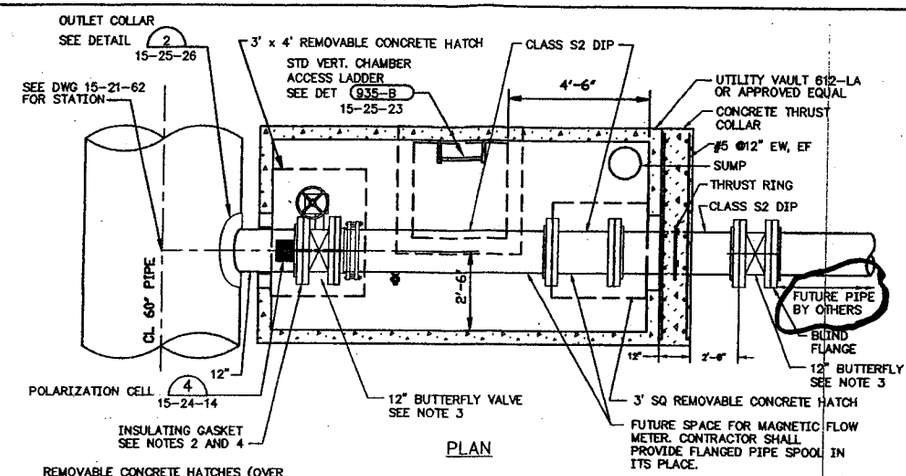
DRAWING NO. 15-19-62

SHEET 43 OF 115

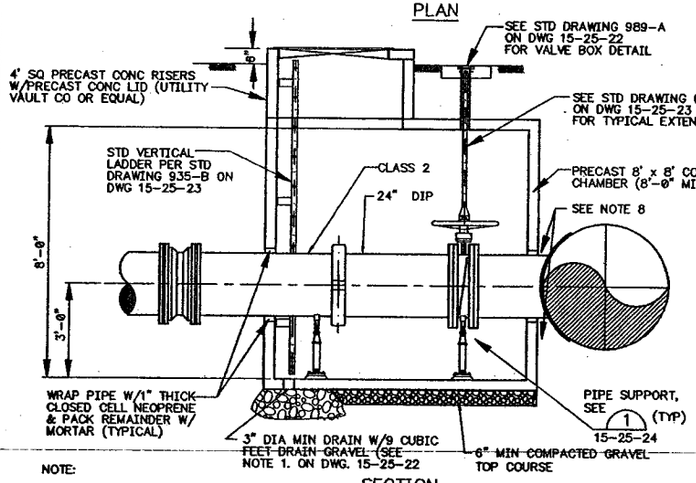
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

d:\tpw\15x22 MicroStation Segment\Division\Drawings\Details\15-19-62.dgn





PLAN

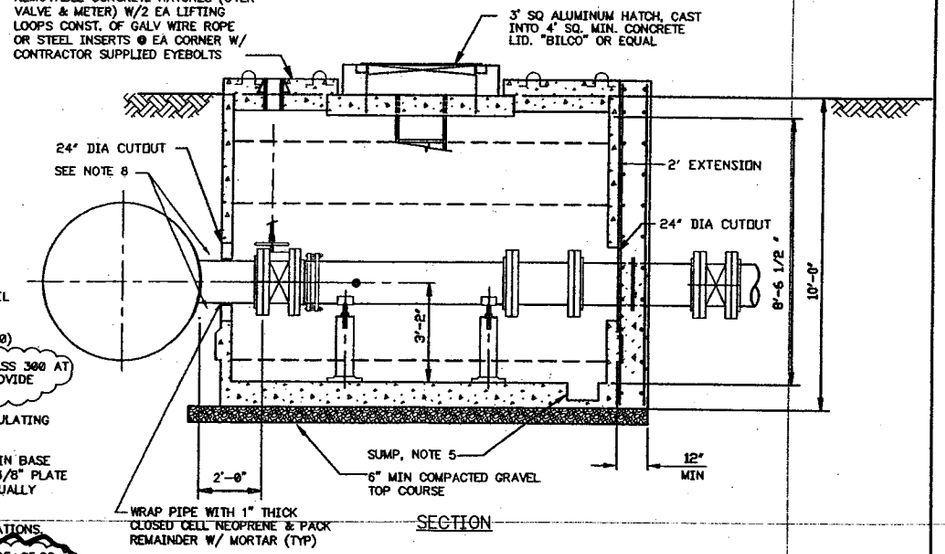


SECTION

NOTE:
GROUNDING MAT AND POLARIZATION CELL NOT SHOWN. SEE DETAIL 1 15-24-15 AND DETAIL 4 15-24-14

24" TURNOUT VALVE VAULT 1

SCALE 1/2" = 1'-0"



SECTION

NOTES:

1. GROUNDING MATS FOR VAULTS NOT SHOWN. SEE DETAIL 1/15-24-15
2. ALL FLANGES SHALL BE ANSI/ASME B 16.5 (CLASS 300)
3. 12" BUTTERFLY VALVES SHALL BE HIGH PRESSURE CLASS 300 AT STA 765+85.22 AND STA 803+50. WHERE BURIED, PROVIDE EXTENSION STEM AND VALVE BOX TO GRADE.
4. TYPE "I" TEST STATION TO BE LOCATED AT EACH INSULATING GASKET PER DETAIL 6 ON DRAWING 15-24-14.
5. FOR SUMP, PLACE 12" DIA CONCRETE PIPE 12" LONG IN BASE SLAB. PIPE BOTTOM WITH 3" OF CONCRETE & PLACE 3/8" PLATE COVER RECESS FLUSH WITH SLAB. DRILL 5-1" DIA EQUALLY SPACED HOLES IN PLATE & HOT DIP GALVANIZE.
6. SEE PLAN AND PROFILE DRAWINGS FOR TURNOUT LOCATIONS.
7. REGARDING THE 12" SERVICE CONNECTIONS AT STA 765+85.22 AND STA 803+50, CONTACT DUANE HUSKY AT THE CITY OF AUBURN (253-804-5062) 2 WEEKS PRIOR TO INSTALLATION.
8. PROVIDE CLSM BACKFILL IN PIPE BASE AND PIPE ZONE BETWEEN 60" PIPE & VAULT.

12" SERVICE CONNECTION AND METER TURNOUT VAULT 2

1/2"=1'-0"

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

ESTHER L. STOCKS — EXPIRES 9/06/04
DARRYL D. LARSEN — EXPIRES 11/04/04

NO.	REVISION	DATE	BY	APP'D.	REV. COMP.
1	ADDENDUM NO. 1	1/31/03	PLM	TAL	

CH2MHILL — MWH Montgomery Watson Harza — HDR Engineering, Inc.

REFERENCE

DATE JAN 2003
DESIGN
DRAWN SDS
TRACED
CHECKED

W.O. 71881
DIRECT PROJECT NAME: PLANAD83
DIRECT FILE NAME:
FIELD BOOK
DATA FILE

APPROVED

TACOMA WATER — TACOMA PUBLIC UTILITIES

TACOMA SECOND SUPPLY PROJECT

MIDDLE REACH – WESTERN SECTION
STANDARD DETAILS
TURN-OUT VALVE VAULTS

SCALE AS SHOWN

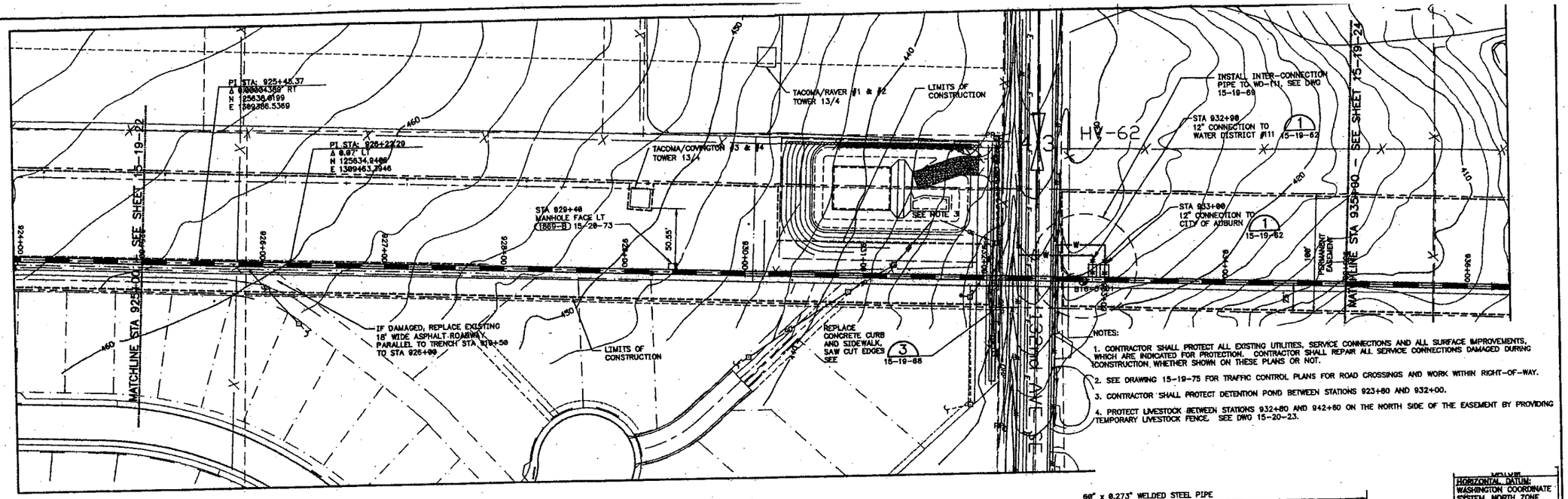
DRAWING NO. 15-25-29

SHEET 152 OF 207

Exhibit B-1

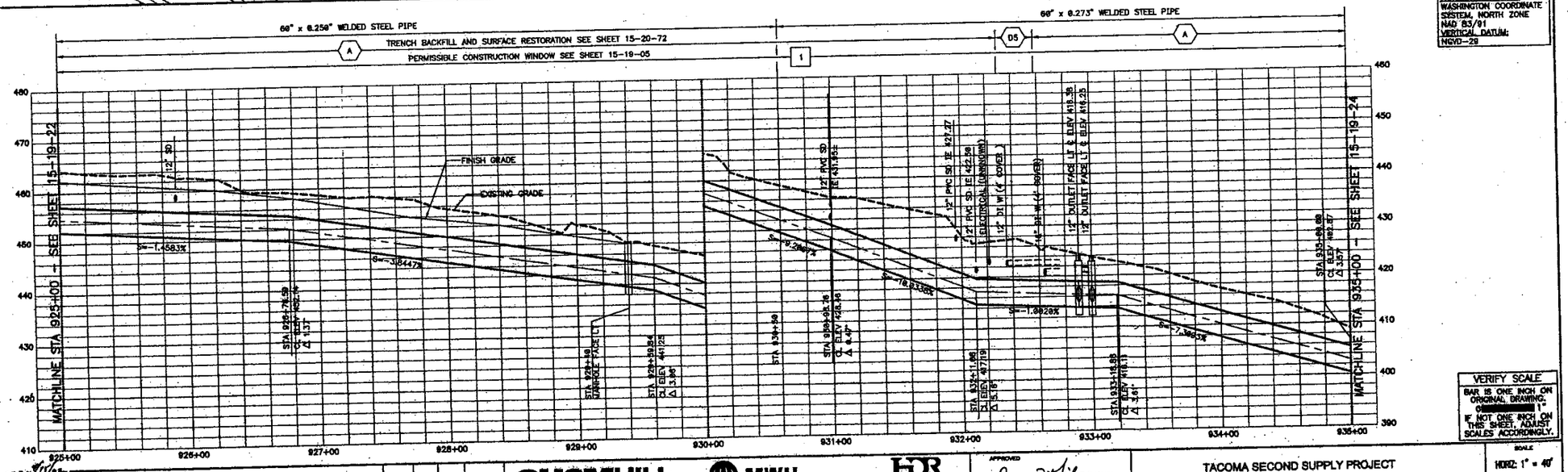
General Vicinity Map of Turnout #1 Facilities

(SSP construction drawing 15-19-23)



NOTES:

1. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES, SERVICE CONNECTIONS AND ALL SURFACE IMPROVEMENTS, WHICH ARE INDICATED FOR PROTECTION. CONTRACTOR SHALL REPAIR ALL SERVICE CONNECTIONS DAMAGED DURING CONSTRUCTION, WHETHER SHOWN ON THESE PLANS OR NOT.
2. SEE DRAWING 15-19-75 FOR TRAFFIC CONTROL PLANS FOR ROAD CROSSINGS AND WORK WITHIN RIGHT-OF-WAY.
3. CONTRACTOR SHALL PROTECT DETENTION POND BETWEEN STATIONS 923+80 AND 932+00.
4. PROTECT LIVESTOCK BETWEEN STATIONS 932+80 AND 942+60 ON THE NORTH SIDE OF THE EASEMENT BY PROVIDING TEMPORARY LIVESTOCK FENCE. SEE DWG 15-20-23.



HORIZONTAL DATUM:
WASHINGTON COORDINATE SYSTEM, NORTH ZONE
NAD 83/91
VERTICAL DATUM:
NGVD-29

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

NO.	REVISION	DATE	BY	APP'D.	REV. COMPL.
6					
5					
4					
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2					
1					

CH2MHILL
MWH MONTGOMERY WATSON HARZA
HDR Engineering, Inc.

REFERENCE

DATE APRIL 16, 2002
DESIGN M. BLANCHETTE
DRAWN E. CLEAVER
DESIGNED
CHECKED

W.O. 73005
CONST. PROJECT NUMBER PI-SHA063
CONST. FILE PATH
FIELD BOOK
DATA FILE

APPROVED
TACOMA WATER
TACOMA PUBLIC UTILITIES

TACOMA SECOND SUPPLY PROJECT

MIDDLE REACH – EASTERN SECTION
PLAN AND PROFILE
STA 925+00 TO 935+00

SCALE
HORZ: 1" = 40'
VERT: 1" = 10'

DRAWING NO.
15-19-23

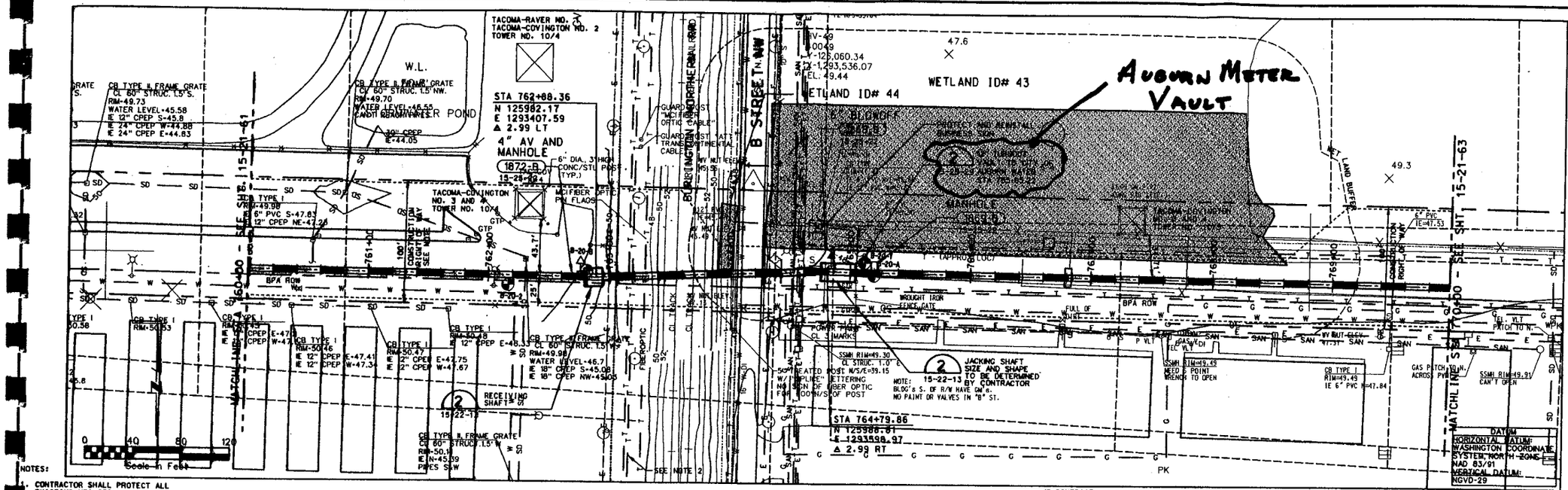
SHEET 12 OF 115

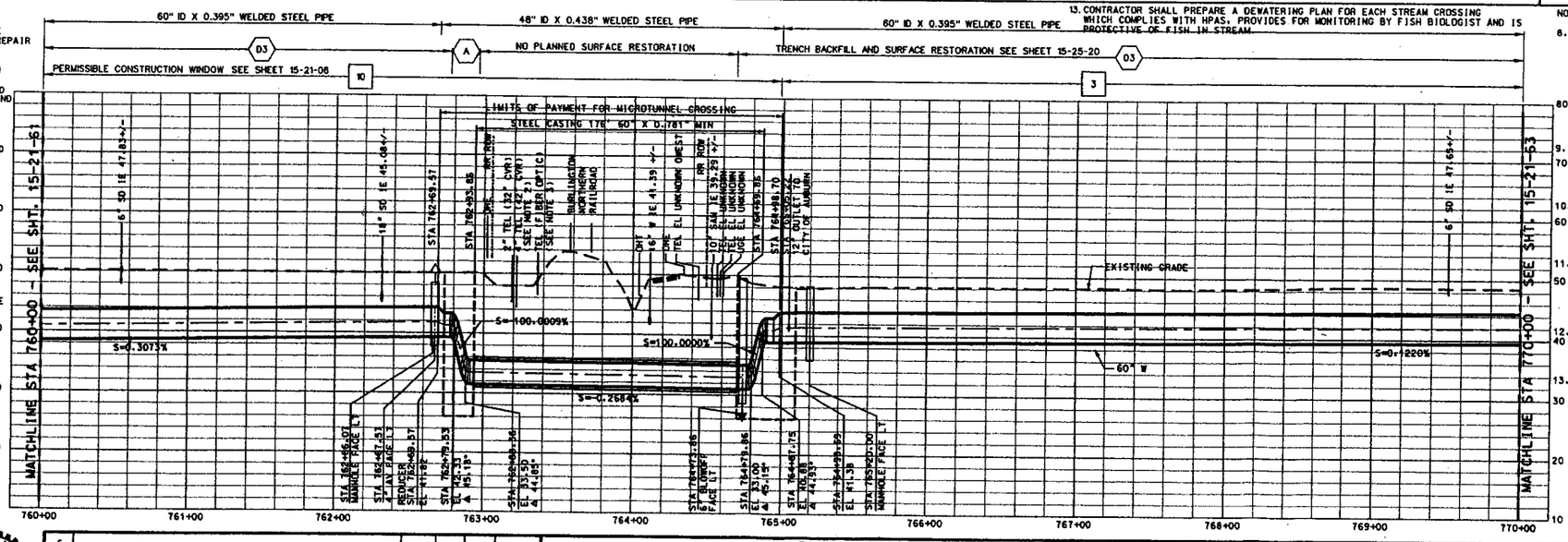
EXPIRES: 9/19/04
EXPIRES: 11/20/04

Exhibit B-2

General Vicinity Map of Turnout #2 Facilities

(SSP construction drawing 15-21-62)





NOTES:

1. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES, SERVICE CONNECTIONS, AND SURFACE IMPROVEMENTS UNLESS OTHERWISE INDICATED. CONTRACTOR SHALL REPAIR ALL SERVICE CONNECTIONS AND UTILITIES DAMAGED DURING CONSTRUCTION WHETHER SHOWN ON THESE PLANS OR NOT.
2. ATT FIBER OPTIC CABLE IN 4" AND 2" PVC CONDUIT. CALL SHEIKH MOMD AT 206-349-0180 FOR FURTHER INFORMATION AND TO COORDINATE WITNESSING OF WORK IN THIS AREA.
3. CONTACT MIKE STAFFORD AT MCI WORLD COM AT 206-730-9306 FOR FURTHER INFORMATION.
4. EASEMENT THROUGH EMERALD DOWNS IS OWNED IN FEE BY CITY OF TACOMA.
5. SIGNIFICANT DEWATERING IS ANTICIPATED IN THE AUBURN VALLEY FROM APPROXIMATELY STA 712+00 TO STA 840+00. CONTRACTOR IS RESPONSIBLE FOR THE CARE OF THIS WATER AND COMPLIANCE WITH APPLICABLE WATER QUALITY REGULATIONS SEE SPECIFICATION SECTION 02140.
6. TEMPORARY FILL MAY BE PLACED IN DITCH AT STA 764+00 IF NECESSARY TO STABILIZE AREA FOR TUNNELING.
7. SEE DRAWING 15-23-62 FOR REDUCED CONSTRUCTION LIMITS THROUGH WETLAND, EROSION CONTROL MEASURES, AND RESTORATION PLANS.
8. WETLANDS IMPACTED BY CONSTRUCTION SHALL BE RESTORED TO ORIGINAL GRADE USING WETLAND SOILS. WETLAND SOILS, INCLUDING TOP SOIL SHALL BE SEGREGATED AND STOCKPILED FOR RESTORATION OF WETLANDS AND WETLAND BUFFERS. NO TEMPORARY STOCKPILING OF SOILS WILL BE ALLOWED WITHIN WETLANDS OR WETLAND BUFFERS.
9. TIMBER MATTS MAY BE REQUIRED TO ENSURE CONSTRUCTION EQUIPMENT HAS ADEQUATE TRACTION IN WETLANDS AND TO AVOID OVER COMPACTION OF SOILS.
10. SEE SHEET 15-22-40 FOR TRAFFIC CONTROL PLANS FOR ROAD CROSSINGS AND WORK WITHIN ROAD RIGHT OF WAY UNTIL CROSSING RESTORED.
11. CONTRACTOR SHALL MAINTAIN ACCESS TO BUSINESSES DURING WORKING AND NON-WORKING HOURS. TEMPORARY CLOSURES SHALL BE COORDINATED WITH PROPERTY OWNER AND TENANTS.
12. CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNERS REGARDING UTILITIES, ACCESS AND RELATED CONSTRUCTION ISSUES.
13. USE TYPE II PIPE BEDDING AND PIPE ZONE BACKFILL FROM STA 749+30 TO STA 803+00. SEE SECTION 2200-2.2.0.1b.
13. CONTRACTOR SHALL PREPARE A DEWATERING PLAN FOR EACH STREAM CROSSING WHICH COMPLIES WITH HPAS, PROVIDES FOR MONITORING BY FISH BIOLOGIST AND IS PROTECTIVE OF FISH IN STREAM.

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

NO.	REVISION	DATE	BY	APP'D.	REV. COMP.
6					
5					
4					
3					
2					
1					

CH2MHILL | MWH | HDR Engineering, Inc.

REFERENCE

DATE JAN 2003
DESIGN LCS
DRAWN DGP/SN/JES
DETAILED
CHECKED WAC/GSH

W.O. 71001
CADKEY PROJECT NAME PLRNAD83
CADKEY FILE NAME
FIELD BOOK
DATA FILE

APPROVED
MANAGER

TACOMA WATER
TACOMA PUBLIC UTILITIES

TACOMA SECOND SUPPLY PROJECT
MIDDLE REACH - WESTERN SECTION
PLAN AND PROFILE
STA 760+00 TO STA 770+00

SCALE
HORIZ: 1"=40'
VERT: 1"=10'

DRAWING NO.
15-21-62

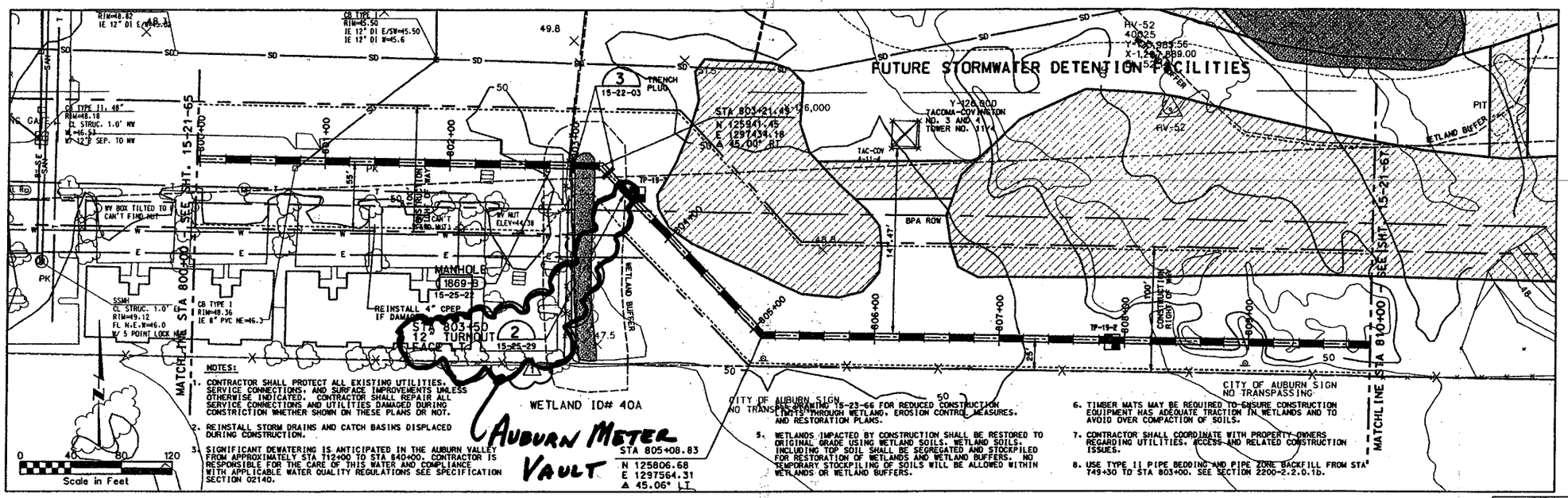
SHEET 46 OF 207

EXPIRES: 02/15/03
EXPIRES: 11/04/04

Exhibit B-3

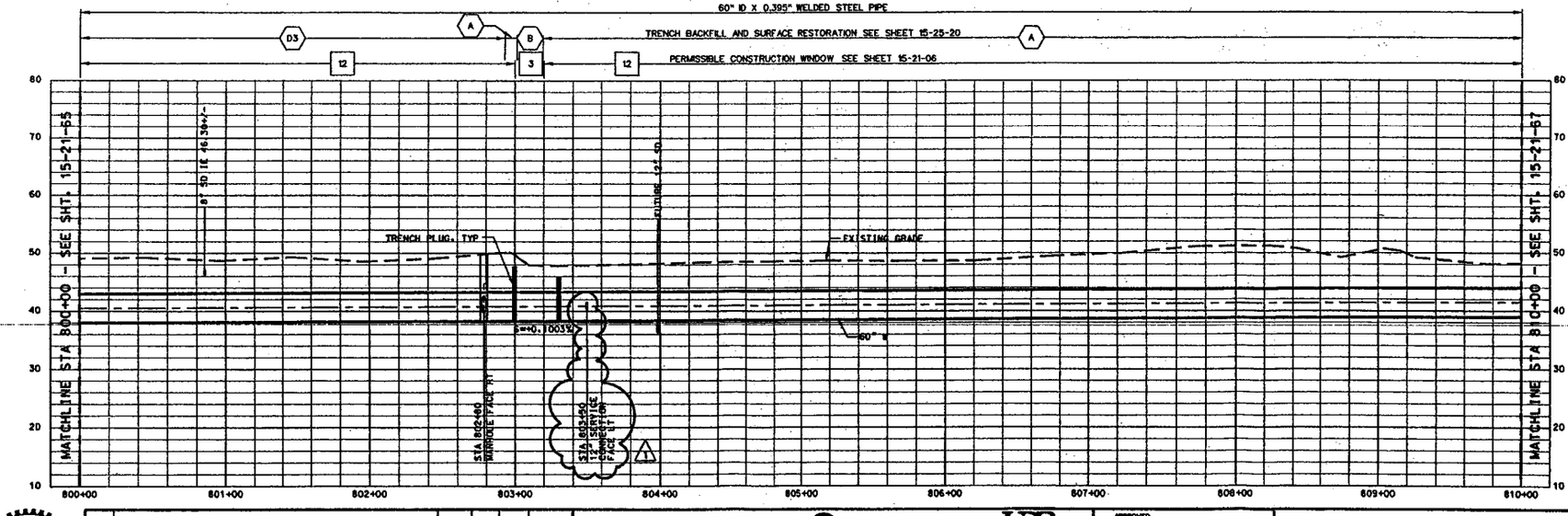
General Vicinity Map of Turnout #3 Facilities

(SSP construction drawing 15-21-66)



NOTES:

1. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES, SERVICE CONNECTIONS, AND SURFACE IMPROVEMENTS UNLESS OTHERWISE INDICATED. CONTRACTOR SHALL REPAIR ALL SERVICE CONNECTIONS AND UTILITIES DAMAGED DURING CONSTRUCTION WHETHER SHOWN ON THESE PLANS OR NOT.
2. REINSTALL STORM DRAINS AND CATCH BASINS DISPLACED DURING CONSTRUCTION.
3. SIGNIFICANT DEWATERING IS ANTICIPATED IN THE AUBURN VALLEY FROM APPROXIMATELY STA 712+00 TO STA 840+00. CONTRACTOR IS RESPONSIBLE FOR THE CARE OF THIS WATER AND COMPLIANCE WITH APPLICABLE WATER QUALITY REGULATIONS SEE SPECIFICATION SECTION 02140.
4. SEE DRAWING 15-23-66 FOR REDUCED CONSTRUCTION LIMITS THROUGH WETLAND, EROSION CONTROL MEASURES, AND RESTORATION PLANS.
5. WETLANDS IMPACTED BY CONSTRUCTION SHALL BE RESTORED TO ORIGINAL GRADE USING WETLAND SOILS. WETLAND SOILS, INCLUDING TOP SOIL SHALL BE SEGREGATED AND STOCKPILED FOR RESTORATION OF WETLANDS AND WETLAND BUFFERS. NO TEMPORARY STOCKPILING OF SOILS WILL BE ALLOWED WITHIN WETLANDS OR WETLAND BUFFERS.
6. TIMBER MATS MAY BE REQUIRED TO ENSURE CONSTRUCTION EQUIPMENT HAS ADEQUATE TRACTION IN WETLANDS AND TO AVOID OVER COMPACTION OF SOILS.
7. CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNERS REGARDING UTILITIES, ACCESS AND RELATED CONSTRUCTION ISSUES.
8. USE TYPE II PIPE BEDDING AND PIPE ZONE BACKFILL FROM STA 749+30 TO STA 803+00. SEE SECTION 2200-2.2.0.1b.



DATUM
HORIZONTAL DATUM:
WASHINGTON COORDINATE SYSTEM, NORTH ZONE
NAD 83/91
VERTICAL DATUM:
NGVD-29

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

NO.	REVISION	DATE	BY	APP'D.	REV. COMP.
6					
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4					
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2					
1	ADDENDUM NO. 1	3/31/03	LCS	TAL	

CH2MHILL — MWH (ENVIRONMENT MATTERS AWARD) — HDR Engineering, Inc.

REFERENCE

DATE JAN 2003
DESIGN LCS
DRAWN DGP/SNV/JES
DETTD'D
CHECKED WAC/GSH

W.O. 71001
CADET PROJECT BASE PLSNA003
CADET FILE BASE
FIELD BOOK
DATA FILE

APPROVED
MANAGER

TACOMA WATER
TACOMA PUBLIC UTILITIES

TACOMA SECOND SUPPLY PROJECT
MIDDLE REACH - WESTERN SECTION
PLAN AND PROFILE
STA 800+00 TO STA 810+00

SCALE
HORIZ: 1"=40'
VERT: 1"=10'
DRAWING NO. 15-21-66
SHEET 50 OF 207

CONSULTANTS AND NO.

JONATHAN C. TIGHE — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — EXPIRES: 02/18/05
TIMOTHY A. TARSON — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — EXPIRES: 11/04/04

G:\tpu\TSSP Middle Segment-Western Section\Design\Drawings\Plan+Profile\15-21-66.dgn 10/05/44 AM

Return Address:
Auburn City Clerk
City of Auburn
25 West Main St.
Auburn, WA 98001

200602100022 63
PACIFIC NW TIT INTERLOCA 91.00
PAGE001 OF 060
02/10/2006 15:46
KING COUNTY, WA

RECORDER'S COVER SHEET

Document Title(s) (or transactions contained therein):

Interlocal Agreement (RES 3644)

Reference Number(s) of Documents assigned or released:
☐Additional reference #'s on page _____ of document

Grantor(s)/Borrower(s) (Last name first, then first name and initials)
Auburn, City of

Grantee/Assignee/Beneficiary: (Last name first)
1. Pacific, City of

Legal Description (abbreviated: i.e. lot, block, plat or section, township, range)

PER RCW 39.34

☐ Additional legal is on page of document.

Assessor's Property Tax Parcel/Account Number
N/A

☐ Assessor Tax # not yet assigned

Said document(s) were filed for record by Pacific Northwest Title as accommodation only. It has not been examined as to proper execution or as to its affect upon title.

RESOLUTION NO. **3644**

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, RELATING TO THE ANNEXATION OF A PORTION OF PROPERTY TO THE CITY OF AUBURN SIMULTANEOUSLY TO ITS DEANNEXATION FROM THE CITY OF PACIFIC, PURSUANT TO RCW 35.10.217(2)

WHEREAS, the City Council of the City of Auburn adopted Resolution No. 3617 on May 19, 2003, and Resolution No. 3619 on June 16, 2003, notifying the King County Boundary Review Board of the City's intent to annex property to the City of Auburn simultaneous to its de-annexation from the City of Pacific; and

WHEREAS, the City Council of the City of Pacific has concurred with the annexation and de-annexation through its Resolution No. 527 on May 27, 2003, and Resolution No. 530 on June 9, 2003; and

WHEREAS, the King County Boundary Review Board has consented to and approved the annexation and de-annexation; and

WHEREAS, in connection with such annexation/de-annexation, the cities of Auburn and Pacific have committed to coordinate and cooperate with respect to any planning, transportation, utility or development issues that affect the cities; and

WHEREAS, the annexation/de-annexation will result in a change in the water service areas of the cities; and

WHEREAS, Pacific desires to be granted the right to a future franchise for ingress, egress and utilities in the vicinity of the King/Pierce County line on East Valley Highway in order to access the parcels to the west of the Burlington Northern Santa Fe right-of-way; and

WHEREAS, Auburn desires to be granted a franchise for its existing facilities in A Street SE remaining in Pacific after the annexation/de-annexation; and

WHEREAS, the cities wish to amend the existing emergency intertie agreements and relocate the emergency intertie facility serving Pacific on Lakeland Hills Way; and

WHEREAS, the cities have mutual interests in the development "Vista Heights" that currently straddles the existing cities' boundaries and will be completely contained within Auburn when the annexation/de-annexation is finalized; and

WHEREAS, Auburn desires to treat and retain public storm water in public facilities; and

WHEREAS, Auburn and Pacific have agreed that Pacific will, by bill of sale, transfer their interest in the public facilities within the annexation/de-annexation area to Auburn; and

WHEREAS, Auburn and Pacific have agreed that Auburn will provide operation and maintenance services for the portion of A Street SE remaining in Pacific; and

WHEREAS, the requirements of the State Environmental Policy Act and applicable Environmental Procedures have been complied with; and

WHEREAS, a Public Hearing was held on October 6, 2003, for which notice was provided pursuant to the requirements of RCW 35.10.217(2) and at which hearing all persons wishing to speak to the annexation and de-annexation were heard; and

WHEREAS, the City Council of the City of Auburn passed its Resolution No. 3643 on October 6, 2003, finalizing the annexation of a portion of property to the City of Auburn and simultaneous to its de-annexation from the City of Pacific.

NOW THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, HEREBY RESOLVES as follows:

Section 1. The Mayor is hereby authorized to execute agreements in substantial conformity with the following agreements attached hereto and incorporated herein by this reference:

The Water Service Area Adjustment Agreement marks as Exhibit A,

The Emergency Water System Intertie Agreement marked as Exhibit B,

The Auburn Franchise Agreement With the City of Pacific marked as Exhibit C,

The Pacific Franchise Agreement with the City of Auburn marked as Exhibit D

The Vista Heights Development Agreement marked as Exhibit E,

The Bill of Sale for infrastructure being transferred from Pacific to Auburn marked as Exhibit F, and

An interlocal agreement for maintenance and operation services on a portion of A Street SE attached as Exhibit G.

Section 2. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation, including transmitting a copy of this Resolution to the City Clerk of Pacific.

Section 3. This Resolution shall shall take effect and be in full force upon passage and signatures hereon.

DATED and SIGNED this 20th day of October 2003.

CITY OF AUBURN

PETER B. LEWIS
MAYOR

ATTEST:

Danielle E. Daskam,
City Clerk

APPROVED AS TO FORM:

Daniel B. Heid,
City Attorney

EXHIBIT A
WATER SERVICE AREA AGREEMENT

This Agreement made and entered into by and between the City of Pacific, a Washington municipal corporation, ("**Pacific**") and the City of Auburn, a Washington municipal corporation ("**Auburn**").

Whereas, Pacific is engaged in the business of providing water service to the public located in certain areas of King County in the State of Washington. Auburn is engaged in the business of providing water service to the public located in certain areas of King and Pierce Counties in the State of Washington, and;

Whereas, the parties desire to enter into a formal service area agreement to revise the boundary between their contiguous service areas in King county in order to avoid any duplication or overlap of water service and to provide the most efficient service to their respective customers, and;

Whereas, Auburn and Pacific have by resolution annexed/de-annexed an area legally described in Attachment "1" attached hereto and shown on the map (Attachment "2") attached hereto. The Cities have agreed to work together cooperatively to facilitate a practical efficient boundary between the two systems.

Pacific and **Auburn** therefore agree as follows:

1. This Agreement is entered into pursuant to the South King County Coordinated Water System Plan which Plan and Appendices are incorporated herein by this reference.

2. The contiguous water service boundary between **Pacific** and **Auburn** is agreed upon by both parties as shown on the attached map (Attachment "2") and as legally described in Attachment "3", which by this reference are incorporated herein.

3. **Pacific** and **Auburn** may by mutual written amendment(s) to this Agreement make such adjustments to the service boundary as they may mutually agree upon from time to time so that water service to new service locations in close proximity to the service boundary may be provided in an efficient, effective and economical manner. Any such adjustments shall be documented by modifying the attached maps which when so modified and agreed to by the parties shall constitute amendments to this Agreement. Minor adjustments consisting of ten acres or less may be authorized by the Public Works Director of the City of Auburn and the Community Development Director of the City of Pacific.

4. Except as specifically set forth herein, this Agreement shall not modify the Resolutions regarding the Annexation/De-annexation process referenced above.

5. **Auburn** will work with Pacific to assist in the negotiations with a Tacoma Second Supply Project Partner (SSP Partner) for future water supply for **Pacific**. The rate for water sold to Pacific from a SSP Partner shall be the rate charged Auburn for the water plus a wheeling charge to be established using cost of service principles.

6. **Pacific** will pay Auburn its costs associated with increasing the capacity of the Auburn Tacoma Second Supply Pipeline connection(s) to allow the wheeling of up to one (1) million gallon per day peak day demand and up to one half million gallon per day average day demand through Auburn to Pacific.

7. Water available to the **Pacific** pursuant to this Agreement shall be in compliance with all applicable state and federal drinking water laws, regulations and standards.

8. If **Pacific** requires additional or different treatment facilities in order for the wheeled water to comply with their water quality goals or standards then **Pacific** will install such treatment facilities on the **Pacific** side of the intertie meters at their expense. If **Auburn** and **Pacific** determine that treatment is required to meet the mutual water quality goals and standards then the treatment facilities will be installed as near the point of connection to the Tacoma pipeline as practical. The treatment facility costs will be shared based upon the capacity required by each city.

IN WITNESS WHEREOF, the parties have executed this Agreement effective as of the date last written below.

CITY OF AUBURN
King County, Washington

PETER B. LEWIS, MAYOR

Date OCT 2 0 2003

CITY OF PACIFIC
King County, Washington

HOWARD ERICKSON, MAYOR

Date October 31, 2003

ATTEST:

Danielle E. Daskam, CMC, City Clerk

ATTEST:

Randy Reed, CMC, City Clerk

APPROVED AS TO FORM:

Daniel B. Heid, City Attorney

APPROVED AS TO FORM:

Albert A. Abuan, City Attorney

ATTACHMENT 1

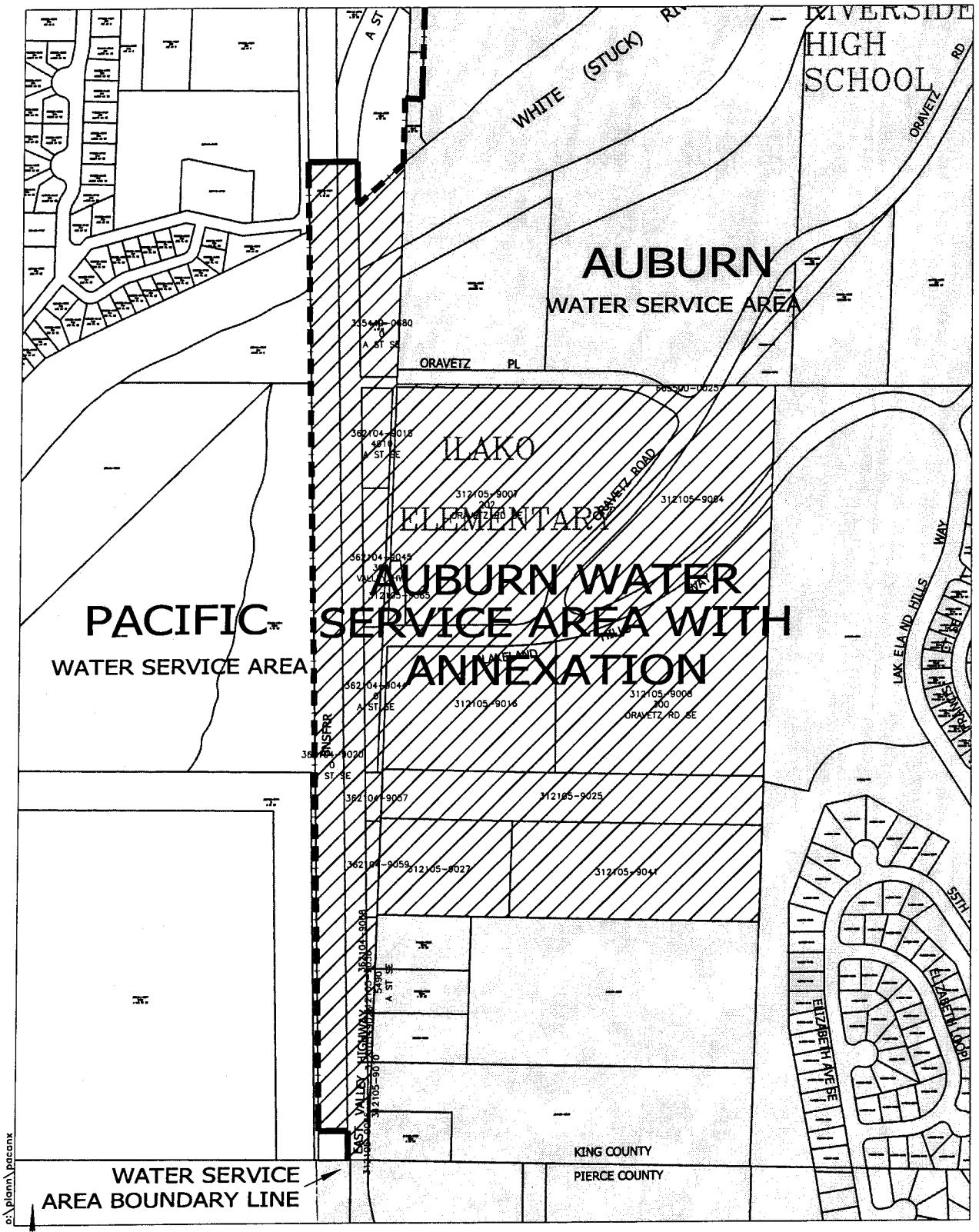
ANNEXATION LEGAL DESCRIPTION
AREA IN VICINITY OF "A" STREET SOUTHEAST (EAST VALLEY HIGHWAY) AND LAKELAND HILLS WAY SOUTHEAST

THAT PORTION OF GOVERNMENT LOTS 3 AND 4 IN THE SOUTHWEST QUARTER OF SECTION 31, TOWNSHIP 21 NORTH, RANGE 5 EAST, W. M., AND THE EAST HALF OF SECTION 36, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M., DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF SAID GOVERNMENT LOT 3 IN SECTION 31, TOWNSHIP 21 NORTH, RANGE 5 EAST, W.M., SAID CORNER ALSO BEING AN ANGLE POINT IN THE WEST BOUNDARY OF THE LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 2271 AND THE NORTHWEST CORNER OF THE LANDS DESCRIBED IN CITY OF PACIFIC ANNEXATION ORDINANCE NUMBER 319;
THENCE EAST ALONG THE NORTH LINE OF SAID GOVERNMENT LOT 3, AND THE BOUNDARY COMMON TO SAID LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 2271 AND THE CITY OF PACIFIC BY CITY OF PACIFIC ORDINANCE NUMBER 319 A DISTANCE OF 1280 FEET MORE OR LESS TO THE NORTHEAST CORNER OF SAID GOVERNMENT LOT 3;
THENCE SOUTH ALONG THE EAST LINE OF SAID GOVERNMENT LOTS 3 AND 4, AND THE BOUNDARY COMMON TO SAID LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 2271 AND THE CITY OF PACIFIC BY CITY OF PACIFIC ORDINANCE NUMBER 319 TO THE SOUTHEAST CORNER OF SAID CITY OF PACIFIC ORDINANCE 319 AND TO A LINE PARALLEL WITH AND 825 FEET NORTHERLY OF THE SOUTH LINE OF SAID GOVERNMENT LOT 4;
THENCE WEST ALONG THE BOUNDARY COMMON TO SAID LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 2271 AND THE CITY OF PACIFIC BY CITY OF PACIFIC ORDINANCE NUMBER 319, AND ALONG SAID PARALLEL LINE A DISTANCE OF 1300 FEET, MORE OR LESS, TO THE WEST LINE OF SAID SECTION 31;
THENCE SOUTH ALONG THE WEST LINE OF SAID SECTION 31 AND THE BOUNDARY COMMON TO THE LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 2271 AND THE CITY OF PACIFIC BY CITY OF PACIFIC ORDINANCE NUMBER 226 TO THE SOUTHWEST CORNER OF SAID SECTION 31;
THENCE WEST ALONG THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SECTION 36, TOWNSHIP 21 NORTH, RANGE 4 EAST AND ALONG THE SOUTH LINE OF THE LANDS ANNEXED TO THE CITY OF PACIFIC BY CITY OF PACIFIC ORDINANCE NUMBER 226 A DISTANCE OF 70 FEET, MORE OR LESS, TO THE EAST LINE OF THE BURLINGTON NORTHERN SANTA FE (BNSF) RAILROAD RIGHT-OF-WAY (100 FEET IN WIDTH);
THENCE NORTH ALONG SAID EAST LINE OF THE BNSF RAILROAD RIGHT-OF-WAY TO A LINE PARALLEL WITH AND 100 FEET NORTHERLY OF SAID SOUTH LINE OF THE SOUTHEAST QUARTER OF SAID SECTION 36;
THENCE WEST ALONG LAST SAID PARALLEL LINE 100 FEET TO THE WEST LINE OF SAID BURLINGTON NORTHERN SANTA FE (BNSF) RAILROAD RIGHT-OF-WAY;
THENCE NORTH ALONG SAID WEST LINE OF THE BNSF RAILROAD RIGHT-OF-WAY A DISTANCE OF 3280 FEET, MORE OR LESS, TO A LINE PARALLEL WITH AND 1884 FEET SOUTHERLY (WHEN MEASURED ALONG THE WEST LINE OF SAID RAILROAD RIGHT-OF-WAY) FROM THE NORTH LINE OF THE NORTHWEST QUARTER OF SAID SECTION 36;
THENCE EASTERLY ALONG LAST SAID PARALLEL LINE A DISTANCE OF 175 FEET, MORE OR LESS, TO THE EAST RIGHT-OF WAY LINE OF EAST VALLEY HIGHWAY ("A" STREET SE);
THENCE SOUTHERLY ALONG SAID EAST RIGHT-OF-WAY LINE A DISTANCE OF 150 FEET, MORE OR LESS, TO THE NORTH BANK OF THE WHITE RIVER (STUCK RIVER);
THENCE NORTHEASTERLY ALONG SAID NORTH BANK OF THE WHITE RIVER A DISTANCE OF 200 FEET, MORE OR LESS, TO THE LINE COMMON TO THE LANDS ANNEXED TO THE CITY OF

AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 2271 AND THE CITY OF PACIFIC BY CITY OF PACIFIC ORDINANCE NUMBER 226, AND THE WEST LINE OF THE NORTHWEST QUARTER OF SAID SECTION 31, TOWNSHIP 21 NORTH, RANGE 5 EAST, W.M.;
THENCE SOUTH ALONG SAID LINE COMMON TO THE LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 2271 AND THE CITY OF PACIFIC BY CITY OF PACIFIC ORDINANCE NUMBER 226, AND THE WEST LINE OF THE NORTHWEST QUARTER OF SAID SECTION 31 A DISTANCE OF 700 FEET, MORE OR LESS, TO THE POINT OF BEGINNING.

SITUATE IN KING COUNTY, WASHINGTON.



ATTACHMENT 2

Plotted: JAN 2003

EXHIBIT A, ATTACHMENT 2
RESOLUTION No. 3644
PAGE 1 of 1

ATTACHMENT 3

WATER SERVICE AGREEMENT LINE – BOUNDARY AFTER ANNEXATION
(IN THE E 1/2 OF SEC. 36 TWP 21N, R 4E, AND W 1/2 OF SEC. 31 TWP 21N, R 5E. W.M.)

COMMENCING AT THE SOUTHEAST CORNER OF SECTION 36, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M., SAID CORNER ALSO BEING THE SOUTHWEST CORNER OF THE LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 2271 AND THE SOUTHEAST CORNER OF THE LANDS ANNEXED TO THE CITY OF PACIFIC BY CITY OF PACIFIC ORDINANCE NUMBER 226;
THENCE WEST ALONG THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SAID SECTION 36, AND ALONG SAID SOUTH LINE OF THE LANDS ANNEXED TO THE CITY OF PACIFIC BY CITY OF PACIFIC ORDINANCE NUMBER 226 A DISTANCE OF 70 FEET, MORE OR LESS, TO THE EAST LINE OF THE BURLINGTON NORTHERN SANTA FE (BNSF) RAILROAD RIGHT-OF-WAY (100 FEET IN WIDTH) AND THE TRUE POINT OF BEGINNING OF THIS WATER SERVICE AGREEMENT LINE;
THENCE NORTH ALONG SAID EAST LINE OF THE BNSF RAILROAD RIGHT-OF-WAY TO A LINE PARALLEL WITH AND 100 FEET NORTHERLY OF SAID SOUTH LINE OF THE SOUTHEAST QUARTER OF SAID SECTION 36;
THENCE WEST ALONG SAID PARALLEL LINE 100 FEET TO THE WEST LINE OF SAID BURLINGTON NORTHERN SANTA FE (BNSF) RAILROAD RIGHT-OF-WAY;
THENCE NORTH ALONG SAID WEST LINE OF THE BNSF RAILROAD RIGHT-OF-WAY A DISTANCE OF 3280 FEET, MORE OR LESS, TO A LINE PARALLEL WITH AND 1884 FEET SOUTHERLY (WHEN MEASURED ALONG THE WEST LINE OF SAID RAILROAD RIGHT-OF-WAY) FROM THE NORTH LINE OF THE NORTHWEST QUARTER OF SAID SECTION 36;
THENCE EASTERLY ALONG LAST SAID PARALLEL LINE A DISTANCE OF 175 FEET, MORE OR LESS, TO THE EAST RIGHT-OF WAY LINE OF EAST VALLEY HIGHWAY ("A" STREET SE);
THENCE SOUTHERLY ALONG SAID EAST RIGHT-OF-WAY LINE A DISTANCE OF 150 FEET, MORE OR LESS, TO THE NORTH BANK OF THE WHITE RIVER (STUCK RIVER);
THENCE NORTHEASTERLY ALONG SAID NORTH BANK OF THE WHITE RIVER A DISTANCE OF 200 FEET, MORE OR LESS, TO THE LINE COMMON TO THE LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 2271 AND THE CITY OF PACIFIC BY CITY OF PACIFIC ORDINANCE NUMBER 226, AND THE EAST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 36;
THENCE NORTH ALONG THE LINE COMMON TO THE LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 2271 AND THE CITY OF PACIFIC BY CITY OF PACIFIC ORDINANCE NUMBER 226, AND THE EAST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 36 A DISTANCE OF 258 FEET, MORE OR LESS, TO THE NORTHWEST CORNER OF THE LANDS CONVEYED TO THE CITY OF AUBURN BY DEED RECORDED UNDER RECORDING NUMBER 8009050525, RECORDS OF SAID COUNTY;
THENCE EAST 50 FEET ALONG THE NORTH LINE OF SAID LANDS TO THE NORTHEAST CORNER THEREOF;
THENCE NORTH 346.82 FEET TO A POINT 50 FEET EAST OF THE SOUTHWEST CORNER OF TRACT "B" OF CITY OF AUBURN LOT LINE ADJUSTMENT LLA-5-87 RECORDED UNDER RECORDING NUMBER 8704220781, RECORDS OF KING COUNTY;
THENCE WEST ALONG THE SOUTH LINE OF SAID TRACT "B" TO THE SOUTHWEST CORNER OF SAID TRACT "B" AND THE EAST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 36;
THENCE NORTH ALONG THE WEST LINE OF SAID TRACT "B", THE LINE COMMON TO THE LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 2271 AND THE CITY OF PACIFIC BY CITY OF PACIFIC ORDINANCE NUMBER 226, AND THE EAST LINE OF THE NORTHEAST QUARTER OF SAID SECTION 36 A DISTANCE OF 54.22 FEET, MORE OR LESS, TO SAID EAST RIGHT-OF-WAY LINE OF EAST VALLEY HIGHWAY ("A" STREET SE);
THENCE SOUTHWESTERLY ALONG SAID EAST RIGHT-OF-WAY LINE TO THE SOUTHEAST CORNER OF THE LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 1171;

THENCE WEST ALONG SAID SOUTH LINE TO THE SOUTHWEST CORNER OF THE LANDS DESCRIBED IN SAID CITY OF AUBURN ORDINANCE NUMBER 1171;
THENCE NORTHERLY ALONG THE WEST LINE OF THE LANDS DESCRIBED IN SAID CITY OF AUBURN ORDINANCE NUMBER 1171 TO THE NORTH LINE OF SAID SECTION 36 AND THE TERMINUS OF THIS WATER SERVICE AGREEMENT LINE.

SITUATE IN KING COUNTY, WASHINGTON.

EXHIBIT B

EMERGENCY WATER SYSTEM INTERTIE AGREEMENT
Pacific/Auburn Intertie Agreement No. 3

THIS AGREEMENT made and entered into by and between the City of Auburn, hereinafter referred to as Auburn, and, the City of Pacific, hereinafter referred to as Pacific, for the purposes of planning, designing, constructing, maintaining, and operating an emergency system intertie between the respective parties,

WITNESSETH:

WHEREAS, both Cities have water facilities in the vicinity, and

WHEREAS, both Cities can increase fire protection and emergency water supply reliability for their customers, and

WHEREAS, the Cities are willing to provide the necessary services to increase fire fighting and emergency supply reliability upon the terms and conditions set forth herein,

NOW, THEREFORE, IT IS MUTUALLY AGREED as follows:

1. The Cities hereby concurrently terminate, with the execution of this Agreement the Water Sales Agreement Between City of Auburn and City of Pacific, dated November 4, 1991 and the Water Service Agreement dated July 27, 1984.

2. The four-inch (4") water service connection on Ellingson Road near Pacific's well field will continue to function as an emergency water supply under the terms and conditions of this agreement and the supply of emergency water through this facility will be one-way from Auburn to Pacific.

3. The new emergency water system intertie will be designed to be operated manually as a two way emergency supply between the Auburn and Pacific Systems. The facility shall be located on East Valley Highway in the vicinity of the Water Service Area Boundaries between the two cities. Final location and configuration of the facilities shall be determined at the time of final design.

4. The emergency water system interties shall be operated only in the event of an emergency. For purposes of this agreement, an emergency shall be defined as resulting from a water shortage, a major water line break, fire demand, contamination to the water supply system, mechanical

equipment failure, electrical equipment failure or Puget Sound Energy facility failure, or any other agreed upon emergency within the water supply system.

5. Auburn will design and administer the contract for the construction of the new metering station. The facility will be designed and constructed in accordance with reasonably accepted water utility standards for similar municipal water utilities. Construction of the metering station will occur in the future at a mutually agreed upon time. Auburn will own and maintain the piping, interior equipment, emergency meter and interior appurtenances, and all piping up to the Pacific side of the vault for the metering station.

6. Upon completion of construction, Auburn will transfer ownership of all exterior appurtenances, and all piping that is located on the Pacific side of the vault, to Pacific. Pacific will own and maintain the exterior appurtenances and all piping on Pacific's side of the vault.

7. Each City will have unlimited access to the vault via a dual padlock or ownership of keys to the vault.

8. Each City will operate the respective normally locked valve inside of the vault. Auburn will solely unlock and operate the locked valve on Auburn's side of the meter and Pacific will solely unlock and operate the locked valve on Pacific's side of the meter.

9. The procedure for operating the interties in the event of such emergency shall be as follows:

   A. Each City shall determine that an emergency of sufficient magnitude has occurred which warrants the need to request that the one or both interties be activated.

   B. Upon agreement that an emergency exists, the authorized representative of each City shall allow for one or both of the interties to be opened. The intertie(s) will be activated as soon as reasonably possible. Both Cities' personnel shall be present at the vault(s) to open the valves to activate the facility.

   C. The City requesting the activation shall provide a written confirmation of the request not less than 24 hours after the verbal request, or on the first day of normal business after the verbal request.

D. The intertie(s) shall remain activated until the City requesting activation determines that the need for activation of the emergency intertie(s) has ceased and shall request in writing to close the intertie.

E. In case of emergency or whenever the public health, safety, or the equitable distribution of water so demands, the City supplying the water may change, reduce or limit the time for or temporarily discontinue the supply of water without notice; water service may be temporarily interrupted, limited for purposes of making repairs, extensions or doing other necessary work; and the City supplying the water shall not be responsible for any damage resulting from interruption, change or failure of the water supply, and the City receiving the water (City requesting activation) shall save and hold harmless the City supplying the water from any loss, damages or suites to or by customers of the City receiving the water resulting from interruption, change or failure of water supply provided by this Agreement, except damages arising out of the City supplying the water's negligence. Prior to a planned interruption or limiting of service, the City supplying the water will notify the City receiving the water of such not less than three days prior to the service disruption. The City supplying the water agrees to use best efforts and reasonable diligence to notify the City receiving the water as soon after it becomes aware of the need for service disruption and further will, to the extent practical, limit the service disruption to daylight hours.

10. Auburn shall read the meter(s) upon activation and upon deactivation of the intertie(s). The City supplying the water shall verify the information and shall then calculate and invoice the other City for the water used during the request. The total water used during the event shall be used to calculate the invoice. The rate for water consumed through the emergency interties shall be at the Auburn Wholesale Rate to Algona in effect at the time the water is used. This shall be complete payment for the water, labor, and administration of activating the intertie(s).

11. The total project costs for the construction of the new intertie shall include costs for consulting design service, and construction. Auburn shall bear the project costs in exchange for facilities transferred to Auburn as a part of the Lakeland Hills area annexation/de-annexation. Each City is responsible for associated staff, administration and legal costs associated with this implementation of the agreement.

12. To the extent allowed by law, the City of Pacific shall defend, indemnify, and hold harmless the City of Auburn, its elected officials, employees and agents from and against any and all suits, claims, actions, losses, costs,

expenses of litigation, attorney's fees, penalties and damages of whatsoever kind or nature arising out of or in connection with or incident to an act or omission of the City of Pacific, its employees, agents, and contractors in the performance of the City of Pacific's obligations under the Agreement and this Amendment. This indemnification provision shall include, but is not limited to, all claims against the City of Auburn by an employee or former employee of the City of Pacific or its contractors and, as to such claims; the City of Pacific expressly waives all immunity and limitation of liability under Title 51 RCW.

To the extent allowed by law, the City of Auburn shall defend, indemnify and hold harmless the City of Pacific, its elected officials, employees and agents from and against any and all suits, claims, actions, losses, costs, expenses of litigation, attorney's fees, penalties, and damages or whatsoever kind or nature arising our of, in connection with or incident to an act or omission of the City of Auburn, its employees, agents, and contractors in the performance of the City of Auburn's obligations under this Agreement. This indemnification obligation shall include, but is not limited to, all claims against the City of Pacific by an employee or former employee of the City of Auburn or its contractors and, as to such claims, the City of Auburn expressly waives all immunity and limitation of liability under Title 51 RCW.

13. This Agreement shall remain in force until terminated by either party hereto upon 60-days written notice to the other party. Any project costs, incurred up to the date of such notice, as described herein, shall be shared in accordance with the provisions of this Agreement.

14. Water available to the Pacific pursuant to this Agreement shall be in compliance with all applicable state and federal drinking water laws, regulations and standards.

15. If Pacific requires additional or different treatment facilities in order for the water received under this agreement to comply with their water quality goals or standards then Pacific will install such treatment facilities on the Pacific side of the intertie meters at their expense.

16. If Auburn requires additional or different treatment facilities in order for the water received under this agreement to comply with their water quality goals or standards then Auburn will install such treatment facilities on the Auburn side of the intertie meters at their expense.

IN WITNESS WHEREOF, the parties have executed this Agreement effective as of the date last written below.

CITY OF AUBURN
King County, Washington

PETER B. LEWIS, MAYOR

Date OCT 2 0 2003

ATTEST:

Danielle E. Daskam, CMC, City Clerk

APPROVED AS TO FORM:

Daniel B. Heid, City Attorney

CITY OF PACIFIC
King County, Washington

HOWARD ERICKSON, MAYOR

Date October 31, 2003

ATTEST:

Randy Reed, CMC, City Clerk

APPROVED AS TO FORM:

Albert A. Abuan, City Attorney

EXHIBIT "C"

CITY OF AUBURN, WASHINGTON
FRANCHISE AGREEMENT WITH THE CITY OF PACIFIC

WHEREAS, the City of Auburn (Auburn) and the City of Pacific (Pacific) have agreed to the annexation/de-annexation a portion of property described in Attachment "1" relating to among other things East Valley Highway (EVH) from the north end of the White River bridge to the King-Pierce County line in which, Auburn recognizes and agrees to Pacific's right to access a portion of EVH near the King/Pierce County line for ingress, egress and utilities; and

WHEREAS, Auburn and Pacific have entered into a Water Service Area Agreement, which revised the boundary between their respective water service areas; and

WHEREAS, the City of Auburn and Pacific have entered into an Emergency Water System Intertie Agreement; and

WHEREAS, according to said Emergency Water System Intertie Agreement, Auburn guaranteed Pacific the right to wheel water through Auburn's water system for an associated wheeling charge; and

WHEREAS, in order to maintain control over the use of Auburn right-of-ways by Pacific within Auburn, it is appropriate to enter into franchise agreements with Pacific; and

WHEREAS, Pacific has negotiated this franchise agreement with Auburn acceptable to both parties; and

WHEREAS, Auburn has determined that it is in the best interests of the public to grant Pacific a franchise on the terms and conditions set forth in this Agreement.

NOW, THEREFORE THE CITY OF AUBURN AND THE CITY OF PACIFIC AGREE AS FOLLOWS:

SECTION 1 DEFINITION

Where used in this franchise ("Franchise"), the following definitions shall apply:

1.1 "Franchisee" means the City of Pacific, a Washington municipal corporation, and its respective successors and assigns.

1.2 "City" means the City of Auburn, a Washington municipal corporation.

1.3 "Franchise Area" means that portion of East Valley Highway where Pacific will own, operate and maintain utilities as described with Attachment 2" attached hereto, which is by this reference incorporated, as if fully set forth herein; provided, that the Franchise Area shall not include or convey any right to Franchisee to install facilities on or to otherwise use City owned or leased properties outside the Franchise Area.

1.4 "Facilities" means the Franchisee's utility system, lines, mains, appurtenances, and all other necessary or convenient facilities for the purpose of providing water service.

1.5 "Agreement" means this Agreement setting forth the terms and conditions of the franchise granted to the Franchisee.

SECTION 2 FRANCHISE GRANT

Subject to the terms and conditions set forth in this Agreement, the City grants to the Franchisee the right to construct and install water pipelines and appurtenances and to excavate trenches in City roads for the purposes of constructing, installing, operating, maintaining, removing, and replacing mains and pipes and making connections between the same to the dwellings and other buildings of the consumers. In exercising the foregoing rights, the Franchisee shall be governed by and conform to the general rules adopted by the Public Works Department of the City of Auburn, and the Franchisee, at no expense to the City, shall complete all work and shall replace and restore the City roads to the condition of the City roads existing immediately prior to such disturbance; PROVIDED, HOWEVER, that no such work shall be done prior to the obtaining of a permit therefor issued by the City's Public Works Director (hereinafter "Director"), which permit shall set forth conditions pertaining to the work to be done and specifications for the restoration of the roads to the same condition as they were prior to such work. If the Franchisee does not repair the City roads to the satisfaction of the Director, the City may, at its sole discretion, repair such City roads, or cause them to be repaired, and the Franchisee hereby agrees to reimburse the City for the cost of such work, including overhead costs.

SECTION 3 FRANCHISE TERM

This Franchise is and shall remain in full force and effect from the effective date of this Agreement forward, for a period not to exceed twenty-five (25) years from the effective date of this Agreement provided, that this Franchise shall not take effect and the Franchisee shall have no rights under this Franchise unless the Franchisee files a written acceptance of this Franchise with the City pursuant to Section 4 of this Agreement.

SECTION 4 ACCEPTANCES BY GRANTEE OF TERMS AND CONDITIONS

The full acceptance of this Franchise and all of its terms and conditions shall be filed with the City Clerk within forty-five (45) days from the date of this Agreement, by the Franchisee. Full acceptance of this Franchise is a condition precedent to its taking effect, and unless this Franchise is accepted within the time specified, this grant will be null and void and have no force or effect.

SECTION 5 NON-EXCLUSIVE FRANCHISE

This Franchise is not exclusive. It does not prohibit the City from granting franchises for other public or private utilities in, over, along, across, and under any City property, including the Franchise Area. This Franchise does not prevent or prohibit the City from constructing, altering, maintaining or using any of the Franchise Area. The City retains full power to make all changes, relocations; repair, maintenance or other work to or in the Franchise Area as the City deems fit.

SECTION 6 JURISDICTIONS

This Franchise is intended to convey limited rights and interest only as to those roads and rights-of-way in which the City has an actual interest. It is not a warranty of title or of interest in City road rights-of-way. None of the rights granted to the Franchisee shall affect the jurisdiction of the City over City road rights-of-way or the City's power to perform work upon its roadways, rights-of-way or appurtenant drainage facilities including by constructing, altering, renewing, paving, widening, grading, blasting or excavating.

SECTION 7 REGULATIONS OF USE AND CONTROL

This Franchise does not deprive the City of any powers, rights, or privileges it now has or may later acquire in the future to regulate the use of and to control the City road rights-of-way covered by this Franchise. The City reserves the right and power at all times to exercise its police powers with respect to the time, manner and location of the placement of the Franchisee's Facilities.

SECTION 8 EMINENT DOMAIN

This Franchise and the limited rights and interests granted by this Franchise are subject to the exercise of eminent domain. In the event of an exercise of eminent domain by the City, the value to be attributed to all the rights and interests granted under this Franchise shall not exceed the actual amount the Franchisee paid to the City in obtaining this Franchise.

SECTION 9 VACATION

If at any time the City vacates any City rights-of-way covered by this Franchise, the City will not be held liable for any damages or loss to the Franchisee by reason of such vacation. The City may, after giving thirty (30) days written notice to the Franchisee terminate this Franchise with respect to any City road or rights-of-way vacated.

SECTION 10 ENFORCEMENT

The City's failure to enforce any provision of this Franchise does not constitute a waiver of its right to enforce that provision or any other provision of this Franchise.

SECTION 11 INDEMNITIES AND HOLD HARMLESS

11.1 The Franchisee shall defend, indemnify and hold harmless the City, its appointed and elected officials, and its employees and agents from and against liability for all claims, actions, injuries, demands, liabilities, losses, costs, damages and

judgments, including costs of defense thereof, (collectively referred to as "damages") for injury to persons, death or property damage caused by, arising out of, or incidental to the Franchisee's exercise of the rights and privileges granted by this Franchise, except for damages caused by or arising out of the City's sole negligence. In the event that any such claim or demand for damages is presented to or filed with the City, or if any suit or action is initiated against the City based on such claims or demands for damages, the City shall promptly notify the Franchisee of the claim, demand, suit or action and the Franchisee shall have the right, at its election and its sole cost and expense, to settle and compromise such claim, demand, suit or action, or defend the same at the Franchisee's sole cost and expense.

11.2 If it is determined that RCW 4.24.115 applies to this Franchise, the Franchisee agrees to defend, hold harmless and indemnify the City to the maximum extent permitted under that statute, and specifically for the Franchisee's negligence concurrent with that of the City to the full extent of the Franchisee's negligence.

SECTION 12 INSURANCE

12.1 The Franchisee shall keep a policy of insurance in force with a minimum limit of five million dollars ($5,000,000.00). Verification of insurance coverage is a condition precedent to the effectiveness of this Agreement.

12.2 The insurance shall be maintained in full force and effect at the Franchisee's sole expense throughout the term of the Franchise, and, should such insurance be terminated, this Agreement shall terminate as of the date of the termination of insurance coverage.

12.3 The coverage provided by the Franchisee's insurance policies shall be primary to any insurance maintained by the City except as to losses or damages attributable to the sole negligence of the City. Any insurance maintained by the City that might relate to this Franchise shall be in excess to the Franchisee's insurance and shall not contribute with or to it. The City has no obligation to report occurrences to the insurance companies unless a claim is filed with the City's City Council; and the City has no obligations to pay the Franchisee's premiums.

12.4 The Franchisee shall be solely and completely responsible to perform all work related to this Franchise in compliance with all applicable federal, state, county and city statutes, rules, regulations, Ordinances, orders and codes. The Franchisee's attention is directed to the requirements of the Washington Industrial Safety and Health Act, Chapter 49.17 RCW. The Franchisee shall be solely and completely responsible for safety and safety conditions on its job sites and for its work within the Franchise Area, including the safety of all persons and property during performance of any works therein. The services of the City or City's consultant personnel in conducting construction review of the Franchisee's work relating to the Franchise is not intended to include review of the adequacy of the Franchisee's work methods, equipment, scaffolding, or trenching, or safety measures in, on or near such Franchise Area or job site. The Franchisee shall provide safe access for the City and its inspectors to adequately inspect the work and its conformance with applicable statutes, Ordinances, rules, regulations, and the Franchise.

SECTION 13 INSTALLATIONS, REPAIR, REMOVAL OR RELOCATION

13.1 The Franchisee shall, at no expense to the City, expeditiously repair all existing Facilities that it owns within the Franchise Area, including any damage caused directly or indirectly by its Facilities, all appurtenant Facilities and service lines connecting its system to users, if the City requires such repair for any reasonable purpose.

13.2 The Franchisee shall, at no expense to the City, adjust, remove or relocate existing Facilities within the Franchise Area, including all appurtenant Facilities and service lines connecting its system to users, if the City determines such adjustment, removal or relocation is reasonably necessary to allow for an improvement or alteration planned by the City. The City shall give the Franchisee written notice of such requirement as soon as practicable. The written notice shall include all available information, such as plans and specifications, as is reasonably necessary for the Franchisee to plan for such adjustment, removal or relocation.

13.3 Franchisee's Facilities shall be constructed, installed, maintained and repaired within the Franchise Area so as to provide safety of persons and property, and not interfere with the free passage of traffic, all in accordance with the laws of the State of Washington, and the Ordinances, resolutions, rules and regulations of the City.

13.4 For projects that are a part of the City's capital improvement program, in addition to any other notice given to the Franchisee, the City shall provide a copy of the capital improvement plan and six (6) year transportation improvement plan when requested. Further the City shall provide a vertical and horizontal profile of the roadway and drainage facilities within it, both existing and as proposed by the City, and the proposed construction schedule. The initial design information shall be given at least one hundred and eighty (180) days before construction is scheduled to begin, except in cases of urgent construction or emergencies. The Franchisee shall respond to this notice, and to any later notices of revised designs, within twenty (20) days of the date of the notice, by providing to the City the Franchisee's best available information as to the location of all the Franchisee's Facilities, including all appurtenant Facilities and service lines connecting its system to users and all Facilities that it has abandoned, within the area proposed for the project.

13.5 The City shall offer the Franchisee the opportunity to participate in the preparation of bid documents for the selection of a contractor to perform the public works project as well as all required adjustments, removals or relocations of the Franchisee's Facilities. The City shall have sole authority to choose the contractor to perform such work. Such bid documents shall provide for an appropriate cost allocation between the parties. In addition to the Franchisee's allocation of contractor costs, the Franchisee shall reimburse the City for all costs, to include but not be limited to legal, engineering, inspections, administration and/or soils testing, related to the Franchisee's work and reasonably incurred by the City in the administration of such joint construction contracts. Such costs shall include the direct salary cost of the time of City professional and technical personnel, including the City's consultants, spent productively engaged in such work, plus overhead costs at the standard rate charged by the City on other similar projects.

13.6 It is understood that emergency situations may arise that could threaten public health and/or continued operation of the Franchisee's utility system and the Franchisee may be unable to notify the City in the manner prescribed in Section 14 of this Franchise. In such a situation the Franchisee shall immediately correct the hazardous situation and continue to use best efforts to contact the City staff. The Emergency Phone Number for the City of Auburn is (253) 931-3010, and the City of Pacific is (253) 929-1110. Dialing 911 is advised for emergency situations.

SECTION 14 REQUIREMENTS OF CONSTRUCTION PERMITS

14.1 The Franchisee has the right, privilege and authority to enter the City road rights-of-way for the purpose of constructing, installing, operating, maintaining, replacing or repairing its Facilities on the condition that it obtains construction, excavation, and right-of-way use permits issued by the City. Any work performed, whether by Franchisee, its contractors, or third parties, shall include necessary paving, patching, grading and any other reasonably necessary repair or restoration to the City rights-of-way. All work shall be done to the City's satisfaction.

14.2 All equipment, pipelines and appurtenances which are used in the construction, installation, operation, maintenance or repair of the Franchisee's Facilities and which are located within the City road rights-of-way and owned by the Franchisee shall be considered to be part of the Franchisee's system and shall be the responsibility of the Franchisee. All permits for the construction, installation, operation, maintenance or repair of the Franchisee's system shall be applied for and given in the name of the Franchisee, who will be responsible for all work done under the permit. The Franchisee remains responsible whether the work is performed by the Franchisee, its contractors, or by third parties.

14.3 When required by the Public Works Director, the Franchisee shall post a bond to the City in the amount sufficient for any road repair or restoration. The amount of the bond shall be set by the City and must be filed with the City before a permit will be issued.

SECTION 15 PERFORMANCE OF WORK

15.1 Any work performed by the Franchisee in the Franchise Area shall conform to all City Ordinances and requirements including, but not limited to, Auburn City Code and the City's Design and Construction Standards in force when the work is performed. All traffic control shall conform to the current edition of the Uniform Traffic Control Devices in force when the work is performed.

15.2 If work performed under this Franchise makes it necessary to turn off or diminish water pressure to any fire hydrant, the Franchisee shall notify the City's Fire Department by telephone and by written notice, that water pressure or fire flow conditions have been affected. Except in the case of an emergency, the notice shall be provided at least 48 hours prior to the water pressure being turned off or diminished.

If more than one fire hydrant will be affected, the Franchisee shall provide a map of the affected area to the Fire Department. Out-of-service fire hydrants must be identified as not operational by covering with a properly secured burlap or plastic bag. Fire hydrants should be returned to full service as soon as reasonably possible or no longer than two working days from the date service was diminished. The Franchisee shall notify the City's Fire Department when the hydrant is returned to full service.

SECTION 16 RESTORATION OF CITY RIGHTS-OF-WAY

After performing work on, under or adjacent to City road rights-of-way, the Franchisee is responsible for and shall leave all City road rights-of-way in the condition of the City roads rights-of-way existing immediately prior to such disturbance. If the Franchisee, its contractors, or third parties working under permit should fail to diligently restore City road rights-of-way to the satisfaction of the City, the City may make such repairs or restorations as are necessary to return the City road rights-of-way to a condition reasonably comparable to the condition of the City roads rights-of-way existing immediately prior to such disturbance. Upon presentation of an itemized bill for repairs or restorations, including all applicable costs, both direct and indirect, to include but not be limited to the cost of labor, tools, materials and equipment, the Franchisee shall pay the bill within sixty-five (65) days.

SECTION 17 GUARANTEES

The Franchisee shall guarantee work and materials furnished and completed by the Franchisee under this Franchise for a period of two (2) years from the date the City accepts the work and/or restoration.

SECTION 18 INFORMATION ON LOCATION OF FACILITIES

Prior to the effective date of this Agreement, the Franchisee shall provide the City with all information requested by the City regarding the location of the Franchisee's current Facilities, including but not limited to copies of all record drawings for such Facilities. If the Franchisee performs any work to install, repair, reconstruct, or replace Facilities in the Franchise Area after this Agreement's effective date, the Franchisee shall provide the City with all information requested by the City regarding the location of those Facilities, including but not limited to copies of record drawings.

SECTION 19 COORDINATION OF WORK IN FRANCHISE AREA

To facilitate the coordination of work in City rights-of-way, if either the Franchisee or the City plans to make excavations in the Franchise Area, the party planning such excavation shall provide written notice to the other of the planned excavation, affording the other party the opportunity to share in the excavation; provided, that (1) such joint use shall not unreasonably delay the work of the party causing the excavation to be made, (2) such joint use shall be arranged and accomplished on terms and conditions satisfactory to both parties, and (3) either party may deny such request for safety reasons.

SECTION 20 REIMBURSEMENTS OF COSTS

The Franchisee shall reimburse and pay to the City the amount of actual administrative expenses incurred by the City, which are directly or indirectly related to the receipt, review and approval of this Franchise. In the event of non-payment thereafter, the Franchisee shall pay the City's reasonable attorneys' fees and other costs incurred in collecting such amount. Payment must be made within sixty-five (65) days of the Franchisee's receipt of the City's bill/invoice. If payment is not paid in full within the sixty-five (65) days, this Franchise shall become null and void.

SECTION 21 BLASTING REQUIREMENTS

The Franchisee's right to construct, install, operate, maintain and repair Facilities does not preclude the City, its agents or contractors from blasting, grading, or doing other road work contiguous to the Franchisee's Facilities. When practical, the City shall give the Franchisee forty-eight (48) hours notice of blasting or excavating.

SECTION 22 SURVEY MARKERS AND MONUMENTS

Before any work is performed under this Franchise, the Franchisee shall establish two or more reference marks to all monuments and markers of every nature relating to subdivisions, plats, rights-of-way, and all other surveys. The reference points shall be located so that they will not be disturbed during any of Franchisee's operations under this Franchise. The method of referencing monuments or other markers or points shall be approved by the City before placement. The replacement of all markers or monuments disturbed during any construction of the Franchisee shall be made as promptly as conditions permit. The cost of monuments or markers lost, destroyed, or disturbed and the expense or replacement with approved markers or monuments shall be borne by the Franchisee.

SECTION 23 RESERVATIONS OF RIGHTS

The City reserves the right, upon thirty (30) days written notice to the Franchisee, to amend or modify the provisions or conditions of this Franchise to conform to any state, county, federal, or city statute, ordinance, rule or regulation. The City may terminate this Franchise upon thirty (30) days written notice to the Franchisee if the Franchisee fails or refuses to comply with such amendment or modification.

SECTION 24 ASSIGNMENT

The Franchisee shall not have the right to assign this Franchise without the written consent of the City. No assignment shall be effective unless an acceptance by the assignee of all rights, conditions, terms, provisions and responsibilities contained within the Franchise, as well as surety bonds which the City deems necessary to be posted, are received as allowed by law. The City's approval of the assignment may be made subject to the assignee's acceptance of new or modified terms of the Franchise.

SECTION 25 PENALTY FOR VIOLATION OF CONDITIONS

If the Franchisee fails to comply with any material term, condition or responsibility under this Franchise, the City may provide the Franchisee with written notice of the City's intent to revoke the Franchise if the Franchisee's failure is not cured within thirty (30) days of the date of the notice. During the thirty (30) days following the date of the notice, the Franchisee shall have the opportunity to remedy the failure to comply. A public hearing shall be scheduled before the Auburn City Council at least thirty (30) days following the notification on the issue of the revocation. If at the hearing, the City Council finds that grounds exist to revoke the Franchise under this paragraph and that the revocation is in the public interest, the City Council may by ordinance revoke the Franchise. The revocation shall be effective ninety (90) days after the public hearing.

SECTION 26 EXPIRATION AND RENEWAL

26.1 If the Franchisee requests a renewal of this Franchise prior to its expiration date, the City may, at the City's sole discretion, extend the term of this Franchise for up to one year beyond the expiration date to allow for processing of the renewal. If the City elects to extend the term of this Franchise, written notice of the extension shall be provided to the Franchisee prior to the Franchise expiration date.

26.2 If the Franchisee has not requested a renewal of this Franchise prior to its expiration date, the City has the right, upon thirty (30) day's prior notice to the Franchisee, to remove or relocate any of the Franchisee's Facilities as is reasonably necessary for the public's health, welfare or safety, or for the construction, alteration, or improvement of the Franchise Area, or for the construction or installation of lines or facilities of other franchise holders. The Franchisee shall be liable for costs incurred in any removal or relocation of the Franchisee's Facilities under this section.

26.3 Upon the expiration of this Franchise, the Franchisee shall continue to be responsible for the operation and maintenance of the Franchisee's existing facilities in the Franchise Area, but shall not have the right to provide additional services. This Section and Sections 11, 13, 14, 15, 16, 19, and 22 of this Franchise shall continue in force until such time as the Franchisee's Facilities are abandoned to the City in accordance with the terms and conditions of the Annexation Resolution.

SECTION 27 COMPLIANCE WITH LAWS

The Franchisee shall conform to all applicable federal, state and local laws and regulations including, but not limited to, the State Environmental Policy Act and the City's Environmental Standards and Ordinances.

SECTION 28 NON-DISCRIMINATION CLAUSES

In all hiring or employment made possible or resulting from this Franchise, there shall be no discrimination against any employee or applicant for employment because of sex, sexual orientation, age, race, color, national origin, marital status or the presence of any sensory, mental, or physical handicap, unless based upon a bona fide occupation qualification. No person shall be denied or subjected to discrimination in receipt of the benefit of any services or activities made possible by or resulting from this agreement

on the grounds of sex, sexual orientation, race, color, national origin, age, except minimum age and retirement provisions, marital status, or the presence of any sensory, mental or physical handicap.

SECTION 29 NOTICES

Any notice or information required or permitted under this Franchise may be sent to the following addresses unless otherwise specified:

City of Auburn:
City Engineer
25 West Main Street
Auburn, WA 98001-4998
253-931-3010

City of Pacific:
Community Development Director
100 3rd Avenue S.E.
Pacific, WA 98047
253-929-1110

SECTION 30 ATTORNEYS' FEES

If either party commences litigation against the other party relating to the performance or alleged breach of this Franchise, the prevailing party shall be entitled to all costs, including reasonable attorneys' fees incurred, relating to such litigation, including those incurred in any appeal.

SECTION 31 SEVERANCES

If any term, provision, condition or portion of this Franchise is held to be invalid, such invalidity shall not affect the validity of the remaining portions of this Franchise which shall continue in full force and effect, unless the dominant purpose of the Franchise would be prevented or the public interest would no longer be served, as determined by the City.

SECTION 32 EFFECTIVE DATE

This Agreement having been introduced at least five days prior to its date of passage and submitted to the city attorney, and being approved by at least a majority of the entire city council at a regular city council meeting, shall take effect and be in force five days after its passage, approval and publication as required by law.

SECTION 33 EXISTING UTILITIES

This Franchise shall govern City of Pacific, new utility Facilities within the City of Auburn.

IN WITNESS WHEREOF, the parties have executed this Agreement effective as of the date last written below.

CITY OF AUBURN
King County, Washington

PETER B. LEWIS, MAYOR

Date OCT 2 0 2003

CITY OF PACIFIC
King County, Washington

HOWARD ERICKSON, MAYOR

Date October 31, 2003

ATTEST:

Danielle E. Daskam, CMC, City Clerk

ATTEST:

Randy Reed, CMC, City Clerk

APPROVED AS TO FORM:

Daniel B. Heid, City Attorney

APPROVED AS TO FORM:

Albert A. Abuan, City Attorney

ATTACHMENT 1

ANNEXATION LEGAL DESCRIPTION
AREA IN VICINITY OF "A" STREET SOUTHEAST (EAST VALLEY HIGHWAY) AND LAKELAND HILLS WAY SOUTHEAST

THAT PORTION OF GOVERNMENT LOTS 3 AND 4 IN THE SOUTHWEST QUARTER OF SECTION 31, TOWNSHIP 21 NORTH, RANGE 5 EAST, W. M., AND THE EAST HALF OF SECTION 36, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M., DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF SAID GOVERNMENT LOT 3 IN SECTION 31, TOWNSHIP 21 NORTH, RANGE 5 EAST, W.M., SAID CORNER ALSO BEING AN ANGLE POINT IN THE WEST BOUNDARY OF THE LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 2271 AND THE NORTHWEST CORNER OF THE LANDS DESCRIBED IN CITY OF PACIFIC ANNEXATION ORDINANCE NUMBER 319;
THENCE EAST ALONG THE NORTH LINE OF SAID GOVERNMENT LOT 3, AND THE BOUNDARY COMMON TO SAID LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 2271 AND THE CITY OF PACIFIC BY CITY OF PACIFIC ORDINANCE NUMBER 319 A DISTANCE OF 1280 FEET MORE OR LESS TO THE NORTHEAST CORNER OF SAID GOVERNMENT LOT 3;
THENCE SOUTH ALONG THE EAST LINE OF SAID GOVERNMENT LOTS 3 AND 4, AND THE BOUNDARY COMMON TO SAID LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 2271 AND THE CITY OF PACIFIC BY CITY OF PACIFIC ORDINANCE NUMBER 319 TO THE SOUTHEAST CORNER OF SAID CITY OF PACIFIC ORDINANCE 319 AND TO A LINE PARALLEL WITH AND 825 FEET NORTHERLY OF THE SOUTH LINE OF SAID GOVERNMENT LOT 4;
THENCE WEST ALONG THE BOUNDARY COMMON TO SAID LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 2271 AND THE CITY OF PACIFIC BY CITY OF PACIFIC ORDINANCE NUMBER 319, AND ALONG SAID PARALLEL LINE A DISTANCE OF 1300 FEET, MORE OR LESS, TO THE WEST LINE OF SAID SECTION 31;
THENCE SOUTH ALONG THE WEST LINE OF SAID SECTION 31 AND THE BOUNDARY COMMON TO THE LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 2271 AND THE CITY OF PACIFIC BY CITY OF PACIFIC ORDINANCE NUMBER 226 TO THE SOUTHWEST CORNER OF SAID SECTION 31;
THENCE WEST ALONG THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SECTION 36, TOWNSHIP 21 NORTH, RANGE 4 EAST AND ALONG THE SOUTH LINE OF THE LANDS ANNEXED TO THE CITY OF PACIFIC BY CITY OF PACIFIC ORDINANCE NUMBER 226 A DISTANCE OF 70 FEET, MORE OR LESS, TO THE EAST LINE OF THE BURLINGTON NORTHERN SANTA FE (BNSF) RAILROAD RIGHT-OF-WAY (100 FEET IN WIDTH);
THENCE NORTH ALONG SAID EAST LINE OF THE BNSF RAILROAD RIGHT-OF-WAY TO A LINE PARALLEL WITH AND 100 FEET NORTHERLY OF SAID SOUTH LINE OF THE SOUTHEAST QUARTER OF SAID SECTION 36;
THENCE WEST ALONG LAST SAID PARALLEL LINE 100 FEET TO THE WEST LINE OF SAID BURLINGTON NORTHERN SANTA FE (BNSF) RAILROAD RIGHT-OF-WAY;
THENCE NORTH ALONG SAID WEST LINE OF THE BNSF RAILROAD RIGHT-OF-WAY A DISTANCE OF 3280 FEET, MORE OR LESS, TO A LINE PARALLEL WITH AND 1884 FEET SOUTHERLY (WHEN MEASURED ALONG THE WEST LINE OF SAID RAILROAD RIGHT-OF-WAY) FROM THE NORTH LINE OF THE NORTHWEST QUARTER OF SAID SECTION 36;
THENCE EASTERLY ALONG LAST SAID PARALLEL LINE A DISTANCE OF 175 FEET, MORE OR LESS, TO THE EAST RIGHT-OF WAY LINE OF EAST VALLEY HIGHWAY ("A" STREET SE);
THENCE SOUTHERLY ALONG SAID EAST RIGHT-OF-WAY LINE A DISTANCE OF 150 FEET, MORE OR LESS, TO THE NORTH BANK OF THE WHITE RIVER (STUCK RIVER);

THENCE NORTHEASTERLY ALONG SAID NORTH BANK OF THE WHITE RIVER A DISTANCE OF 200 FEET, MORE OR LESS, TO THE LINE COMMON TO THE LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 2271 AND THE CITY OF PACIFIC BY CITY OF PACIFIC ORDINANCE NUMBER 226, AND THE WEST LINE OF THE NORTHWEST QUARTER OF SAID SECTION 31, TOWNSHIP 21 NORTH, RANGE 5 EAST, W.M.;
THENCE SOUTH ALONG SAID LINE COMMON TO THE LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 2271 AND THE CITY OF PACIFIC BY CITY OF PACIFIC ORDINANCE NUMBER 226, AND THE WEST LINE OF THE NORTHWEST QUARTER OF SAID SECTION 31 A DISTANCE OF 700 FEET, MORE OR LESS, TO THE POINT OF BEGINNING.

SITUATE IN KING COUNTY, WASHINGTON.

Attachment 2

CITY OF PACIFIC – DESCRIPTION CROSSING EAST VALLEY HIGHWAY

BEGINNING AT INTERSECTION OF THE EAST MARGIN OF THE EAST VALLEY HIGHWAY ("A" STREET SOUTHEAST) AND THE NORTH LINE OF TOWNSHIP 20 NORTH, RANGE 5 EAST, W.M.;
THENCE SOUTHERLY ALONG SAID EAST MARGIN OF THE EAST VALLEY HIGHWAY A DISTANCE OF 50 FEET;
THENCE WEST TO THE EAST LINE OF THE BURLINGTON NORTHERN SANTA FE (BNSF) RAILROAD RIGHT-OF-WAY (100 FEET IN WIDTH);
THENCE NORTHERLY ALONG SAID EAST LINE OF THE BNSF RAILROAD RIGHT-OF-WAY A DISTANCE OF 150 FEET;
THENCE EAST TO SAID EAST MARGIN OF THE EAST VALLEY HIGHWAY;
THENCE SOUTHERLY ALONG SAID EAST MARGIN OF THE EAST VALLEY HIGHWAY A DISTANCE OF 100 FEET TO THE POINT OF BEGINNING.

SITUATE IN KING AND PIERCE COUNTIES, WASHINGTON.

EXHIBIT D

CITY OF PACIFIC, WASHINGTON
FRANCHISE AGREEMENT WITH THE CITY OF AUBURN

WHEREAS, the City of Auburn (Auburn) and the City of Pacific (Pacific) have agreed to the annexation/de-annexation a portion of property described in Attachment "1" relating to among other things East Valley Highway (EVH) from the north end of the White River bridge to the King-Pierce County line in which, Auburn recognizes and agrees to Pacific's right to access a portion of EVH near the King/Pierce County line for ingress, egress and utilities; and

WHEREAS, Auburn and Pacific have entered into a Water Service Area Agreement, which revised the boundary between their respective water service areas; and

WHEREAS, the City of Auburn and Pacific have entered into an Emergency Water System Intertie Agreement; and

WHEREAS, in order to maintain control over the use of City of Pacific right-of-way by utilities operating within the City of Pacific, it is appropriate to enter into franchise agreements with such utilities; and

WHEREAS, City of Auburn is such a utility, and has negotiated this franchise agreement with the City of Pacific acceptable to both parties; and

WHEREAS, the City of Pacific has determined that it is in the best interests of the public to grant the City of Auburn a franchise on the terms and conditions set forth in this Agreement; now, therefore

THE CITY COUNCIL OF THE CITY OF PACIFIC, WASHINGTON, DO ORDAIN AS FOLLOWS:

SECTION 1 DEFINITIONS

Where used in this franchise ("Franchise"), the following definitions shall apply:

1.1 "Franchisee" means the City of Auburn, a Washington municipal corporation, and its respective successors and assigns.

1.2 "City" means the City of Pacific, a Washington municipal corporation.

1.3 "Franchise Area" means the Right of Way of A Street SE as described in Attachment "2" attached hereto, which is by this reference incorporated, as if fully set forth herein; provided, that the Franchise Area shall not include or convey any right to Franchisee to install facilities on or to otherwise use City owned or leased properties outside the Franchise Area.

1.4 "Facilities" means the Franchisee's water system, lines, mains, appurtenances, and all other necessary or convenient facilities for the purpose of providing water service.

1.5 "Agreement" means this Agreement setting forth the terms and conditions of the franchise granted to the Franchisee.

SECTION 2 FRANCHISE GRANT

Subject to the terms and conditions set forth in this Agreement, the City grants to the Franchisee the right for the construction and installation of water pipeline, appurtenances and the excavation of trenches on City roads for the purposes of constructing, installing, operating, maintaining, removing, and replacing mains and pipes and making connections between the same to the dwellings and other buildings of the consumers, the Franchisee shall be governed by and conform to the general rules adopted by the Public Works Department of the City of Pacific, and the Franchisee, at no expense to the City, shall complete all such work and shall replace and restore the City roads to a condition reasonably comparable to the condition of the City roads existing immediately prior to such disturbance; PROVIDED, HOWEVER, that no such work shall be done prior to the obtaining of a permit therefor issued by the City's Community Development Director (hereinafter "Director"), which permit shall set forth conditions pertaining to the work to be done and specifications for the restoration of the roads to the same condition as they were prior to such work. If the Franchisee does not repair the City roads to the satisfaction of the Director, the City may, at its sole discretion, repair such City roads, or cause them to be repaired, and the Franchisee hereby agrees to reimburse the City for the cost of such work, including overhead costs.

SECTION 3 FRANCHISE TERM

This Franchise is and shall remain in full force and effect for a period of twenty-five (25) years from the effective date of this Agreement; provided, that this Franchise shall not take effect and the Franchisee shall have no rights under this Franchise unless the Franchisee files a written acceptance of this Franchise with the City pursuant to Section 4 of this Agreement.

SECTION 4 ACCEPTANCE BY GRANTEE OF TERMS AND CONDITIONS

The full acceptance of this Franchise and all of its terms and conditions shall be filed with the City Clerk within forty-five (45) days from the date of this Agreement, by the Franchisee. Full acceptance of this Franchise is a condition precedent to its taking effect, and unless this Franchise is accepted within the time specified, this grant will be null and void and have no force or effect.

SECTION 5 NON-EXCLUSIVE FRANCHISE

This Franchise is not exclusive. It does not prohibit the City from granting franchises for other public or private utilities in, over, along, across, and under any City property,

including the Franchise Area. This Franchise does not prevent or prohibit the City from constructing, altering, maintaining or using any of the Franchise Area. The City retains full power to make all changes, relocations, repair, maintenance or other work to or in the Franchise Area as the City deems fit.

SECTION 6 JURISDICTIONS

This Franchise is intended to convey limited rights and interest only as to those roads and rights-of-way in which the City has an actual interest. It is not a warranty of title or of interest in City road rights-of-way. None of the rights granted to the Franchisee shall affect the jurisdiction of the City over City road rights-of-way or the City's power to perform work upon its roadways, rights-of-way or appurtenant drainage facilities including by constructing, altering, renewing, paving, widening, grading, blasting or excavating.

SECTION 7 REGULATION OF USE AND CONTROL

This Franchise does not deprive the City of any powers, rights, or privileges it now has or may later acquire in the future to regulate the use of and to control the City road rights-of-way covered by this Franchise. The City reserves the right and power at all times to exercise its police powers with respect to the time, manner and location of the placement of the Franchisee's Facilities.

SECTION 8 EMINENT DOMAIN

This Franchise and the limited rights and interests granted by this Franchise are subject to the exercise of eminent domain. In the event of an exercise of eminent domain by the City, the value to be attributed to all the rights and interests granted under this Franchise shall not exceed the actual amount the Franchisee paid to the City in obtaining this Franchise.

SECTION 9 VACATION

If at any time the City vacates any City rights-of-way covered by this Franchise, the City will not be held liable for any damages or loss to the Franchisee by reason of such vacation. The City may, after giving thirty (30) days written notice to the Franchisee terminate this Franchise with respect to any City road or rights-of-way vacated.

SECTION 10 ENFORCEMENT

The City's failure to enforce any provision of this Franchise does not constitute a waiver of its right to enforce that provision or any other provision of this Franchise.

SECTION 11 INDEMNITIES AND HOLD HARMLESS

11.1 The Franchisee shall defend, indemnify and hold harmless the City, its appointed and elected officials, and its employees and agents from and against liability for all claims, actions, injuries, demands, liabilities, losses, costs, damages and judgments, including costs of defense thereof, (collectively referred to as "damages") for injury to persons, death or property damage caused by, arising out of, or incidental

to the Franchisee's exercise of the rights and privileges granted by this Franchise, except for damages caused by or arising out of the City's sole negligence. In the event that any such claim or demand for damages is presented to or filed with the City, or if any suit or action is initiated against the City based on such claims or demands for damages, the City shall promptly notify the Franchisee of the claim, demand, suit or action and the Franchisee shall have the right, at its election and its sole cost and expense, to settle and compromise such claim, demand, suit or action, or defend the same at the Franchisee's sole cost and expense.

11.2 If it is determined that RCW 4.24.115 applies to this Franchise, the Franchisee agrees to defend, hold harmless and indemnify the City to the maximum extent permitted under that statute, and specifically for the Franchisee's negligence concurrent with that of the City to the full extent of the Franchisee's negligence.

SECTION 12 INSURANCE

12.1 The Franchisee being a municipality in the State of Washington shall be self-insured through the Washington Cities Insurance Association (WCIA). If required by Pacific, Auburn shall request the WCIA to provide Pacific with a letter sent from the WCIA evidencing such an insurance policy to be in force.

12.2 The insurance shall be maintained in full force and effect at the Franchisee's sole expense throughout the term of the Franchise. The City shall be given at least forty-five (45) days written notice that the Franchisee is no longer a member of the WCIA. Such notice to the City shall be by certified mail, sent to City of Pacific; Public Works Dept.; 100 3rd SE; Pacific, Washington 98047

12.3 The coverage provided by Auburn's insurance policies shall be primary to any insurance maintained by Pacific except as to losses or damages attributable to the sole negligence of Pacific. Any insurance maintained by Pacific that might relate to this Franchise shall be in excess to Auburn's insurance and shall not contribute with or to it. Pacific has no obligation to report occurrences to the insurance companies unless a claim is filed with Pacific's City Council; and Pacific has no obligations to pay Auburn's premiums.

12.4 The Franchisee shall be solely and completely responsible to perform all work related to this Franchise in compliance with all applicable federal, state, county and city statutes, rules, regulations, ordinances, orders and codes. The Franchisee's attention is directed to the requirements of the Washington Industrial Safety and Health Act, Chapter 49.17 RCW. The Franchisee shall be solely and completely responsible for safety and safety conditions on its job sites and for its work within the Franchise Area, including the safety of all persons and property during performance of any works therein. The services of the City or City's consultant personnel in conducting construction review of the Franchisee's work relating to the Franchise is not intended to include review of the adequacy of the Franchisee's work methods, equipment, scaffolding, or trenching, or safety measures in, on or near such Franchise Area or job site. The Franchisee shall provide safe access for the City and its inspectors to

adequately inspect the work and its conformance with applicable statutes, ordinances, rules, regulations, and the Franchise.

SECTION 13 INSTALLATION, REPAIR, REMOVAL OR RELOCATION

13.1 The Franchisee shall, at no expense to the City, expeditiously repair all existing Facilities that it owns within the Franchise Area, including any damage caused directly or indirectly by its Facilities, all appurtenant Facilities and service lines connecting its system to users, if the City requires such repair for any reasonable purpose.

13.2 The Franchisee shall, at no expense to the City, adjust, remove or relocate existing Facilities within the Franchise Area, including all appurtenant Facilities and service lines connecting its system to users, if the City determines such adjustment, removal or relocation is reasonably necessary to allow for an improvement or alteration planned by the City. The City shall give the Franchisee written notice of such requirement as soon as practicable. The written notice shall include all available information, such as plans and specifications, as is reasonably necessary for the Franchisee to plan for such adjustment, removal or relocation.

13.3 Franchisee's Facilities shall be constructed, installed, maintained and repaired within the Franchise Area so as to provide safety of persons and property, and not interfere with the free passage of traffic, all in accordance with the laws of the State of Washington, and the ordinances, resolutions, rules and regulations of the City.

13.4 For projects that are a part of the City's capital improvement program, in addition to any other notice given to the Franchisee, the City shall provide a vertical and horizontal profile of the roadway and drainage facilities within it, both existing and as proposed by the City, and the proposed construction schedule. The initial design information shall be given at least thirty (30) days before construction is scheduled to begin, except in cases of urgent construction or emergencies. The Franchisee shall respond to this notice, and to any later notices of revised designs, within twenty (20) days of the date of the notice, by providing to the City the Franchisee's best available information as to the location of all the Franchisee's Facilities, including all appurtenant Facilities and service lines connecting its system to users and all Facilities that it has abandoned, within the area proposed for the project.

13.5 The City shall offer the Franchisee the opportunity to participate in the preparation of bid documents for the selection of a contractor to perform the public works project as well as all required adjustments, removals or relocations of the Franchisee's Facilities. The City shall have sole authority to choose the contractor to perform such work. Such bid documents shall provide for an appropriate cost allocation between the parties. In addition to the Franchisee's allocation of contractor costs, the Franchisee shall reimburse the City for all costs, to include but not be limited to legal, engineering, inspections, administration and/or soils testing, related to the Franchisee's work and reasonably incurred by the City in the administration of such joint construction contracts. Such costs shall include the direct salary cost of the time of City professional

and technical personnel, including the City's consultants, spent productively engaged in such work, plus overhead costs at the standard rate charged by the City on other similar projects.

13.6 It is understood that emergency situations may arise that could threaten public health and/or continued operation of the Franchisee's utility system and the Franchisee may be unable to notify the City in the manner prescribed in Section 14 of this Franchise. In such a situation the Franchisee shall immediately correct the hazardous situation and continue to use best efforts to contact the City staff. The Emergency Phone Number for the City of Pacific is 253-929-1110, and the City of Auburn is 253-931-3048. Dialing 911 is advised for emergency situations.

SECTION 14 REQUIREMENT OF CONSTRUCTION PERMITS

14.1 The Franchisee has the right, privilege and authority to enter the City road rights-of-way for the purpose of constructing, installing, operating, maintaining, replacing or repairing its Facilities on the condition that it obtains construction, excavation, and right-of-way use permits issued by the City. Any work performed, whether by Franchisee, its contractors, or third parties, shall include necessary paving, patching, grading and any other reasonably necessary repair or restoration to the City rights-of-way. All work shall be done to the City's satisfaction.

14.2 All equipment, lines and appurtenances which are used in the construction, installation, operation, maintenance or repair of the Franchisee's Facilities and which are located within the City road rights-of-way and owned by the Franchisee shall be considered to be part of the Franchisee's system and shall be the responsibility of the Franchisee. All permits for the construction, installation, operation, maintenance or repair of the Franchisee's system shall be applied for and given in the name of the Franchisee, who will be responsible for all work done under the permit. The Franchisee remains responsible whether the work is performed by the Franchisee, its contractors, or by third parties.

14.3 When required by the Director, the Franchisee shall post a bond to the City in the amount sufficient for any road repair or restoration. The amount of the bond shall be set by the City and must be filed with the City before a permit will be issued.

SECTION 15 PERFORMANCE OF WORK

15.1 Any work performed by the Franchisee in the Franchise Area shall conform to all City ordinances and requirements including, but not limited to, Chapter 13.12 PMC and the City's Road Standards in force when the work is performed. All traffic control shall conform to the current edition of the Uniform Traffic Control Devices in force when the work is performed.

15.2 If work performed under this Franchise makes it necessary to turn off or diminish water pressure to any fire hydrant, the Franchisee shall notify the City's Fire Department by telephone and by written notice, that water pressure or fire flow conditions have been affected. Except in the case of an emergency, the notice shall be

provided at least 48 hours prior to the water pressure being turned off or diminished. If more than one fire hydrant will be affected, the Franchisee shall provide a map of the affected area to the Fire Department. Out-of-service fire hydrants must be marked to indicate that it is not operational.

SECTION 16 RESTORATION OF CITY RIGHTS-OF-WAY

After performing work on, under or adjacent to City road rights-of-way, the Franchisee is responsible for and shall leave all City road rights-of-way in a condition reasonably comparable to the condition of the City roads rights-of-way existing immediately prior to such disturbance. If the Franchisee, its contractors, or third parties working under permit should fail to diligently restore City road rights-of-way to the satisfaction of the City, the City may make such repairs or restorations as are necessary to return the City road rights-of-way to a condition reasonably comparable to the condition of the City roads rights-of-way existing immediately prior to such disturbance. Upon presentation of an itemized bill for repairs or restorations, including all applicable costs, both direct and indirect, to include but not be limited to the cost of labor, tools, materials and equipment, the Franchisee shall pay the bill within sixty-five (65) days.

SECTION 17 GUARANTEE

The Franchisee shall guarantee work and materials furnished and completed by the Franchisee under this Franchise for a period of two (2) years from the date the City approves the work and/or restoration.

SECTION 18 INFORMATION ON LOCATION OF FACILITIES

Prior to the effective date of this Agreement, the Franchisee shall provide the City with all information requested by the City regarding the location of the Franchisee's current Facilities, including but not limited to copies of all record drawings for such Facilities. If the Franchisee performs any work to install, repair, reconstruct, or replace Facilities in the Franchise Area after this Agreement's effective date, the Franchisee shall provide the City with all information requested by the City regarding the location of those Facilities, including but not limited to copies of record drawings.

SECTION 19 COORDINATION OF WORK IN FRANCHISE AREA

To facilitate the coordination of work in City rights-of-way, if either the Franchisee or the City plans to make excavations in the Franchise Area, the party planning such excavation shall provide written notice to the other of the planned excavation, affording the other party the opportunity to share in the excavation; provided, that (1) such joint use shall not unreasonably delay the work of the party causing the excavation to be made, (2) such joint use shall be arranged and accomplished on terms and conditions satisfactory to both parties, and (3) either party may deny such request for safety reasons.

SECTION 20 REIMBURSEMENT OF COSTS

The Franchisee shall reimburse and pay to the City the amount of actual administrative expenses incurred by the City which are directly or indirectly related to the receipt, review and approval of this Franchise. In the event of non-payment thereafter, the Franchisee shall pay the City's reasonable attorneys' fees and other costs incurred in collecting such amount. Payment must be made within sixty-five (65) days of the Franchisee's receipt of the City's bill/invoice. If payment is not paid in full within the sixty-five (65) days, this Franchise shall become null and void.

SECTION 21 BLASTING REQUIREMENTS

The Franchisee's right to construct, install, operate, maintain and repair Facilities does not preclude the City, its agents or contractors from blasting, grading, or doing other road work contiguous to the Franchisee's Facilities. When practical, the City shall give the Franchisee forty-eight (48) hours notice of blasting or excavating.

SECTION 22 SURVEY MARKERS AND MONUMENTS

Before any work is performed under this Franchise, the Franchisee shall establish two or more reference marks to all monuments and markers of every nature relating to subdivisions, plats, rights-of-way, and all other surveys. The reference points shall be located so that they will not be disturbed during any of Franchisee's operations under this Franchise. The method of referencing monuments or other markers or points shall be approved by the City before placement. The replacement of all markers or monuments disturbed during any construction of the Franchisee shall be made as promptly as conditions permit. The cost of monuments or markers lost, destroyed, or disturbed and the expense or replacement with approved markers or monuments shall be borne by the Franchisee.

SECTION 23 RESERVATION OF RIGHTS

The City reserves the right, upon thirty (30) days written notice to the Franchisee, to amend or modify the provisions or conditions of this Franchise to conform to any state, county, federal, or city statute, ordinance, rule or regulation. The City may terminate this Franchise upon thirty (30) days written notice to the Franchisee if the Franchisee fails or refuses to comply with such amendment or modification.

SECTION 24 ASSIGNMENT

The Franchisee shall not have the right to assign this Franchise without the written consent of the City. No assignment shall be effective unless an acceptance by the assignee of all rights, conditions, terms, provisions and responsibilities contained within the Franchise, as well as surety bonds which the City deems necessary to be posted, are received. The City's approval of the assignment may be made subject to the assignee's acceptance of new or modified terms of the Franchise.

SECTION 25 PENALTY FOR VIOLATION OF CONDITIONS

If the Franchisee fails to comply with any material term, condition or responsibility under this Franchise, the City may provide the Franchisee with written notice of the City's intent to revoke the Franchise if the Franchisee's failure is not cured within thirty (30) days of the date of the notice. During the thirty (30) days following the date of the notice, the Franchisee shall have the opportunity to remedy the failure to comply. A public hearing shall be scheduled before the Pacific City Council at least thirty (30) days following the notification on the issue of the revocation. If at the hearing, the City Council finds that grounds exist to revoke the Franchise under this paragraph and that the revocation is in the public interest, the City Council may by Agreement revoke the Franchise. The revocation shall be effective ninety (90) days after the public hearing.

SECTION 26 EXPIRATION AND RENEWAL

26.1 If the Franchisee requests a renewal of this Franchise prior to its expiration date, the City may, at the City's sole discretion, extend the term of this Franchise for up to one year beyond the expiration date to allow for processing of the renewal. If the City elects to extend the term of this Franchise, written notice of the extension shall be provided to the Franchisee prior to the Franchise expiration date.

26.2 If the Franchisee has not requested a renewal of this Franchise prior to its expiration date, the City has the right, upon thirty (30) day's prior notice to the Franchisee, to remove or relocate any of the Franchisee's Facilities as is reasonably necessary for the public's health, welfare or safety, or for the construction, alteration, or improvement of the Franchise Area, or for the construction or installation of lines or facilities of other franchise holders. The Franchisee shall be liable for costs incurred in any removal or relocation of the Franchisee's Facilities under this section.

26.3 Upon the expiration of this Franchise, the Franchisee shall continue to be responsible for the operation and maintenance of the Franchisee's existing facilities in the Franchise Area, but shall not have the right to provide additional services. This Section and Sections 11, 13, 14, 15, 16, 19, and 22 of this Franchise shall continue in force until such time as the Franchisee's Facilities are removed from the Franchise Area or abandoned in place with approval of the City.

SECTION 27 COMPLIANCE WITH LAWS

The Franchisee shall conform to all applicable federal, state and local laws and regulations including, but not limited to, the State Environmental Policy Act and the City's Environmental Standards and Ordinances.

SECTION 28 NON-DISCRIMINATION CLAUSES

In all hiring or employment made possible or resulting from this Franchise, there shall be no discrimination against any employee or applicant for employment because of sex, sexual orientation, age, race, color, national origin, marital status or the presence of any

sensory, mental, or physical handicap, unless based upon a bona fide occupation qualification. No person shall be denied or subjected to discrimination in receipt of the benefit of any services or activities made possible by or resulting from this agreement on the grounds of sex, sexual orientation, race, color, national origin, age, except minimum age and retirement provisions, marital status, or the presence of any sensory, mental or physical handicap.

SECTION 29 NOTICES

Any notice or information required or permitted under this Franchise may be sent to the following addresses unless otherwise specified:

City of Pacific:
City Community Development Director
100 - 3rd Avenue S.E.
Pacific, Washington 98047
253-929-1110

City of Auburn:
City Engineer
25 West Main Street
Auburn, WA 98001-4998
253-931-3010

SECTION 30 ATTORNEYS' FEES

If either party commences litigation against the other party relating to the performance or alleged breach of this Franchise, the prevailing party shall be entitled to all costs, including reasonable attorneys' fees incurred, relating to such litigation, including those incurred in any appeal.

SECTION 31 SEVERANCE

If any term, provision, condition or portion of this Franchise is held to be invalid, such invalidity shall not affect the validity of the remaining portions of this Franchise which shall continue in full force and effect, unless the dominant purpose of the Franchise would be prevented or the public interest would no longer be served, as determined by the City.

SECTION 32 EFFECTIVE DATE

This Agreement having been introduced at least five days prior to its date of passage and submitted to the city attorney, and being approved by at least a majority of the entire city council at a regular city council meeting, shall take effect and be in force five days after its passage, approval and publication as required by law.

SECTION 33 EXISTING UTILITIES

This Franchise shall govern Franchisee's new and existing Facilities within the City of Pacific.

IN WITNESS WHEREOF, the parties have executed this Agreement effective as of the date last written below.

CITY OF AUBURN
King County, Washington

PETER B. LEWIS, MAYOR

Date OCT 2 0 2003

ATTEST:

Danielle E. Daskam, CMC, City Clerk

APPROVED AS TO FORM:

Daniel B. Heid, City Attorney

CITY OF PACIFIC
King County, Washington

HOWARD ERICKSON, MAYOR

Date October 31, 2003

ATTEST:

Randy Reed, CMC, City Clerk

APPROVED AS TO FORM:

Albert A. Abuan, City Attorney

ATTACHMENT 1

ANNEXATION LEGAL DESCRIPTION
AREA IN VICINITY OF "A" STREET SOUTHEAST (EAST VALLEY HIGHWAY) AND LAKELAND HILLS WAY SOUTHEAST

THAT PORTION OF GOVERNMENT LOTS 3 AND 4 IN THE SOUTHWEST QUARTER OF SECTION 31, TOWNSHIP 21 NORTH, RANGE 5 EAST, W. M., AND THE EAST HALF OF SECTION 36, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M., DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF SAID GOVERNMENT LOT 3 IN SECTION 31, TOWNSHIP 21 NORTH, RANGE 5 EAST, W.M., SAID CORNER ALSO BEING AN ANGLE POINT IN THE WEST BOUNDARY OF THE LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 2271 AND THE NORTHWEST CORNER OF THE LANDS DESCRIBED IN CITY OF PACIFIC ANNEXATION ORDINANCE NUMBER 319;
THENCE EAST ALONG THE NORTH LINE OF SAID GOVERNMENT LOT 3, AND THE BOUNDARY COMMON TO SAID LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 2271 AND THE CITY OF PACIFIC BY CITY OF PACIFIC ORDINANCE NUMBER 319 A DISTANCE OF 1280 FEET MORE OR LESS TO THE NORTHEAST CORNER OF SAID GOVERNMENT LOT 3;
THENCE SOUTH ALONG THE EAST LINE OF SAID GOVERNMENT LOTS 3 AND 4, AND THE BOUNDARY COMMON TO SAID LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 2271 AND THE CITY OF PACIFIC BY CITY OF PACIFIC ORDINANCE NUMBER 319 TO THE SOUTHEAST CORNER OF SAID CITY OF PACIFIC ORDINANCE 319 AND TO A LINE PARALLEL WITH AND 825 FEET NORTHERLY OF THE SOUTH LINE OF SAID GOVERNMENT LOT 4;
THENCE WEST ALONG THE BOUNDARY COMMON TO SAID LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 2271 AND THE CITY OF PACIFIC BY CITY OF PACIFIC ORDINANCE NUMBER 319, AND ALONG SAID PARALLEL LINE A DISTANCE OF 1300 FEET, MORE OR LESS, TO THE WEST LINE OF SAID SECTION 31;
THENCE SOUTH ALONG THE WEST LINE OF SAID SECTION 31 AND THE BOUNDARY COMMON TO THE LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 2271 AND THE CITY OF PACIFIC BY CITY OF PACIFIC ORDINANCE NUMBER 226 TO THE SOUTHWEST CORNER OF SAID SECTION 31;
THENCE WEST ALONG THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SECTION 36, TOWNSHIP 21 NORTH, RANGE 4 EAST AND ALONG THE SOUTH LINE OF THE LANDS ANNEXED TO THE CITY OF PACIFIC BY CITY OF PACIFIC ORDINANCE NUMBER 226 A DISTANCE OF 70 FEET, MORE OR LESS, TO THE EAST LINE OF THE BURLINGTON NORTHERN SANTA FE (BNSF) RAILROAD RIGHT-OF-WAY (100 FEET IN WIDTH);
THENCE NORTH ALONG SAID EAST LINE OF THE BNSF RAILROAD RIGHT-OF-WAY TO A LINE PARALLEL WITH AND 100 FEET NORTHERLY OF SAID SOUTH LINE OF THE SOUTHEAST QUARTER OF SAID SECTION 36;
THENCE WEST ALONG LAST SAID PARALLEL LINE 100 FEET TO THE WEST LINE OF SAID BURLINGTON NORTHERN SANTA FE (BNSF) RAILROAD RIGHT-OF-WAY;
THENCE NORTH ALONG SAID WEST LINE OF THE BNSF RAILROAD RIGHT-OF-WAY A DISTANCE OF 3280 FEET, MORE OR LESS, TO A LINE PARALLEL WITH AND 1884 FEET SOUTHERLY (WHEN MEASURED ALONG THE WEST LINE OF SAID RAILROAD RIGHT-OF-WAY) FROM THE NORTH LINE OF THE NORTHWEST QUARTER OF SAID SECTION 36;
THENCE EASTERLY ALONG LAST SAID PARALLEL LINE A DISTANCE OF 175 FEET, MORE OR LESS, TO THE EAST RIGHT-OF WAY LINE OF EAST VALLEY HIGHWAY ("A" STREET SE);
THENCE SOUTHERLY ALONG SAID EAST RIGHT-OF-WAY LINE A DISTANCE OF 150 FEET, MORE OR LESS, TO THE NORTH BANK OF THE WHITE RIVER (STUCK RIVER);

THENCE NORTHEASTERLY ALONG SAID NORTH BANK OF THE WHITE RIVER A DISTANCE OF 200 FEET, MORE OR LESS, TO THE LINE COMMON TO THE LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 2271 AND THE CITY OF PACIFIC BY CITY OF PACIFIC ORDINANCE NUMBER 226, AND THE WEST LINE OF THE NORTHWEST QUARTER OF SAID SECTION 31, TOWNSHIP 21 NORTH, RANGE 5 EAST, W.M.;
THENCE SOUTH ALONG SAID LINE COMMON TO THE LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 2271 AND THE CITY OF PACIFIC BY CITY OF PACIFIC ORDINANCE NUMBER 226, AND THE WEST LINE OF THE NORTHWEST QUARTER OF SAID SECTION 31 A DISTANCE OF 700 FEET, MORE OR LESS, TO THE POINT OF BEGINNING.

SITUATE IN KING COUNTY, WASHINGTON.

ATTACHMENT 2

PORTION OF "A" STREET SOUTHEAST WITHIN THE CITY OF PACIFIC (IN THE NE QUARTER OF SECTION 36, TWP 21N, R 4E, W.M.)

THAT PORTION OF THE NORTHEAST QUARTER OF SECTION 36, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M., DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEAST CORNER OF THE LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 1171, SAID CORNER BEING ON THE EAST MARGINAL LINE OF THE EAST VALLEY HIGHWAY (ALSO KNOWN AS STATE HIGHWAY NO. 5 AND AS "A" STREET SOUTHEAST);
THENCE SOUTHWESTERLY 600 FEET, MORE OR LESS, ALONG SAID EAST MARGINAL LINE TO A LINE PARALLEL WITH AND 1884 FEET SOUTHERLY (WHEN MEASURED ALONG THE WEST LINE OF THE BURLINGTON NORTHERN SANTA FE RAILROAD RIGHT-OF-WAY) FROM THE NORTH LINE OF THE NORTHWEST QUARTER OF SAID SECTION 36;
THENCE WESTERLY ALONG SAID PARALLEL LINE TO THE WESTERLY RIGHT-OF WAY LINE OF SAID EAST VALLEY HIGHWAY ("A" STREET SE);
THENCE NORTHERLY ALONG SAID WESTERLY RIGHT-OF-WAY LINE A DISTANCE OF 600 FEET, MORE OR LESS, TO THE SOUTH LINE OF SAID LANDS ANNEXED UNDER CITY OF AUBURN ORDINANCE NUMBER 1171;
THENCE EASTERLY ALONG SAID SOUTH LINE TO THE POINT OF BEGINNING.

SITUATE IN KING COUNTY, WASHINGTON.

Exhibit E

INTERLOCAL AGREEMENT
regarding the
PROPOSED VISTA HEIGHTS DEVELOPMENT AT LAKELAND
City of Pacific and City of Auburn

This Agreement is entered into between the City of Pacific, a municipal corporation under the laws of Washington State, hereinafter referred to as "Pacific", and the City of Auburn, a municipal corporation formed under the laws of Washington State, hereinafter referred to as "Auburn".

WHEREAS, Pacific and Auburn have agreed that Auburn will assume SEPA lead agency responsibilities for a proposed residential development known as "Vista Heights at Lakeland," hereinafter referred to as the "Development," that is situated on adjoining parcels, one with tax identification number 312105-9008 (hereinafter referred to as "Site 7"), in Pacific, and one with tax identification number 312105-9006 (hereinafter referred to as "Site 8"), in Auburn; and

WHEREAS, Pacific and Auburn have agreed that Site 7 will be annexed into Auburn; and

WHEREAS, Pacific and Auburn previously executed an Interlocal Agreement dated July 24, 2000 regarding Emergency Fire Flow Protection for Site 7 from Auburn and domestic water service for Site 7 from Pacific; and

WHEREAS, upon completion of the Annexation, Site 7 will be served with water for domestic use and emergency fire flow protection by Auburn;

NOW, THEREFORE, IT IS MUTUALLY AGREED as follows:

1. The *Interlocal Agreement regarding Emergency Fire Flow Protection for the Proposed Vista Heights Development At Lakeland, City of Pacific and City of Auburn* is superceded by this agreement.

2. Pacific shall be responsible for collecting Auburn's traffic mitigation fee of $677.71 per single family residential lot if building permits are issued by Pacific prior to the completion of the annexation and the funds will be transmitted to Auburn.

3. Auburn shall be responsible for collecting Pacific's parks mitigation fee of $600.00 per single-family residential lot as authorized by applicable Pacific SEPA finding, Ordinance or Resolution if building permits are issued by Auburn subsequent to the completion of the annexation and the funds will be transmitted to Pacific.

4. Pacific shall be responsible for assisting Auburn in obtaining clear title to the storm water facilities and the underlying property that store and treat public storm water.

5. Each participant to this Agreement shall indemnify and hold the other harmless from and against any liability, loss, cost, damage, or expense of any kind and nature arising out of injury to person or damage to property in any manner, caused by the negligent act or omission of the indemnifying individual participant to this Agreement in the performance of its work or execution of its obligations under the terms of this Agreement. Each participant to this Agreement shall indemnify and hold the other harmless from all damages, which may occur as a result of any failure to comply with the provisions of Chapter 82.02 RCW or other applicable law.

6. Should a dispute arise between the parties that cannot be resolved satisfactorily, a mediator mutually acceptable to the parties shall resolve the dispute through the use of mediation at equal cost to each party. Should the Parties not be able to satisfactorily resolve the dispute through mediation, the forum for resolution shall be the King County Superior Court. The prevailing party shall be entitled to attorney fees and costs.

IN WITNESS WHEREOF, the parties have executed this Agreement effective as of the date last written below.

CITY OF AUBURN
King County, Washington

PETER B. LEWIS, MAYOR

Date OCT 2 0 2003

ATTEST:

Danielle E. Daskam, CMC, City Clerk

APPROVED AS TO FORM:

Daniel B. Heid, City Attorney

CITY OF PACIFIC
King County, Washington

HOWARD ERICKSON, MAYOR

Date October 31, 2003

ATTEST:

Randy Reed, CMC, City Clerk

APPROVED AS TO FORM:

Albert A. Abuan, City Attorney

Return Address:
City of Auburn
City Clerk
25 West Main
Auburn, WA 98001

200402110019 82
PACIFIC NW TIT BS 24.00
PAGE001 OF 006
02/11/2004 15:13
KING COUNTY, WA

Exhibit F

Above this line reserved for recording information.

BILL OF SALE

Reference # (if applicable):	N/A
Grantor/Borrower:	**City of Pacific**
Grantee/Assignee/Beneficiary:	**City of Auburn**
Legal Description/STR:	SW ¼, 31-21-05E, & E ½, 36-21-04E
Assessor's Tax Parcel ID#:	312105-9007, 9008, 9016, 9025, 9026, 9027, 9036, 9041, 9044, 9064, 9065, 9066, 9068. 362104-9018, 9020, 9044, 9045, 9057, 9059, & 9068. 362104-9018 & 9045. 335440-0680.

6/24 PNWT
W7634-12

KNOW ALL MEN BY THESE PRESENTS that for and in consideration of the relocation of the water system Emergency Intertie Facility, and for the consideration of incorporating the facility into the City system, and other good and sufficient consideration, receipt whereof is hereby acknowledged, the undersigned Grantor, City of Pacific, a Municipal Corporation in King County, Washington does by these presents hereby convey, setover, assign, transfer and warrant to the City of Auburn, a Municipal Corporation in King County, Washington,

STREETS	
Lakeland Hills Way	775 LF of 72 foot wide ROW,
Lakeland Hills Way	725 LF of 60 foot wide ROW,
East Valley Highway	2,650 LF of 70 foot wide ROW,
Oravetz Rd.	744 LF of 60foot wide ROW,
Oravetz Place SE	1,030 LF of 10 wide ROW,
S 376th ST.	120 LF of 30 foot wide ROW.

STREETLIGHTS

Lakeland Hills Way	7 each 400-watt luminaire, & 4 each 250-watt luminaire
East Valley Highway	6 each 400-watt luminaire
Oravetz Rd.	4 each 250-watt luminaire, & 1 each 150-watt luminaire

WATER MAIN

Lakeland Hills Way	1,650 LF of 12-inch pipe
East Valley Highway	2,000 LF of 12-inch pipe
Oravetz Rd.	900 LF of 12-inch pipe
Oravetz Place SE	1,250 LF of 12-inch pipe

PRESSURE REDUCING STATION

Lakeland Hills Way	One Water Pressure Reducing Station

STORM SEWER

Lakeland Hills Way	920 LF of 24-inch, 740 LF of 18-inch & 380 LF of 12-inch storm pipe
East Valley Highway	141 LF of 24-inch, 1,405 LF of 12-inch, & 37 LF of 8-inch storm pipe
Oravetz Rd.	900 LF of 24-inch, and 156 LF of 12-inch storm pipe

STORM DETENTION PONDS

Lakeland Hills Way	Detention Pond #1, Detention Pond #2 and 130 LF of 24-inch storm pipe

BRIDGE

East Valley Highway	White "Stuck" River Bridge.

and all appurtenances or any other associated public facility as shown on the public facility extension plans constructed by Public or Private entities associated with the Pacific Annexation. Situated within the following described real property.

See ATTACHMENTS '1' and '2' ATTACHED HERETO AND BY THIS REFERENCE MADE A PART HEREOF

and the said Grantor hereby warrants that it is the sole owner of all the property above conveyed; that it has full power to convey the same and that it will defend the title of the said Grantee against any and all persons lawfully making claim thereto, and indemnify the City of Auburn for any costs, including Attorney fees in defending title.

IN WITNESS WHEREOF the Grantor has executed these presents this 31st day of October, 2003.

Howard Erickson October 31, 2003
Mayor Date

ATTEST:

Randy Reed
City Clerk

APPROVAL AS TO FORM

City Attorney

STATE OF WASHINGTON)
)ss.
County of King)

On this 31 day of October, 2003 before me, the undersigned, a Notary Public in and for the State of Washington, personally appeared Howard Erickson Randy Reed and Albert A. Aburan, to me known to be the Mayor and City Clerk of the City of Pacific, the municipal corporation of the State of Washington, in the forgoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said municipal corporation for the uses and purposes therein mentioned, and on oath stated that they are authorized to execute said instrument on behalf of said municipal corporation.

IN WITNESS WHEREOF, I have hereto set my hand and affixed my official seal the date hereinabove set forth.

Catherine A Roppo

CATHERINE A ROPPO
Notary Public in and for the State of Washington
residing at Graham
My appointment expires 10-9-2007

CATHERINE A. ROPPO NOTARY PUBLIC STATE OF WASHINGTON COMMISSION EXPIRES 10-9-07

ATTACHMENT 1

PROPOSED ANNEXATION LEGAL DESCRIPTION
AREA IN VICINITY OF "A" STREET SOUTHEAST (EAST VALLEY ROAD) AND LAKELAND HILLS WAY SOUTHEAST

THAT PORTION OF GOVERNMENT LOTS 3 AND 4 IN THE SOUTHWEST QUARTER OF SECTION 31, TOWNSHIP 21 NORTH, RANGE 5 EAST, W. M., AND THE EAST HALF OF SECTION 36, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M., DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF SAID GOVERNMENT LOT 3 IN SECTION 31, TOWNSHIP 21 NORTH, RANGE 5 EAST, W.M., SAID CORNER ALSO BEING AN ANGLE POINT IN THE WEST BOUNDARY OF THE LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 2271 AND THE NORTHWEST CORNER OF THE LANDS DESCRIBED IN CITY OF PACIFIC ANNEXATION ORDINANCE NUMBER 319;

THENCE EAST ALONG THE NORTH LINE OF SAID GOVERNMENT LOT 3, AND THE BOUNDARY COMMON TO SAID LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 2271 AND THE CITY OF PACIFIC BY CITY OF PACIFIC ORDINANCE NUMBER 319 A DISTANCE OF 1280 FEET MORE OR LESS TO THE NORTHEAST CORNER OF SAID GOVERNMENT LOT 3;

THENCE SOUTH ALONG THE EAST LINE OF SAID GOVERNMENT LOTS 3 AND 4, AND THE BOUNDARY COMMON TO SAID LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 2271 AND THE CITY OF PACIFIC BY CITY OF PACIFIC ORDINANCE NUMBER 319 TO THE SOUTHEAST CORNER OF SAID CITY OF PACIFIC ORDINANCE 319 AND TO A LINE PARALLEL WITH AND 825 FEET NORTHERLY OF THE SOUTH LINE OF SAID GOVERNMENT LOT 4;

THENCE WEST ALONG THE BOUNDARY COMMON TO SAID LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 2271 AND THE CITY OF PACIFIC BY CITY OF PACIFIC ORDINANCE NUMBER 319, AND ALONG SAID PARALLEL LINE A DISTANCE OF 1300 FEET, MORE OR LESS, TO THE WEST LINE OF SAID SECTION 31;

THENCE SOUTH ALONG THE WEST LINE OF SAID SECTION 31 AND THE BOUNDARY COMMON TO THE LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 2271 AND THE CITY OF PACIFIC BY CITY OF PACIFIC ORDINANCE NUMBER 226 TO THE SOUTHWEST CORNER OF SAID SECTION 31;

THENCE WEST ALONG THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SECTION 36, TOWNSHIP 21 NORTH, RANGE 4 EAST AND ALONG THE SOUTH LINE OF THE LANDS ANNEXED TO THE CITY OF PACIFIC BY CITY OF PACIFIC ORDINANCE NUMBER 226 A DISTANCE OF 70 FEET, MORE OR LESS, TO THE EAST LINE OF THE BURLINGTON NORTHERN SANTA FE (BNSF) RAILROAD RIGHT-OF-WAY (100 FEET IN WIDTH);

THENCE NORTH ALONG SAID EAST LINE OF THE BNSF RAILROAD RIGHT-OF-WAY TO A LINE PARALLEL WITH AND 100 FEET NORTHERLY OF SAID SOUTH LINE OF THE SOUTHEAST QUARTER OF SAID SECTION 36;

THENCE WEST ALONG LAST SAID PARALLEL LINE 100 FEET TO THE WEST LINE OF SAID BURLINGTON NORTHERN SANTA FE (BNSF) RAILROAD RIGHT-OF-WAY;

THENCE NORTH ALONG SAID WEST LINE OF THE BNSF RAILROAD RIGHT-OF-WAY A DISTANCE OF 3280 FEET, MORE OR LESS, TO A LINE PARALLEL WITH AND 1884 FEET SOUTHERLY (WHEN MEASURED ALONG THE WEST LINE OF SAID RAILROAD RIGHT-OF-WAY) FROM THE NORTH LINE OF THE NORTHWEST QUARTER OF SAID SECTION 36;

THENCE EASTERLY ALONG LAST SAID PARALLEL LINE A DISTANCE OF 175 FEET, MORE OR LESS, TO THE EAST RIGHT-OF WAY LINE OF EAST VALLEY HIGHWAY ("A" STREET SE);

THENCE SOUTHERLY ALONG SAID EAST RIGHT-OF-WAY LINE A DISTANCE OF 150 FEET, MORE OR LESS, TO THE NORTH BANK OF THE WHITE RIVER (STUCK RIVER);

THENCE NORTHEASTERLY ALONG SAID NORTH BANK OF THE WHITE RIVER A DISTANCE OF 200 FEET, MORE OR LESS, TO THE LINE COMMON TO THE LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 2271 AND THE CITY OF PACIFIC BY CITY OF PACIFIC ORDINANCE NUMBER 226, AND THE WEST LINE OF THE NORTHWEST QUARTER OF SAID SECTION 31, TOWNSHIP 21 NORTH, RANGE 5 EAST, W.M.;

THENCE SOUTH ALONG SAID LINE COMMON TO THE LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 2271 AND THE CITY OF PACIFIC BY CITY OF PACIFIC ORDINANCE NUMBER 226, AND THE WEST LINE OF THE NORTHWEST QUARTER OF SAID SECTION 31 A DISTANCE OF 700 FEET, MORE OR LESS, TO THE POINT OF BEGINNING.

SITUATE IN KING COUNTY, WASHINGTON.

ATTACHMENT 2

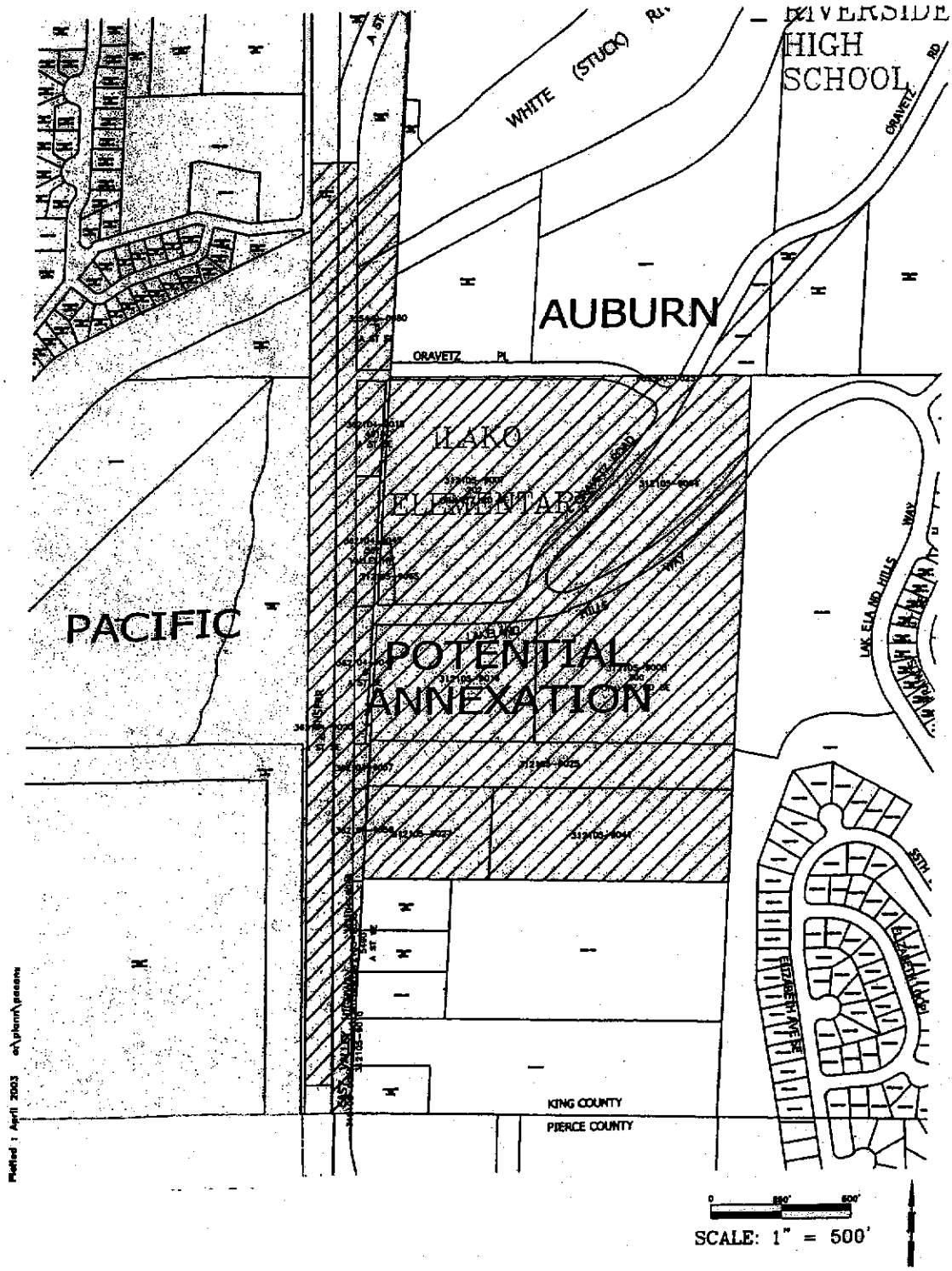


Exhibit F, Attachment 2
Resolution No. 3644
Page 1 of 1

EXHIBIT G

AN INTERLOCAL AGREEMENT BETWEEN THE CITY OF AUBURN AND THE CITY OF PACIFIC FOR MAINTENANCE AND OPERATION SERVICES ON 'A' STREET SE

Pursuant to the Interlocal Cooperation Act codified as RCW 39.34, this Agreement is made and entered into this day by and between the **CITY OF AUBURN**, hereafter called "**AUBURN**", and the **CITY OF PACIFIC**, hereafter called "**PACIFIC**", to provide Right of Way maintenance and operation services on A Street SE as legally described on Attachment 1 and shown on Attachment 2.

WHEREAS, PACIFIC will not have the organization and personnel to provide Right of Way maintenance and operation services at the stated location; and

WHEREAS, PACIFIC desires to provide quality maintenance and operation activities for it's Right of Way; and

WHEREAS, AUBURN is able to provide such maintenance and operation services for PACIFIC, and

WHEREAS, it is for the public benefit that AUBURN and PACIFIC cooperate to provide safe and effective maintenance and operation activities; and

NOW THEREFORE, AUBURN and PACIFIC hereby agree:

1. **BASIC SERVICES:**

AUBURN will provide maintenance and operation activities at the area legal activities described in Attachment 1 and shown on Attachment 2:

A. Locate underground facilities for utilities or other digging operations except the Pacific waterlines.

B. Maintain public storm drainage facilities.

C. Maintain the existing street light system.

D. Maintain subgrade, pavement and pavement markings.

E. Maintain signing per the "Manual of Uniform Traffic Control Devices".

2. **AUBURN AND PACIFIC COORDINATION:**

AUBURN will identify a contact person to handle day-to-day operational problems related to the Basic Services. PACIFIC will identify a contact person for the same purposes. Emergency work to protect the public safety will be handled, as the AUBURN contact person deems necessary.

3. **PERSONNEL AND EQUIPMENT:**

A. AUBURN is acting herein as an independent contractor so that:

1. Control of personnel standards of performance, discipline and all other aspects of performance shall be governed entirely by AUBURN

2. Except as described in Sections 3.C. below, all persons rendering services hereunder shall be for all purposes employees of AUBURN

B. AUBURN shall furnish all personnel, resources, and materials deemed by AUBURN as necessary to provide maintenance services as outlined in Section 1 above.

C. In the event AUBURN uses contract services to perform one or more of the Basic Services for PACIFIC, the appropriate supervision and inspection of the contractor's work will be performed by AUBURN.

4. PACIFIC'S RESPONSIBLITIES

In support of AUBURN providing services for PACIFIC in Sections 1 and 2, PACIFIC shall:

A. Authorize AUBURN to perform maintenance services outlined in Section 1 within the City Limits of PACIFIC for the purposes of carrying out this Agreement.

B. PACIFIC will adopt by reference all AUBURN codes necessary to provide authority for AUBURN to perform service of this Agreement.

5. INDEMNIFICATION:

A. In executing this Agreement, AUBURN does not assume liability or responsibility for or in any way release PACIFIC's responsibility or liability which arises in part from the existence, validity or effect of PACIFIC's ordinances, rule, or regulations. In any such cause, claim, suit, action and administration proceeding commences, PACIFIC shall defend the same at its sole expense and if judgment is entered or damages are awarded against PACIFIC, AUBURN, or both, PACIFIC shall satisfy the sam3e, including chargeable costs and attorney's fees.

B. PACIFIC shall indemnify and hold harmless AUBURN and its officers, agents, and employees, from and against any and all claims, actions, suits liability, loss costs and expense, and damages of any nature whatsoever, which are caused by or result from a negligent act or omission of AUBURN, it's officers, agents, and employees in performing services pursuant to this Agreement.

6. NON-DISCRIMINATION:

AUBURN and PACIFIC certify that both agencies are equal opportunity employers.

7. AUDITS AND INSPECTIONS:

All records and documents with respect to this Agreement shall be subjected to inspection, review or audit by AUBURN or PACIFIC for the duration of this Agreement.

8. AMENDMENTS:

The Agreement may be amended in writing at any time by mutual agreement of both parties.

9. ENTIRE AGREEMENT:

The two parties agree that this Agreement is a complete expression of the terms hereto and any oral representations or understandings are not incorporated herein.

10. AGREEMENT ADMINISTRATION:

The parties shall appoint representatives to review Agreement performances and resolve problems, which cannot be dealt with by PACIFIC and AUBURN's contact persons.

11. INVALID PROVISIONS:

If any provision of this Agreement is held invalid, the remainder of the Agreement shall not be affected thereby if such remainder would then continue to serve the purpose and objective of the parties.

IN WITNESS WHEREOF, the parties have executed this Agreement effective as of the date last written below.

CITY OF AUBURN
King County, Washington

PETER B. LEWIS, MAYOR

Date OCT 2 0 2003

ATTEST:

Danielle E. Daskam, CMC, City Clerk

APPROVED AS TO FORM:

Daniel B. Heid, City Attorney

CITY OF PACIFIC
King County, Washington

HOWARD ERICKSON, MAYOR

Date October 31, 2003

ATTEST:

Randy Reed, CMC, City Clerk

APPROVED AS TO FORM:

Albert A. Abuan, City Attorney

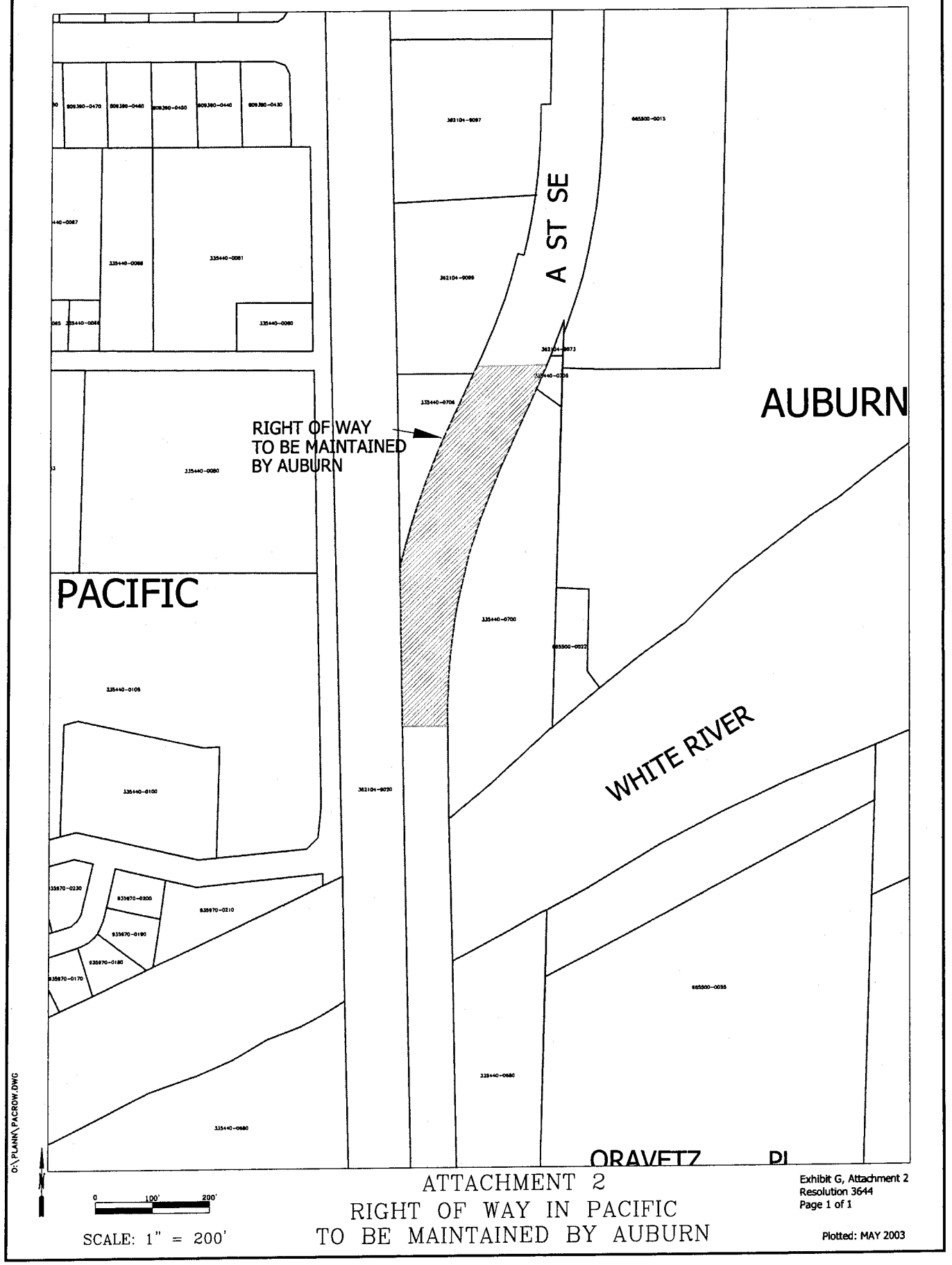
ATTACHMENT 1

PORTION OF "A" STREET SOUTHEAST WITHIN THE CITY OF PACIFIC (IN THE NE QUARTER OF SECTION 36, TWP 21N, R 4E, W.M.)

THAT PORTION OF THE NORTHEAST QUARTER OF SECTION 36, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M., DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEAST CORNER OF THE LANDS ANNEXED TO THE CITY OF AUBURN BY CITY OF AUBURN ORDINANCE NUMBER 1171, SAID CORNER BEING ON THE EAST MARGINAL LINE OF THE EAST VALLEY HIGHWAY (ALSO KNOWN AS STATE HIGHWAY NO. 5 AND AS "A" STREET SOUTHEAST);
THENCE SOUTHWESTERLY 600 FEET, MORE OR LESS, ALONG SAID EAST MARGINAL LINE TO A LINE PARALLEL WITH AND 1884 FEET SOUTHERLY (WHEN MEASURED ALONG THE WEST LINE OF THE BURLINGTON NORTHERN SANTA FE RAILROAD RIGHT-OF-WAY) FROM THE NORTH LINE OF THE NORTHWEST QUARTER OF SAID SECTION 36;
THENCE WESTERLY ALONG SAID PARALLEL LINE TO THE WESTERLY RIGHT-OF WAY LINE OF SAID EAST VALLEY HIGHWAY ("A" STREET SE);
THENCE NORTHERLY ALONG SAID WESTERLY RIGHT-OF-WAY LINE A DISTANCE OF 600 FEET, MORE OR LESS, TO THE SOUTH LINE OF SAID LANDS ANNEXED UNDER CITY OF AUBURN ORDINANCE NUMBER 1171;
THENCE EASTERLY ALONG SAID SOUTH LINE TO THE POINT OF BEGINNING.

SITUATE IN KING COUNTY, WASHINGTON.



SCALE: 1" = 200'

ATTACHMENT 2
RIGHT OF WAY IN PACIFIC TO BE MAINTAINED BY AUBURN

Exhibit G, Attachment 2
Resolution 3644
Page 1 of 1

Plotted: MAY 2003

RESOLUTION NO. 3649

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR AND CITY CLERK TO EXECUTE A LEASE AGREEMENT BETWEEN THE CITY AND VOICESTREAM PCS III CORPORATION, FOR THE PURPOSE OF LEASING SPACE ON THE LAKELAND HILLS WATER TOWER FOR COMMUNICATION EQUIPMENT

WHEREAS, the City of Auburn has facilities from which cellular and telecommunication equipment could be attached; and

WHEREAS, Voicestream PCS III Corporation has sought use of such facilities and has negotiated an agreement for use thereof with terms acceptable to the City.

THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, IN A REGULAR MEETING DULY ASSEMBLED, HEREBY RESOLVES as follows:

Section 1. The Mayor and City Clerk of the City of Auburn are herewith authorized to execute a Lease Agreement between the City and VoiceStream PCS III Corporation, for the purpose of leasing space on the Lakeland Hills water tower for communication equipment, in substantial conformity with the agreement attached hereto, marked as Exhibit "I" and incorporated herein by this reference.

Section 2. That the Mayor is authorized to implement such other administrative procedures as may be necessary to carry out the directives of this legislation.

SECTION 3. That this Resolution shall take effect and be in full force upon passage and signatures hereon.

Dated and Signed this 17th day of Nov, 2003.

CITY OF AUBURN

PETER B. LEWIS
MAYOR

ATTEST:

Danielle E. Daskam,
City Clerk

APPROVED AS TO FORM:

Daniel B. Heid,
City Attorney

Exhibit "I"

SITE LEASE AGREEMENT

THIS SITE LEASE AGREEMENT("Lease") is by and between City of Auburn, ("Landlord") and VoiceStream PCS III Corporation, a Delaware corporation (Tenant").

1. Lease Agreement.

(a) Landlord hereby leases to Tenant a portion of the real property legally described as follows: THE SOUTH 175.00 FEET OF THE EAST 110.00 FEET OF THE WEST 1,393.00 FEET OF THE SOUTHEAST QUARTER OF SECTION 31, TOWNSHIP 21 NORTH, RANGE 5 EAST, W.M., CITY OF AUBURN, RECORDS OF KING COUNTY, WASHINGTON, (collectively referred to hereinafter as the "Property"). The lease includes the right to operate a personal communications service antenna installation on the Landlord's water reservoir, on the terms and conditions set forth herein.

(b) The Tenant agrees to the lease, subject to the following terms and conditions. Landlord hereby leases to Tenant the use of that portion of the Property as generally described and depicted in the attached Exhibit A, (collectively referred to hereinafter as the "Lease Area"). The Lease Area, located at Lakeland Hills Water Reservoir facility, Auburn, Washington, comprises approximately an area not to exceed 2,740 square feet.

(c) The lease shall be nonexclusive and shall not preclude the Landlord from granting a similar lease, right, license, franchise, etc., to other carriers or other persons for telecommunications or any other purpose.

2. Term. The initial term of this Lease shall be five (5) years commencing on the date of execution of the Agreement (the "Commencement Date"), and terminating at midnight on the last day of the initial term (the "Initial Term").

3. Antenna Facilities. Tenant may use the Lease Area for the transmission and reception of radio communication signals and for the construction, installation, operation, maintenance, repair, removal or replacement of related facilities necessary for the operation of a telecommunications facility as well as for access and utilities. Tenant may only place its ground based telecommunications equipment within the portion of the Lease Area identified as the "Compound" on Exhibit A. Tenant may install and maintain landscape plantings within the Lease Area. In addition to using the Lease Area, Tenant may utilize the Property to install and use underground conduits that begin at the Lease Area, cross the Property in a generally straight line to the base of the water reservoir (Reservoir) and then extend up the side of the Reservoir to antennas which Tenant will install on the railing of the Reservoir, as shown in Exhibit A (hereinafter referred to as "Antenna Facilities").

4. Rent. Tenant shall pay Landlord, as rent, Twelve Thousand and no/100 dollars ($12,000.00) per year ("Rent"). Rent shall be payable within twenty (20) days following the Commencement Date and thereafter the Rent will be payable yearly, no later than the anniversary of the Commencement Date to City of Auburn Water Utility Fund, Account Number 430.369.900, at Landlord's address specified in Section 12 below. The Rent shall increase annually over the Rent payable the preceding year by not less than three and one half percent (3.5%). If the average increase in the Consumer Price Index – Urban for the Seattle – Tacoma – Bremerton area (CPI) is greater than three and one half percent (3.5%) over the period of the Term, or any Renewal Term, then the rate at which the Rent is increased annually during the following Renewal Term shall be adjusted to that CPI based average percentage rate. If the average increase in the CPI is less than or equal to three and one half percent (3.5%) over the period of the Term, or any Renewal Term, then the rate at which the Rent is increased annually during the following Renewal Term shall be three and one half percent (3.5%). It shall be the responsibility of the Landlord to track the CPI and notify the Tenant of increases or reductions in the Rent. Landlord shall notify Tenant within 90

days of the commencement of the Renewal Term as to the revised rate at which the Rent shall be increased annually thereafter. Landlord will invoice Tenant for back Rent due or refund over payment as necessary to correct the payment received for the first year of the Renewal Term. If at any time the CPI ceases to incorporate a significant number of items, if a substantial change is made in the method of establishing the CPI, or if issuance of the CPI shall be discontinued, then the Landlord and Tenant shall mutually agree upon another standard recognized cost of living index issued by the United States Government, provided that if the parties cannot reach agreement on such other standard cost of living index, then the Landlord shall select the index closest to the CPI. In either case, the substitute index chosen shall result in increases in the Rent similar to those that had been, or would have been, generated by the CPI. If this Lease is terminated at a time other than on the anniversary of the Commencement Date, Rent shall be prorated as of the date of termination for any reason (other than a default by Tenant) and all prepaid Rent shall be refunded to Tenant within sixty (60) days.

5. Renewal. Tenant may extend this Lease for (5) additional, five-year terms (each a "Renewal Term"). Each Renewal Term shall be on the same terms and conditions as set forth herein, including the Rent increase set forth in Section 4, above. This Lease shall automatically renew for each successive Renewal Term unless Tenant notifies Landlord, in writing, of Tenant's intention not to renew this Lease, at least ninety (90) days prior to the expiration of the Initial Term or any Renewal Term. Landlord may, during any Renewal Term, notify Tenant, in writing, of Landlord's intention not to renew this Lease for an additional Renewal Term, which notice shall be provided to Tenant at least one hundred and eighty (180) days prior to the expiration of the then in effect Renewal Term. If Tenant shall remain in possession of the Lease Area at the expiration of this Lease or any Renewal Term without a written agreement, such tenancy shall be deemed a month-to-month tenancy under the same terms and conditions of this Lease.

6. Interference. Tenant shall not use the Lease Area in any way which interferes with the use of the Property by Landlord. Tenant's Antenna Facilities and the use thereof shall not interfere with the use of any other communication or similar equipment of any kind and nature owned or operated by Landlord or other lessee, licensees, franchisees etc., on the Property except as might be permitted by applicable laws, provided, however that subsequent to the installation by Tenant of the Antenna Facilities, Landlord agrees to exercise reasonable care to assure equipment of subsequent providers leasing space on the Property does not interfere with Tenants Antenna Facilities operations. The Landlord, however, is not in any way responsible or liable for any interference with Tenants use of Landlords Property, which may be caused by the use and operation of any other tenant's equipment, even if caused by new technology. In the event that any other tenant's activities interfere with Tenant's use of Landlord's property, and Tenant cannot work out this interference with other tenant's, Tenant may, upon 30 days notice to Landlord, terminate this lease and restore the Landlord's Property to its original condition, reasonable wear and tear excepted.

7. Improvements; Utilities; Access.

(a) Tenant shall have the right, at its expense, to erect and maintain on the Lease Area, improvements, personal property and facilities necessary to operate its communications system, including, equipment shelters and/or cabinets and related cables and utility lines and a location based system, including coaxial cable, base units and other associated equipment as such location based system may be permitted by any county, state or federal agency/department. Tennant shall have the right, at its expense, to erect and maintain on the Property including on Landlord's water reservoir, improvements, personal property and facilities necessary to operate its communications system, including, radio transmitting and receiving antennas and related cables and conduits and other associated equipment as such location based system may be permitted by any county, state or federal agency/department. Tenant shall have the right to alter, replace, and expand within the confines of the Lease Area as defined in Section 1 and without interference to other providers / tenants, enhance and upgrade the Antenna Facilities at any time during the term of this Lease. Tenant shall cause all construction to occur lien-free and in compliance with all applicable laws and ordinances. Landlord acknowledges that it shall not interfere with any aspects of construction, including, attempting to direct construction personnel as to the location of or method of installation of the Antenna Facilities. The

Antenna Facilities shall remain the exclusive property of Tenant. Tenant shall have the right to remove the Antenna Facilities at any time during and upon the expiration or termination of this Lease.

(b) Tenant, at its expense, may use any and all appropriate means of restricting access to the Compound, including, without limitation, the construction of a fence.

(c) Tenant shall, at Tenant's expense, keep and maintain the Lease Area and Antenna Facilities now or hereafter located on the Property in commercially reasonable condition and repair during the term of this Lease, normal wear and tear excepted. Upon termination or expiration of this Lease, the Lease Area and Antenna Facilities areas shall be returned to Landlord in good, usable condition, normal wear and tear excepted, within ninety (90) days.

(d) Tenant shall have the right to install utilities, power and telephone, at Tenant's expense, and to improve the present utilities on the Property (including, but not limited to, the installation of emergency power generators). Landlord agrees to cooperate with Tenant in its reasonable efforts to acquire necessary utility service. Tenant shall, wherever practicable, install separate meters for utilities used on the Property by Tenant. Landlord shall diligently correct any variation, interruption or failure of utility service within Landlord's control.

(e) Prior to installation of equipment, Tenant shall submit for Landlord review and approval, which approval shall not be unreasonably withheld or delayed, an electrical and grounding connection plan that assures no interference with the water tank cathodic protection system. The plan shall include a 3 " minimum diameter common use conduit enclosure for cables from the ground level to top of tank. This conduit may be utilized by other telecommunication providers until such time as it is filled to capacity, at which time new providers will need to pay for upsizing. Upon Landlord approval of the plans, Tenant may proceed to install and operate the Antenna Facilities.

(f)Tennant shall have the right during the Initial Term and of this Lease and any Renewal Term for ingress and egress to the Property over the south fifteen (15) feet of Lot 6, Lakeland Hills Division Number 3, Extension, according to the plat thereof recorded in Volume 145 of Plats, pages 72 and 73, in King County Washington.

(g) Tenant shall have 24-hours-a-day, 7-days-a-week access to the Lease Area ("Access") at all times during the Initial Term of this Lease and any Renewal Term. In the event Landlord, its employees or agents unreasonably deny Access to Tenant, its employees or agents, Tenant shall, without waiving any other rights that it may have at law or in equity, deduct from Rent amounts due under this Lease an amount equal to fifty and no/100 dollars per day for each day that Access is impeded or denied. Access to Landlord facilities beyond the Lease Area, including but not limited to the water reservoir site and the water reservoir, require 48 hours notice to the Water Division Supervisor of the City of Auburn Water Utility (phone: 253-931-3066). Access to Landlord facilities will only occur with Landlord supervision. Tenant agrees to reimburse Landlord for Landlord expenses attributed to supervising Tenant while accessing Landlord facilities. The hourly rate for Landlord supervision during City standard office hours will be $31.50 per hour in calendar year 2003. The hourly rate shall increase annually on January 1st over the hourly rate payable the preceding year by not less than three and one half percent (3.5%) or the CPI – Urban for the Seattle / Tacoma area whichever is the greater, unless a different hourly rate amount is negotiated.

8. Termination. Except as otherwise provided herein, this Lease may be terminated, without any penalty or further liability as follows:

(a) upon thirty (30) days' written notice by Landlord if Tenant fails to cure a default for payment of amounts due under this Lease within that thirty (30) day period;

(b) immediately if Tenant notifies Landlord of unacceptable results of any title report, environmental or soil tests prior to Tenant's installation of the Antenna Facilities on the Lease Area, or if Tenant is unable to

obtain, maintain, or otherwise forfeits or cancels any license (including, without limitation, an FCC license), permit or any Governmental Approval necessary to the installation and/or operation of the Antenna Facilities or Tenant's business;

(c) upon ninety (90) days' written notice by Tenant if the Lease Area or the Antenna Facilities are, or become unacceptable under Tenant's design or engineering specifications for its Antenna Facilities or the communications system to which the Antenna Facilities belong;

(d) immediately upon written notice by Tenant if the Lease Area or the Antenna Facilities are destroyed or damaged so as in Tenant's reasonable judgment to substantially and adversely affect the effective use of the Antenna Facilities. In such event, all rights and obligations of the parties shall cease as of the date of the damage or destruction, and Tenant shall be entitled to the reimbursement on a prorated basis of any Rent prepaid by Tenant. If Tenant elects to continue this Lease, then all Rent shall abate until the Lease Area and/or the Antenna Facilities are restored to the condition existing immediately prior to such damage or destruction; or

(e) at the time title to the Property transfers to a condemning authority, pursuant to a taking of all or a portion of the Property sufficient in Tenant's determination to render the Lease Area unsuitable for Tenant's use. Landlord and Tenant shall each be entitled to pursue their own separate awards with respect to such taking.

(f) Landlord may terminate this Lease if Landlord needs the Lease Area for expansion of Landlord's responsibility to provide its services, and Landlord has no reasonable or economical alternative site available, provided Landlord provides Tenant written notice 12 months in advance of Landlord's need to re establish the Landlord's sole use of the Lease Area. Upon Tenant's receipt of written notice, Tenant shall have six (6) months to submit to Landlord alternative locations for its Antenna Facilities. Such alternative locations may be on the Property or other properties owned or managed by Landlord. Landlord shall evaluate such alternatives and advise Tenant in writing if one or more of the alternatives is suitable to accommodate Tenant's Antenna Facilities. If so requested by the Landlord, Tenant shall submit additional relevant information to assist the Landlord in making such evaluation. Landlord shall give each alternative proposed by Tenant full and fair consideration, within a reasonable time so as to allow for the relocation work to be performed in a timely manner. In the event Landlord ultimately determines not less than ninety (90) days from the termination date that there is no other reasonable alternative, Tenant shall remove its Antenna Facilities as otherwise provided in this Section 7 (c) of this Lease. If an alternative location for Tenant's Antenna Facilities is found, Landlord and Tenant agree to enter into a new Lease Agreement with the same terms and conditions of this Lease.

(g) If for reasons related to public health, safety or welfare, or for any operational need of the Water Utility, Landlord determines that this Lease must be terminated, then Landlord reserves rights of unilateral termination and will do so by providing Tenant with a six month written notice.

(h) Tenant shall be entitled to a pro rata refund of its prepaid Rent for any termination of this Lease by Landlord pursuant to Subsection 8(f) or 8(g).

9. Default and Right to Cure. Notwithstanding anything contained herein to the contrary and without waiving any other rights granted to it at law or in equity, each party shall have the right, but not the obligation, to terminate this Lease on written notice pursuant to Section 12 hereof, to take effect immediately, if the other party (i) fails to perform any covenant for a period of thirty (30) days after receipt of written notice thereof to cure or (ii) commits a material breach of this Lease and fails to diligently pursue such cure to its completion after sixty (60) days' written notice to the defaulting party.

10. Taxes. Landlord shall pay when due all real property taxes or other fees and assessments for the Property, including the Lease Area. In the event that Landlord fails to pay any such real property taxes or other fees and assessments, Tenant shall have the right, but not the obligation, to pay such owed amounts and deduct them from Rent amounts due under this Lease. Notwithstanding the

foregoing, Tenant shall pay any personal property tax, State leasehold tax, excise tax, real property tax or any other tax or fee which are directly attributable to the presence or installation of the Tenant's Antenna Facilities, only for so long as this Lease has not expired of its own terms or is not terminated by either party. Landlord hereby grants to Tenant the right to challenge, whether in a Court, Administrative Proceeding, or other venue, on behalf of Landlord and/or Tenant, any personal property or real property tax assessments, State leasehold tax or excise tax that may affect Tenant. If Landlord receives notice of any personal property or real property tax assessment, State leasehold tax or excise tax against the Landlord, which may affect Tenant and is directly attributable to Tenant's installation, Landlord shall provide timely notice of the assessment to Tenant sufficient to allow Tenant to consent to or challenge such assessment. Further, Landlord shall provide to Tenant any and all documentation associated with the assessment and shall execute any and all documents reasonably necessary to effectuate the intent of this Section 10.

11. Insurance and Subrogation and Indemnification.

(a) Tenant shall provide Commercial General Liability Insurance naming Landlord (the City of Auburn) as additional insured in an aggregate amount of Two Million and no/100 dollars ($2,000,000.00). Tenant may satisfy this requirement by obtaining the appropriate endorsement to any master policy of liability insurance Tenant may maintain.

(b) Tenant shall indemnify, protect, defend and hold Landlord and its employees and agents harmless from and against any and all claims, liabilities, judgments, costs, damages, and expenses, including reasonable attorney's fees, arising out of or in any way related to the Antenna Facilities, including, but not limited to, the installation, maintenance, operation or removal thereof, except to the extent that such claim, liability, judgment, cost, damage or expense arises out of the sole negligent act or omission, or willful misconduct of Landlord or its employees or agents. Landlord shall not be liable to Tenant, its agents, employees and contractors for damage to the Antenna Facilities or any other property belonging to Tenant from any cause, except for any damage caused by the sole negligent act or omission or willful misconduct of Landlord or its employees or agents. Tenant waives all claims against Landlord and its employees and agents for damage to persons or Antenna Facilities or property arising for any reason other than a claim based on the sole negligent act or omission or willful misconduct of Landlord or its employees or agents. Landlord and its employees and agents shall have no liability to Tenant for any interruption of any utility service unless solely caused by the negligent act or omission or willful misconduct of Landlord or its employees or agents.

Should a court of competent jurisdiction determine that this Lease is subject to RCW 4.24.115, then, in the event of liability for damages arising out of bodily injury to persons or damages to property caused by or resulting from the concurrent negligence of the Tenant and the Landlord, its officers, officials, employees and volunteers, the Landlord's liability hereunder shall be only to the extent of the Landlord's negligence. It is further specifically and expressly understood that the indemnification provided herein constitutes the Tenant's waiver of immunity under Industrial Insurance, Title 51 RCW, solely for the purposes of this indemnification. This waiver has been mutually negotiated by the parties. The provisions of this section shall survive the expiration or termination of this Lease.

12. Notices. All notices, requests, demands and other communications shall be in writing and are effective three (3) days after deposit in the U.S. mail, certified and postage paid, or upon receipt if personally delivered or sent by next-business-day delivery via a nationally recognized overnight courier to the addresses set forth below. Landlord or Tenant may from time to time designate any other address for this purpose by providing written notice to the other party.

If to Tenant, to:

VoiceStream Wireless Corporation
Attn: PCS Lease Administrator
12920 SE 38th Street
Bellevue, WA 98006

With a copy to:

VoiceStream PCS III Corporation
Attn: Lease Administration Manager
19807 North Creek Parkway
Bothell, WA 98011

With a copy to:

VoiceStream Wireless Corporation
Attn: Legal Department
12920 SE 38th Street
Bellevue, WA 98006

If to Landlord, to:

Public Works Director
City of Auburn
25 West Main St.
Auburn, WA 98001

With a copy to:

City Attorney
City of Auburn
25 West Main St.
Auburn, WA 98001

13. Quiet Enjoyment, Title and Authority. Landlord covenants and warrants to Tenant that (i) Landlord has full right, power and authority to execute this Lease; (ii) it has good and unencumbered title to the Property free and clear of any liens or mortgages, except those disclosed to Tenant and which will not interfere with Tenant's rights to or use of the Lease Area; and (iii) execution and performance of this Lease will not violate any laws, ordinances, covenants, or the provisions of any mortgage, lease, or other agreement binding on Landlord.

14. Environmental Laws. Landlord represents that it has no knowledge of any substance, chemical or waste (collectively, "Hazardous Substance") on the Property that is identified as hazardous, toxic or dangerous in any applicable federal, state or local law or regulation. Landlord and Tenant shall not introduce or use any Hazardous Substance on the Property in violation of any applicable law. Landlord shall be responsible for, and shall promptly conduct any investigation and remediation as required by any applicable environmental laws, for all spills or other releases of any Hazardous Substance not caused in whole or in part by Tenant, that have occurred or which may occur on the Property. Each party agrees to defend, indemnify and hold harmless the other from and against any and all administrative and judicial actions and rulings, claims, causes of action, demands and liability (collectively, "Claims") including, but not limited to, damages, costs, expenses, assessments, penalties, fines, losses, judgments and reasonable attorney fees that the indemnitee may suffer or incur due to the existence or discovery of any Hazardous Substances on the Property or the migration of any Hazardous Substance to other properties or the release of any Hazardous Substance into the environment (collectively, "Actions"), that relate to or arise from the indemnitor's activities on the Property. Landlord agrees to defend, indemnify and hold Tenant harmless from Claims resulting from Actions on the Property not caused by Landlord or Tenant prior to and during the Initial Term and any Renewal Term of this Lease. The indemnifications in this section specifically include, without limitation, costs incurred in connection with any investigation of site conditions or any cleanup, remedial, removal or restoration work required by any governmental authority. This Section 14 shall survive the termination or expiration of this Lease.

15. Assignment and Subleasing. All of the terms and provisions contained herein shall inure to the benefit of and shall be binding upon the parties hereto and their respective heirs, legal representatives, successors and assigns. This Agreement shall not be assigned by Tenant without the express written consent of the Landlord, which consent shall not be unreasonably withheld, delayed or conditioned. Any attempted assignment in violation of this Section shall be void. The transfer of the rights and obligations of Tenant to a parent, subsidiary, or other affiliate of Tenant, or to any successor-in-interest or entity

acquiring fifty-one percent (51%) or more of Tenant's stock or assets, shall not be deemed an assignment. Tenant shall give to Landlord thirty (30) days' prior written notice of any such transfer.

Additionally, Tenant may, upon notice to Landlord, mortgage or grant a security interest in this Lease and the Antenna Facilities, and may assign this Lease and the Antenna Facilities to any mortgagees or holders of security interests, including their successors or assigns (collectively "Mortgagees"), provided such Mortgagees agree to be bound by the terms and provisions of this Lease. In such event, Landlord shall execute such consent to leasehold financing as may reasonably be required by Mortgagees. Landlord agrees to notify Tenant and Tenant's Mortgagees simultaneously of any default by Tenant and to give Mortgagees the same right to cure any default as Tenant or to remove any property of Tenant or Mortgagees located on the Lease Area, except that the cure period for any Mortgagees shall not be less than thirty (30) days after receipt of the default notice, as provided in Section 9 of this Lease. All such notices to Mortgagees shall be sent to Mortgagees at the address specified by Tenant. Failure by Landlord to give Mortgagees such notice shall not diminish Landlord's rights against Tenant, but shall preserve all rights of Mortgagees to cure any default and to remove any property of Tenant or Mortgagees located on the Lease Area.

16. Successors and Assigns. This Lease granted herein shall run with the land, and shall be binding upon and inure to the benefit of the parties, their respective successors, personal representatives and assigns. This Agreement shall not be assigned by Tenant without the express written consent of the Landlord, which consent shall not be unreasonably withheld, delayed or conditioned.

17. Removal of Antenna Facilities. The Antenna Facilities are and shall remain the property of the Tenant and upon the expiration or earlier termination of this Lease, Tenant shall, at Tenant's sole cost and expense, remove the Antenna Facilities and restore the Lease Area to its original condition, normal wear and tear excluded.

18. Miscellaneous.

(a) The substantially prevailing party in any litigation, including any arbitration to which the parties shall submit, arising hereunder shall be entitled to its reasonable attorneys' fees and court costs, including appeals, if any.

(b) This Lease constitutes the entire agreement and understanding of the parties, and supersedes all offers, negotiations and other agreements. There are no representations or understandings of any kind not set forth herein. Any amendments to this Lease must be in writing and executed by both parties. At such time as the Auburn City Council approves any regulation affecting telecommunications, Tenant agrees to amend this Lease, as determined by the Landlord in order to comply with any future ordinance related to telecommunications provided, however, that in no event shall such regulation (i) materially interfere with or affect Tenant's operation of its Antenna Facilities; or (ii) increase Tenant's financial obligations under the terms of this Lease, except as provided herein, or impose some new financial obligations not already contemplated by this Lease. No amendment, change or modification of this Lease shall be valid, unless in writing and signed by all parties hereto.

(c) Each party agrees to cooperate with the other in executing any documents (including a Memorandum of Lease in substantially the form attached hereto as Exhibit B) necessary to protect its rights or use of the Lease Area. The Memorandum of Lease may be recorded in place of this Lease by either party. In the event the Property is encumbered by a mortgage or deed of trust, Landlord agrees, upon request of Tenant, to obtain and furnish to Tenant a non-disturbance and attornment agreement for each such mortgage or deed of trust, in a form reasonably acceptable to Tenant. Tenant may obtain title insurance on its interest in the Lease Area.

(d) This Lease shall be construed in accordance with the laws of the state in which the Property is located.

(e) If any term of this Lease is found to be void or invalid, such finding shall not affect the remaining terms of this Lease, which shall continue in full force and effect. The parties agree that if any provisions are deemed not enforceable, they shall be deemed modified to the extent necessary to make them enforceable. No provision of this Lease will be deemed waived by either party unless expressly waived in writing signed by the waiving party. No waiver shall be implied by delay or any other act or omission of either party. No waiver by either party of any provision of this Lease shall be deemed a waiver of such provision with respect to any subsequent matter relating to such provision.

(f) The persons who have executed this Lease represent and warrant that they are duly authorized to execute this Lease in their individual or representative capacity as indicated.

(g) This Lease may be executed in any number of counterpart copies, each of which shall be deemed an original, but all of which together shall constitute a single instrument.

(h) All Exhibits referred to herein and any Addenda are incorporated herein for all purposes. The parties understand and acknowledge that Exhibit A (the Lease Area, Compound, and Antenna Facilities location within the Property), and Exhibit B (Memorandum of Lease) are attached to this Site Lease Agreement. The terms of all Exhibits are incorporated herein for all purposes.

(i) If Landlord is represented by any broker or any other leasing agent, Landlord is responsible for all commission fees or other payment to such agent, and agrees to indemnify and hold Tenant harmless from all claims by such broker or anyone claiming through such broker. If Tenant is represented by any broker or any other leasing agent, Tenant is responsible for all commission fee or other payment to such agent, and agrees to indemnify and hold Landlord harmless from all claims by such broker or anyone claiming through such broker.

19. Headings. The caption and paragraph headings used in this Lease are inserted for convenience of reference only and are not intended to define, limit or affect the interpretation or construction of any term or provision hereof.

20. Liens. Except with respect to activities for which Landlord is responsible, Tenant shall pay as due all claims for work done on, and for services rendered or material furnished to, the Antenna Facility, and shall keep the Antenna Facility free from all liens.

The effective date of this Lease is the date of execution by the last party to sign (the "Effective Date").

LANDLORD: City of Auburn

By: _____

Printed Name: Peter B. Lewis

Its: Mayor

Date: 12-4-03

Taxpayer ID Number: 91-6001228

TENANT: VoiceStream PCS III Corporation, a Delaware corporation

By: _____

Printed Name: ~~Beth Pearson~~ Beth Pearson Director of Legal Affairs

Its: ~~Vice President, Western Region~~ Director of Legal Affairs

Date: 12/3/03

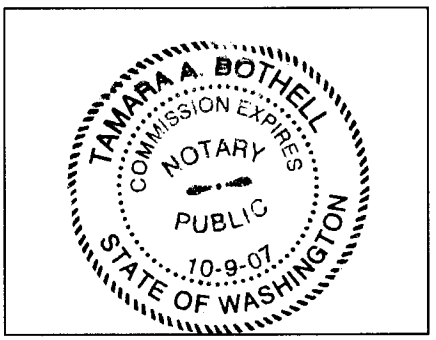
Approved as to form:

Regional Corporate Attorney

STATE OF WA)
) ss.
COUNTY OF King)

I certify that I know or have satisfactory evidence that Peter B. Lewis is the person who appeared before me, and said person acknowledged that he signed this instrument, on oath stated that he was authorized to execute the instrument and acknowledged it as the Mayor, of City of Auburn, to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

Dated: 12-4-03



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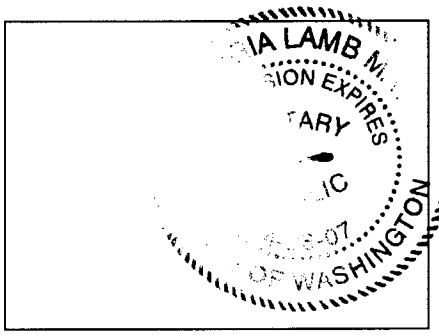
Tamara A Bothell
Notary Public
Print Name Tamara A. Bothell
residing at King Co.
My commission expires 10-9-07

STATE OF WA)
) ss.
COUNTY OF King)

I certify that I know or have satisfactory evidence that ~~Bryon Gunnerson~~ Beth Pearson is the person who appeared before me, and said person acknowledged that he signed this instrument, on oath stated that he was authorized to execute the instrument and acknowledged it as the ~~Vice President, Western Region~~ Director of Legal Affairs of VoiceStream PCS III Corporation, a Delaware corporation, to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

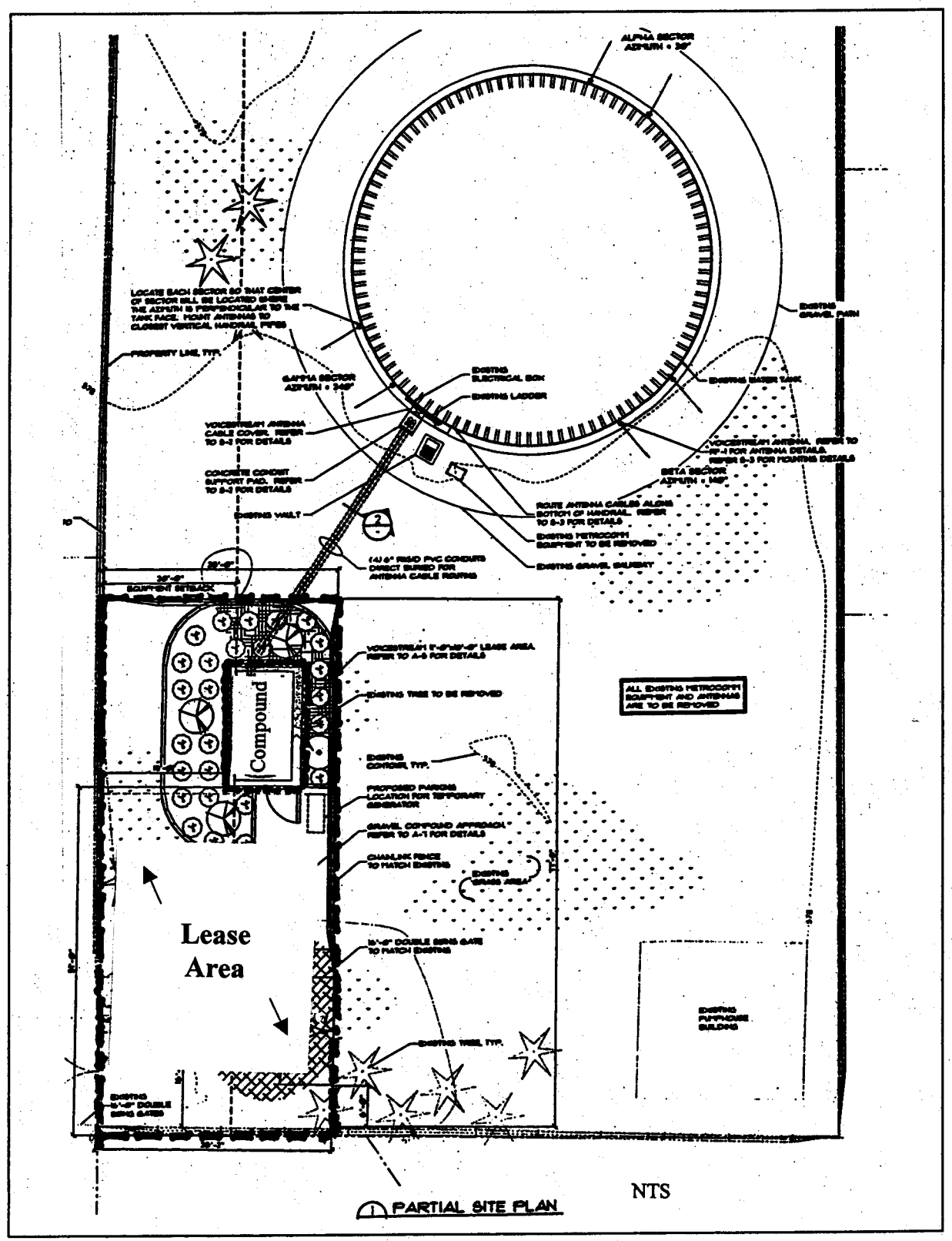
Dated: 12/3/03



(Use this space for notary stamp/seal)

Georgia Lamb May
Notary Public
Print Name Georgia Lamb May
residing at Bellevue, WA
My commission expires 4/20/07

EXHIBIT A



RESOLUTION NO. **3650**

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR TO EXECUTE A FRANCHISE AGREEMENT BETWEEN THE LAKEHAVEN UTILITY DISTRICT AND THE CITY OF AUBURN, ALLOWING THE LAKEHAVEN UTILITY DISTRICT TO CONNECT, INSTALL, OPERATE, MAINTAIN AND REPAIR WATER SYSTEM, FACILITIES, AND APPURTENANCES IN, OVER, ALONG, ACROSS AND UNDER THE FRANCHISE AREA FOR THE PURPOSE OF PROVIDING WATER SERVICE

WHEREAS, the Lakehaven Utility District currently owns, operates, and maintains a water system within Auburn's public right of way located in the franchise area; and

WHEREAS, the Lakehaven Utility District is seeking a new comprehensive franchise with Auburn for public water facilities installed within Auburn's current and future public right of way; and

WHEREAS, in order to maintain control over the use of City of Auburn right-of-ways by utilities operating within the City of Auburn, it is appropriate to enter into franchise agreements with such utilities; and

WHEREAS, Lakehaven Utility District is such a utility, and has negotiated this franchise agreement with the City of Auburn acceptable to both parties; and

WHEREAS, the City of Auburn has determined that it is in the best interests of the public to grant the Lakehaven Utility District a water franchise on the terms and conditions set for in this Agreement.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, HEREBY RESOLVES as follows:

Section 1. The Mayor of the City of Auburn is herewith authorized to execute a Franchise Agreement between the Lakehaven Utility District and the City of Auburn in substantial conformity with the Agreement attached hereto, marked as Exhibit "A" and incorporated herein by this reference.

Section 2. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

Section 3. This resolution shall be in full force and effect upon passage and signatures hereon.

DATED this 2nd day of February, 2004.

CITY OF AUBURN

PETER B. LEWIS
MAYOR

ATTEST:

Danielle E. Daskam,
City Clerk

APPROVED AS TO FORM:

Daniel B. Heid,
City Attorney

Return Address:
Auburn City Clerk
City of Auburn
25 West Main St.
Auburn, WA 98001

RECORDER'S COVER SHEET

Document Title(s) (or transactions contained therein):

Franchise Agreement (Resolution No. 3650)

16/34 PNWT
W 9249-12

Reference Number(s) of Documents assigned or released:
☐ Additional reference #'s on page _____ of document

Grantor(s)/Borrower(s) (Last name first, then first name and initials)
Auburn, City of

Grantee/Assignee/Beneficiary: (Last name first)
1. Lakehaven Utility District

Legal Description (abbreviated: i.e. lot, block, plat or section, township, range)

PER RCW 39.34

☐ Additional legal is on page of document.

Assessor's Property Tax Parcel/Account Number
N/A

☐ Assessor Tax # not yet assigned

EXHIBIT "A"

CITY OF AUBURN, WASHINGTON
WATER FRANCHISE AGREEMENT
WITH THE LAKEHAVEN UTILITY DISTRICT

THIS FRANCHISE AGREEMENT, made and entered into this 23rd day of September, 2004, by and between the CITY OF AUBURN, Washington and the LAKEHAVEN UTILITY DISTRICT:

WITNESSETH:

WHEREAS, the Lakehaven Utility District currently owns, operates, and maintains a water system within Auburn's public right-of-way located in the franchise area; and

WHEREAS the Lakehaven Utility District is seeking to establish a comprehensive franchise with the City of Auburn for water system lines within Auburn's current and future public right-of-way; and

WHEREAS, in order to maintain control over the use of City of Auburn rights-of-way by utilities operating within the City of Auburn, it is appropriate to enter into franchise agreements with such utilities; and

WHEREAS, Lakehaven Utility District is such a utility, and has negotiated this franchise agreement with the City of Auburn acceptable to both parties; and

WHEREAS, the City of Auburn has determined that it is in the best interests of the public to grant the Lakehaven Utility District a franchise on the terms and conditions set forth in this franchise agreement.

NOW, THEREFORE THE CITY OF AUBURN AND THE LAKEHAVEN UTILITY DISTRICT AGREE AS FOLLOWS:

SECTION 1 DEFINITIONS

Where used in this franchise agreement ("Franchise"), the following definitions shall apply:

1.1 "Franchisee" means the Lakehaven Utility District, a Washington municipal corporation, and its respective successors and assigns.

1.2 "City" means the City of Auburn, a Washington municipal corporation.

1.3 "Franchise Area" means all of the public roads, streets, avenues, alleys, highways, and other rights-of-way of the City as now laid out, platted, dedicated or improved; and any and all public City roads, streets, avenues, alleys, highways, and other rights-of-way that may hereafter be laid out, platted, dedicated or improved within the area in which the City has jurisdiction, as described in Attachment 1 and as depicted in

Attachment 2, both attachments attached hereto, which is by this reference incorporated as if fully set forth herein; provided, that the Franchise Area shall not include or convey any right to the Franchisee to install facilities on, or to otherwise use, City owned or leased properties; and provided that the terms of this franchise (i.e., permitting and enforcement) shall not apply to those public roads, streets, avenues, alleys, highways, and other rights-of-way that may hereafter be laid out, platted, dedicated or improved within the area as described in Attachment 1 and depicted in Attachment 2 until such time that the City has assumed jurisdiction thereof.

1.4 "Facilities" means the Franchisee's water system, lines, mains, pump stations, appurtenances, and all other necessary or convenient appurtenances for the purpose of providing water service.

SECTION 2 FRANCHISE GRANT

Subject to the terms and conditions set forth in this Franchise, the City grants to the Franchisee the right to construct, own and maintain its Facilities, including, but not limited to, water pipelines, pump stations, and appurtenances within the City's public right-of-way and the Franchisee's water service area. In exercising authority to construct and install its Facilities and to excavate trenches in City roads for the purposes of constructing, installing, operating, maintaining, removing, and replacing its Facilities, and making connections between the same to the dwellings and other buildings of the consumers, the Franchisee shall be governed by and conform to the general rules adopted by the Public Works Department of the City, and the Franchisee, at no expense to the City, shall complete all work and shall replace and restore the City roads to the condition of the City roads existing immediately prior to such disturbance; PROVIDED, HOWEVER, that no such work shall be done prior to the obtaining of a permit therefor issued by the City's Public Works Director (hereinafter "Director"), which permit shall set forth conditions pertaining to the work to be done and specifications for the restoration of the roads to the same condition as they were immediately prior to such work. If the Franchisee does not repair the City roads to the satisfaction of the Director, the City may, at its sole discretion, repair such City roads, or cause them to be repaired, and the Franchisee hereby agrees to reimburse the City for the cost of such work, including reasonable overhead costs.

SECTION 3 FRANCHISE TERM

This Franchise shall take full force and effect five calendar days after being approved by the City, and shall be valid for a period of 25 years, expiring in 2029; provided, that this Franchise shall not take effect and the Franchisee shall have no rights under this Franchise unless the Franchisee files a written acceptance of this Franchise with the City pursuant to Section 4 of this Franchise.

SECTION 4 ACCEPTANCE BY FRANCHISEE OF TERMS AND CONDITIONS

The full acceptance of this Franchise and all of its terms and conditions shall be filed with the City Clerk within forty-five (45) days from the date of the resolution approving this Franchise by the Franchisee's duly elected Board of Commissioners. Full acceptance of this Franchise is a condition precedent to its taking effect, and unless this Franchise is

accepted within the time specified, this grant will be null and void and have no force or effect.

SECTION 5 NON-EXCLUSIVE FRANCHISE

This Franchise is not exclusive. It does not prohibit the City from granting franchises for other public or private utilities in, over, along, across, and under any City property, including the Franchise Area. This Franchise does not prevent or prohibit the City from constructing, altering, maintaining or using any of the Franchise Area. The City retains full power to make all changes, relocations; repair, maintenance or other work to or in the Franchise Area as the City deems fit.

SECTION 6 JURISDICTION

This Franchise is intended to convey limited rights and interest only as to those roads and rights-of-way in which the City has an actual interest within the Franchise Area. It is not a warranty of title or of interest in City road rights-of-way. None of the rights granted to the Franchisee shall affect the jurisdiction of the City over City road rights-of-way or the City's power to perform work upon its roadways, rights-of-way or appurtenant drainage facilities including by constructing, altering, renewing, paving, widening, grading, blasting or excavating. The parties shall comply with all applicable rules and regulations pertaining to them in connection with the matters covered herein.

SECTION 7 REGULATION OF USE AND CONTROL

This Franchise does not deprive the City of any powers, rights, or privileges it now has or may later acquire in the future to regulate the use of and to control the City road rights-of-way covered by this Franchise. The City reserves the right and power at all times to exercise its police powers with respect to the time, manner and location of the placement of the Franchisee's Facilities.

SECTION 8 EMINENT DOMAIN

This Franchise and the limited rights and interests granted by this Franchise are subject to the exercise of eminent domain. In the event of an exercise of eminent domain by the City, the value to be attributed to all the rights and interests granted under this Franchise shall not exceed the actual amount the Franchisee paid to the City in obtaining this Franchise.

SECTION 9 VACATION

If at any time the City vacates any City rights-of-way covered by this Franchise, the City will not be held liable for any damages or loss to the Franchisee by reason of such vacation. The City may, after giving thirty (30) days written notice to the Franchisee, terminate this Franchise with respect to any City road or rights-of-way vacated. However, should Franchisee notify the City that an easement is required for existing or proposed facilities within the proposed vacation area, the City shall withhold approval of such vacation until the Franchisee has notified the City that the necessary easement(s) have been secured, or provisions otherwise made to maintain the viability and use of existing Facilities.

SECTION 10 ENFORCEMENT

The City's failure to enforce any provision of this Franchise does not constitute a waiver of its right to enforce that provision or any other provision of this Franchise.

SECTION 11 INDEMNITY AND HOLD HARMLESS

11.1 The Franchisee shall defend, indemnify and hold harmless the City, its appointed and elected officials, and its employees and agents from and against liability for all claims, actions, injuries, demands, liabilities, losses, costs, damages and judgments, including costs of defense thereof, (collectively referred to as "damages") for injury to persons, death or property damage caused by, arising out of, or incidental to the Franchisee's exercise of the rights and privileges granted by this Franchise, except for damages caused by or arising out of the City's sole negligence. In the event that any such claim or demand for damages is presented to or filed with the City, or if any suit or action is initiated against the City based on such claims or demands for damages, the City shall promptly notify the Franchisee of the claim, demand, suit or action and the Franchisee shall have the right, at its election and its sole cost and expense, to settle and compromise such claim, demand, suit or action, or defend the same at the Franchisee's sole cost and expense.

11.2 If it is determined that RCW 4.24.115 applies to this Franchise, the Franchisee agrees to defend, hold harmless and indemnify the City to the maximum extent permitted under that statute, and specifically for the Franchisee's negligence concurrent with that of the City to the full extent of the Franchisee's negligence.

SECTION 12 INSURANCE

12.1 The Franchisee shall keep a policy of insurance in force with a minimum limit of five million dollars ($5,000,000.00). Verification of insurance coverage is a condition precedent to the effectiveness of this Franchise.

12.2 The insurance shall be maintained in full force and effect at the Franchisee's sole expense throughout the term of the Franchise, and, should such insurance be terminated, this Franchise shall terminate as of the date of the termination of insurance coverage.

12.3 The coverage provided by the Franchisee's insurance policies shall be primary to any insurance maintained by the City, except as to losses or damages attributable to the sole negligence of the City. Any insurance maintained by the City that might relate to this Franchise shall be in excess to the Franchisee's insurance and shall not contribute with or to it. The City has no obligation to report occurrences to the insurance companies unless a claim is filed with the City's City Council; and the City has no obligations to pay the Franchisee's premiums.

12.4 The Franchisee shall be solely and completely responsible to perform all work related to this Franchise in compliance with all applicable federal, state, county and city statutes, rules, regulations, ordinances, orders and codes. The Franchisee's attention is directed to the requirements of the Washington Industrial Safety and Health Act, Chapter 49.17 RCW. The Franchisee shall be solely and completely responsible for

safety and safety conditions on its job sites and for its work within the Franchise Area, including the safety of all persons and property during performance of any works therein. The services of the City or City's consultant personnel in conducting construction review of the Franchisee's work relating to the Franchise is not intended to include review of the adequacy of the Franchisee's work methods, equipment, scaffolding, or trenching, or safety measures in, on or near such Franchise Area or job site. The Franchisee shall provide safe access for the City and its inspectors to adequately inspect the work and its conformance with applicable statutes, ordinances, rules, regulations, and the Franchise.

SECTION 13 INSTALLATION, REPAIR, REMOVAL OR RELOCATION

13.1 The Franchisee shall, at no expense to the City, expeditiously repair all existing Facilities that it owns within the Franchise Area, including any damage caused directly or indirectly by its Facilities, all appurtenant Facilities and service lines connecting its system to users, if the City requires such repair for any reasonable purpose.

13.2 The Franchisee shall, at no expense to the City, adjust, remove or relocate existing Facilities within the Franchise Area, including all appurtenant Facilities and service lines connecting its system to users, if the City determines such adjustment, removal or relocation is reasonably necessary to allow for an improvement or alteration planned by the City. The City shall give the Franchisee written notice of such requirement as soon as practicable. The written notice shall include all available information, such as plans and specifications, as is reasonably necessary for the Franchisee to plan for such adjustment, removal or relocation.

13.3 Franchisee's Facilities shall be constructed, installed, maintained and repaired within the Franchise Area so as to provide safety of persons and property, and not interfere with the free passage of traffic, all in accordance with the laws of the State of Washington, and the ordinances, resolutions, rules and regulations of the City.

13.4 For projects that are a part of the City's capital improvement program, in addition to any other notice given to the Franchisee, the City shall provide a copy of the capital improvement plan and six (6) year transportation improvement plan when requested. Further, the City shall provide a horizontal plan and vertical profile of the roadway and drainage facilities within it, both existing and as proposed by the City, and the proposed construction schedule. The initial design information shall be given at least one hundred and eighty (180) days before construction is scheduled to begin, except in cases of urgent construction or emergencies. The Franchisee shall respond to this notice, and to any later notices of revised designs, within twenty (20) days of the date of the notice, by providing to the City the Franchisee's best available information as to the location of all the Franchisee's Facilities, including all appurtenant Facilities and service lines connecting its system to users, and all Facilities that it has abandoned, within the area proposed for the project.

13.5 The City shall offer the Franchisee the opportunity to participate in the preparation of bid documents for the selection of a contractor to perform the public works project as well as all required adjustments, removals or relocations of the Franchisee's Facilities. The City shall have sole authority to choose the contractor to perform such

work. Such bid documents shall provide for an appropriate cost allocation between the parties. In addition to the Franchisee's allocation of contractor costs, the Franchisee shall reimburse the City for all costs, to include but not be limited to legal, engineering, inspections, administration and/or soils testing, related to the Franchisee's work and reasonably incurred by the City in the administration of such joint construction contracts. Such costs shall include the direct salary cost of the time of City professional and technical personnel, including the City's consultants, spent productively engaged in such work, plus overhead costs at the standard rate charged by the City on other similar projects. The specific terms of the joint participation on any public work shall be as set forth in a written agreement between the parties.

13.6 It is understood that emergency situations may arise that could threaten public health and/or continued operation of the Franchisee's utility system and the Franchisee may be unable to notify the City in the manner prescribed in Section 14 of this Franchise. In such a situation the Franchisee shall immediately correct the hazardous situation and continue to use best efforts to contact the City staff. The Emergency Phone Number for the City of Auburn is (253) 931-3048, and that for the Lakehaven Utility District is (253) 941-1516. Dialing 911 is advised for emergency situations that may result in imminent threats to life and/or property.

SECTION 14 REQUIREMENT OF CONSTRUCTION PERMITS

14.1 The Franchisee has the right, privilege and authority to enter the City road rights-of-way for the purpose of constructing, installing, operating, maintaining, replacing or repairing its Facilities on the condition that it obtains construction, excavation, and right-of-way use permits issued by the City. Any work performed, whether by Franchisee, its contractors, or third parties, shall include necessary paving, patching, grading and any other reasonably necessary repair or restoration to the City rights-of-way. All work shall be done to the City's satisfaction.

14.2 All equipment, pipelines and appurtenances which are used in the construction, installation, operation, maintenance or repair of the Franchisee's Facilities and which are located within the City road rights-of-way and owned by the Franchisee shall be considered to be part of the Franchisee's system and shall be the responsibility of the Franchisee. All permits for the construction, installation, operation, maintenance or repair of the Franchisee's system shall be applied for and given in the name of the Franchisee, who will be responsible for all work done under the permit. The Franchisee remains responsible whether the work is performed by the Franchisee, its contractors, or by third parties.

14.3 When required by the City's Public Works Director, the Franchisee shall post a bond to the City in the amount sufficient for any road repair or restoration. The amount of the bond shall be set by the City and must be filed with the City before a permit will be issued.

SECTION 15 PERFORMANCE OF WORK

15.1 Any work performed by the Franchisee in the Franchise Area shall conform to all City ordinances and requirements including, but not limited to, Auburn City Code and the City's Design and Construction Standards in force when the work is performed. All traffic control shall conform to the current edition of the Manual of Uniform Traffic Control Devices in force when the work is performed.

15.2 If work performed under this Franchise makes it necessary to turn off or diminish water pressure or potential flow to any fire hydrant, the Franchisee shall notify the City's Fire Department by telephone and by written notice, that water pressure or fire flow conditions have been affected. Except in the case of an emergency, the notice shall be provided at least 48 hours prior to the water pressure or potential flow being suspended or diminished. If more than one fire hydrant will be affected, the Franchisee shall provide a map of the affected area to the Fire Department. Out-of-service fire hydrants must be identified as not operational by covering with a properly secured burlap or plastic bag. Fire hydrants should be returned to full service as soon as reasonably possible or no longer than two working days from the date service was suspended or diminished. The Franchisee shall notify the City's Fire Department when the hydrant(s) is/are returned to full service.

SECTION 16 RESTORATION OF CITY RIGHTS-OF-WAY

After performing work on, under or adjacent to City road rights-of-way, the Franchisee is responsible for and shall leave all City road rights-of-way in the condition of the City road rights-of-way existing immediately prior to such disturbance. If the Franchisee, its contractors, or third parties working under permit should fail to diligently restore City road rights-of-way to the satisfaction of the City, the City may make such repairs or restorations as are necessary to return the City road rights-of-way to a condition reasonably comparable to the condition of the City road rights-of-way existing immediately prior to such disturbance. Upon presentation of an itemized invoice for repairs or restorations, including all applicable costs, both direct and indirect, to include, but not be limited to, the cost of labor, tools, materials and equipment, the Franchisee shall pay the invoice within sixty-five (65) days of its receipt and approval.

SECTION 17 INFORMATION ON LOCATION OF FACILITIES

The Franchisee shall provide the City with all information requested by the City regarding the location of the Franchisee's current Facilities, including, but not limited to, copies of all record drawings for such Facilities. If the Franchisee performs any work to install, repair, reconstruct, or replace Facilities in the Franchise Area after this Franchise's effective date, the Franchisee shall provide the City with all information requested by the City regarding the location of those Facilities, including, but not limited to, copies of record drawings.

SECTION 18 COORDINATION OF WORK IN FRANCHISE AREA

To facilitate the coordination of work in City rights-of-way, if either the Franchisee or the City plans to make excavations in the Franchise Area, the party planning such excavation shall provide written notice to the other of the planned excavation, affording the other party the opportunity to share in the excavation; provided, that (1) such joint use shall not unreasonably delay the work of the party causing the excavation to be made, (2) such joint use shall be arranged and accomplished on terms and conditions satisfactory to both parties, and (3) either party may deny such request for safety reasons.

SECTION 19 BLASTING REQUIREMENTS

The Franchisee's right to construct, install, operate, maintain and repair Facilities does not preclude the City, its agents or contractors from blasting, grading, or doing other road work contiguous to the Franchisee's Facilities. When practical, the City shall give the Franchisee forty-eight (48) hours notice of blasting or excavating.

SECTION 20 SURVEY MARKERS AND MONUMENTS

Before any work is performed under this Franchise, the Franchisee shall establish two or more reference marks to all monuments and markers of every nature relating to subdivisions, plats, rights-of-way, and all other surveys. The reference points shall be located so that they will not be disturbed during any of Franchisee's operations under this Franchise. The method of referencing monuments or other markers or points shall be approved by the City before placement. The replacement of all markers or monuments disturbed during any construction of the Franchisee shall be made as promptly as conditions permit. The cost of monuments or markers lost, destroyed, or disturbed and the expense or replacement with approved markers or monuments shall be borne by the Franchisee.

SECTION 21 RESERVATION OF RIGHTS

21.1 The City reserves the right to impose, to the extent authorized by law, a utility tax on the Franchisee and/or to charge the Franchisee a reasonable fee for services provided or rights granted under this Franchise.

21.2 The Franchisee agrees that it shall be subject to all authority now or later possessed by the City or any other governing body having competent jurisdiction to fix just, reasonable and compensatory rates for services under this Franchise.

21.3 The City reserves the right, upon thirty (30) days written notice to the Franchisee, to amend or modify the provisions or conditions of this Franchise to conform to any state, county, federal, or City statute, ordinance, rule or regulation. The City may terminate this Franchise upon thirty (30) days written notice to the Franchisee if the Franchisee fails or refuses to comply with such amendment or modification.

SECTION 22 ASSIGNMENT

The Franchisee shall not have the right to assign this Franchise without the written consent of the City. No assignment shall be effective unless an acceptance by the assignee of all rights, conditions, terms, provisions and responsibilities contained within the Franchise, as well as surety bonds which the City deems necessary to be posted, are received as allowed by law. The City's approval of the assignment may be made subject to the assignee's acceptance of new or modified terms of the Franchise.

SECTION 23 PENALTY FOR VIOLATION OF CONDITIONS

If the Franchisee fails to comply with any material term, condition or responsibility under this Franchise, the City may provide the Franchisee with written notice of the City's intent to revoke the Franchise if the Franchisee's failure is not cured within thirty (30) days of the date of the notice. During the thirty (30) days following the date of the notice, the Franchisee shall have the opportunity to remedy the failure to comply. A public hearing shall be scheduled before the Auburn City Council at least thirty (30) days following the notification on the issue of the revocation. If at the hearing, the City Council finds that grounds exist to revoke the Franchise under this paragraph and that the revocation is in the public interest, the City Council may by resolution revoke the Franchise. The revocation shall be effective ninety (90) days after the public hearing.

SECTION 24 EXPIRATION AND RENEWAL

24.1 If the Franchisee requests a renewal of this Franchise prior to its expiration date, which renewal shall be granted, on terms reasonable to the parties, unless the City can demonstrate, in good faith, that such renewal would be contrary to its operation of the right of way, the City may, at the City's sole discretion, extend the term of this Franchise for up to one year beyond the expiration date to allow for processing of the renewal. If the City elects to extend the term of this Franchise, written notice of the extension shall be provided to the Franchisee prior to the Franchise expiration date.

24.2 If the Franchisee has not requested a renewal of this Franchise prior to its expiration date, the City has the right, upon thirty (30) day's prior notice to the Franchisee, to remove or relocate any of the Franchisee's Facilities as is reasonably necessary for the public's health, welfare or safety, or for the construction, alteration, or improvement of the Franchise Area, or for the construction or installation of lines or facilities of other franchise holders. The Franchisee shall be liable for costs incurred in any removal or relocation of the Franchisee's Facilities under this section.

24.3 Upon the expiration of this Franchise, the Franchisee shall continue to be responsible for the operation and maintenance of the Franchisee's existing facilities in the Franchise Area, but shall not have the right to provide additional services. This Section and Sections 11, 13, 14, 15, 16, 18, and 20 of this Franchise shall continue in force until such time as the Franchisee's Facilities are abandoned to the City's satisfaction.

SECTION 25 COMPLIANCE WITH LAWS

The Franchisee shall conform to all applicable federal, state and local laws and regulations including, but not limited to, the State Environmental Policy Act and the City's Environmental Standards and Ordinances.

SECTION 26 NON-DISCRIMINATION CLAUSE

In all hiring or employment made possible or resulting from this Franchise, there shall be no discrimination against any employee or applicant for employment because of sex, sexual orientation, age, race, color, national origin, marital status or the presence of any sensory, mental, or physical handicap, unless based upon a bona fide occupation qualification. No person shall be denied or subjected to discrimination in receipt of the benefit of any services or activities made possible by or resulting from this Franchise on the grounds of sex, sexual orientation, race, color, national origin, age, except minimum age and retirement provisions, marital status, or the presence of any sensory, mental or physical handicap.

SECTION 27 NOTICE

All notices between the two agencies hereunder may be delivered or mailed. If mailed, they shall be sent to the following respective addresses:

City of Auburn:
City Engineer
25 West Main Street
Auburn, WA 98001-4998
Tel: 253-931-3010

Lakehaven Utility District:
General Manager
31627 1st Ave South
PO Box 4249
Federal Way, WA 98063-4249
Tel: 253-941-1516

or to such other representative addresses as either party may hereafter from time to time designate in writing. All notices and payments mailed by regular post (including first class) shall be deemed to have been given on the second business day following the date of mailing, if properly mailed and addressed. Notices and payments sent by certified or registered mail shall be deemed to have been given on the day next following the date of mailing, if properly mailed and addressed. For all types of mail, the postmark affixed by the United States Postal Service shall be conclusive evidence of the date of mailing.
If an emergency situation develops, it is recommended that the City or the Franchisee call 911 to solicit an emergency response.

SECTION 28 ATTORNEYS' FEES

If either party shall be required to bring any action to enforce any provision of this Franchise, or shall be required to defend any action brought by the other party with respect to this Franchise, and in the further event that one party shall substantially prevail in such action, the losing party shall, in addition to all other payments required therein, pay all of the prevailing party's reasonable costs in connection with such action, including such sums as the court or courts may adjudge reasonable as attorney's fees in trial court and in appellate courts.

SECTION 29 SEVERANCE

If any term, provision, condition or portion of this Franchise is held to be invalid, such invalidity shall not affect the validity of the remaining portions of this Franchise which shall continue in full force and effect, unless the dominant purpose of the Franchise would be prevented or the public interest would no longer be served, as determined by the City.

SECTION 30 EFFECTIVE DATE

The resolution approving the Franchise, having been introduced at least five days prior to its date of passage and submitted to the city attorney, and being approved by at least a majority of the entire city council at a regular city council meeting, shall take effect and be in force five calendar days after its passage and approval by both parties to this Franchise.

SECTION 31 EXISTING UTILITIES

This Franchise shall govern existing and future water system facilities currently owned, operated and maintained by Lakehaven Utility District within the City of Auburn.

SECTION 32 DISPUTE RESOLUTION

In the event that a dispute arises with regard to the terms of this Franchise Agreement, either party may request that the dispute be submitted to non-binding mediation or arbitration prior to court action. Such request for non-binding mediation or arbitration shall be made in writing and mailed by first class, U.S. Mail to the other party. The mediator or arbitrator shall be chosen by agreement of the parties. Either party may refuse to submit to the dispute resolution process. Refusal to engage in the dispute resolution process shall not prejudice the refusing party in any way.

IN WITNESS WHEREOF the parties hereto have executed this Franchise Agreement as of the day and year first above written.

LAKEHAVEN UTILITY DISTRICT

Approved by Resolution No. 2004-1006 of the Lakehaven Utility District, Federal Way, Washington, at its regular meeting held on the 8th day of January, 2004.

By:

Donald T. Perry, General Manager
Lakehaven Utility District

Approved as to form:

Steven H. Pritchett, General Counsel
Lakehaven Utility District

CITY OF AUBURN

By:

Peter B. Lewis, Mayor
City of Auburn

Attest:

Danielle Daskam, City Clerk

Approved as to form:

Daniel B. Heid, City Attorney

AUBURN RESOLUTION NO: 3650

LAKEHAVEN REFERENCE NUMBER: 2004-1006

Attachment 1

Auburn Ordinance No. 3650

Description of Lakehaven Utility District's Water Franchise Area

BEGINNING AT THE SOUTHWEST CORNER OF SECTION 23, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M.;

THENCE NORTH ALONG THE WEST LINE OF SAID SECTION 23 TO THE NORTHWEST CORNER OF SAID SECTION 23 AND THE SOUTHEAST CORNER OF SECTION 15, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M.;

THENCE WESTERLY ALONG THE SOUTH LINE OF SAID SECTION 15 TO THE SOUTHWEST CORNER OF THE SOUTHEAST QUARTER OF SAID SECTION 15;

THENCE NORTHERLY ALONG THE NORTH-SOUTH CENTERLINE OF SAID SECTION 15 TO THE SOUTHWEST CORNER OF THE SOUTHEAST QUARTER OF SECTION 10, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M.;

THENCE NORTHERLY ALONG THE NORTH-SOUTH CENTERLINE OF SAID SECTION 10 TO THE SOUTHWEST CORNER OF THE SOUTHEAST QUARTER OF SECTION 3, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M.;

THENCE NORTHERLY ALONG THE NORTH-SOUTH CENTERLINE OF SAID SECTION 3 TO THE SOUTHWEST CORNER OF THE SOUTHEAST QUARTER OF SECTION 34, TOWNSHIP 22 NORTH, RANGE 4 EAST, W.M.;

THENCE NORTHERLY ALONG THE WEST LINE OF THE SOUTHEAST QUARTER OF SAID SECTION 34 TO THE NORTHWEST CORNER OF SAID SOUTHEAST QUARTER OF SAID SECTION 34;

THENCE EASTERLY ALONG THE NORTHERLY LINE OF SAID SOUTHEAST QUARTER OF SAID SECTION 34 TO THE NORTHWEST CORNER OF THE SOUTHWEST QUARTER OF SECTION 35, TOWNSHIP 22 NORTH, RANGE 4 EAST, W.M.;

THENCE EASTERLY ALONG THE EAST-WEST CENTERLINE OF SAID SECTION 35 TO THE NORTHWEST CORNER OF THE SOUTHWEST QUARTER OF SECTION 36, TOWNSHIP 22 NORTH, RANGE 4 EAST, W.M.;

THENCE EASTERLY ALONG THE NORTH LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 36 TO THE NORTHEAST CORNER OF SAID SOUTHWEST QUARTER OF SAID SECTION 36;

THENCE SOUTHERLY ALONG THE NORTH-SOUTH CENTERLINE OF SAID SECTION 36 TO THE NORTHWEST CORNER OF THE NORTHEAST QUARTER OF SECTION 1, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M.;

THENCE SOUTHERLY ALONG THE NORTH-SOUTH CENTERLINE OF SAID SECTION 1 TO THE SOUTHEAST CORNER OF THE SOUTHWEST QUARTER OF SAID SECTION 1;

THENCE WESTERLY ALONG THE SOUTH LINE OF SAID SECTION 1 TO THE NORTHEAST CORNER OF SECTION 11, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M.;

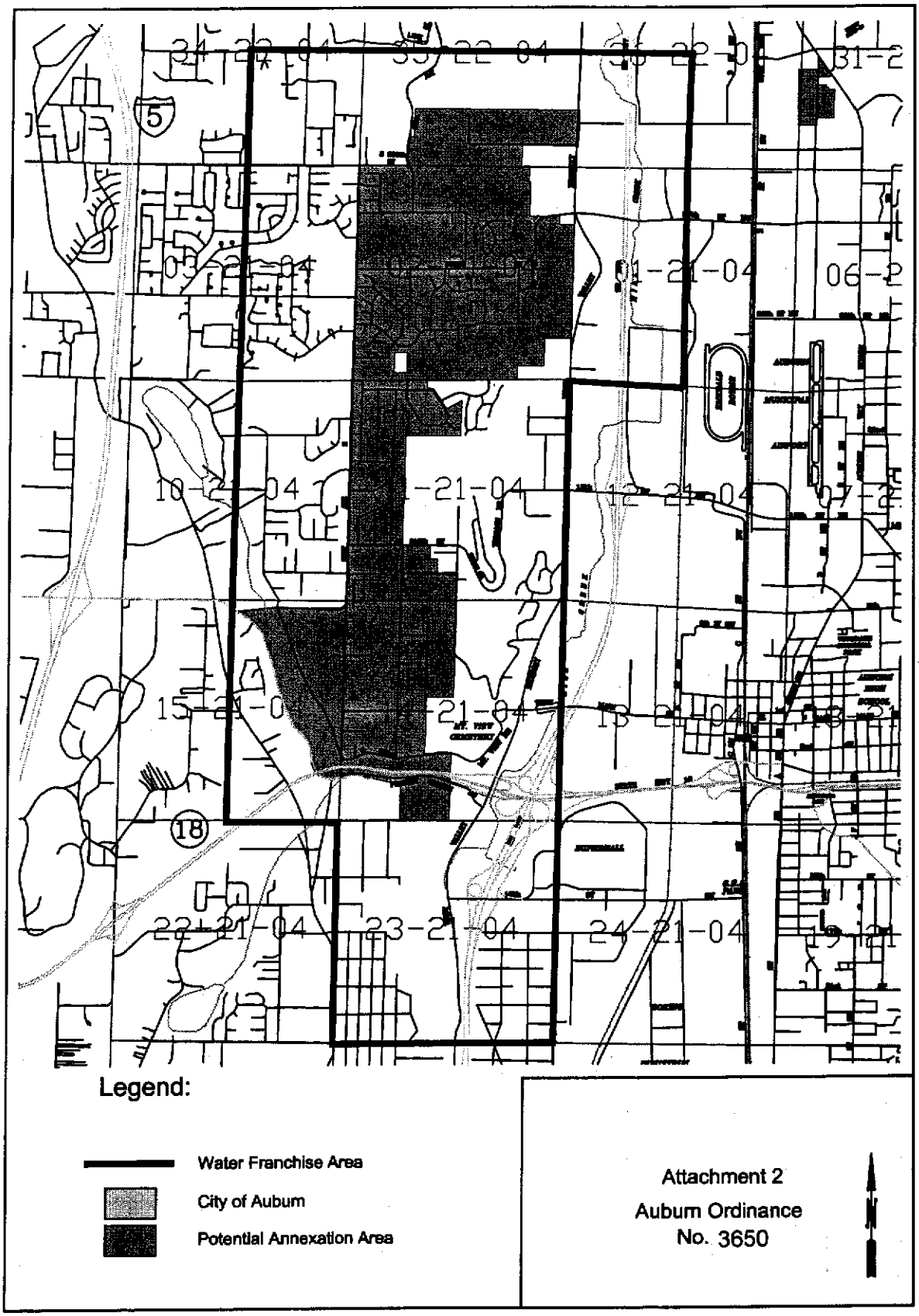
THENCE SOUTHERLY ALONG THE EAST LINE OF SAID SECTION 11 TO THE NORTHEAST CORNER OF THE NORTHEAST QUARTER OF SECTION 14, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M.;

THENCE SOUTHERLY ALONG THE EAST LINE OF SAID SECTION 14 TO THE NORTHEAST CORNER OF THE NORTHEAST QUARTER OF SECTION 23, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M.;

THENCE SOUTHERLY ALONG THE EAST LINE OF SAID SECTION 23 TO THE SOUTHEAST CORNER OF SAID SECTION 23;

THENCE WESTERLY ALONG THE SOUTH LINE OF SAID SECTION 23 TO THE POINT OF BEGINNING.

SITUATE IN KING COUNTY, WASHINGTON.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18
22-21-04
23-21-04
24-21-04
Legend:
Water Franchise Area
City of Auburn
Potential Annexation Area
Attachment 2
Auburn Ordinance
No. 3650

RESOLUTION NO. **3652**

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR TO EXECUTE AN INTERLOCAL AGREEMENT ESTABLISHING WATER SERVICE BOUNDARIES BETWEEN THE LAKEHAVEN UTILITY DISTRICT AND THE CITY OF AUBURN

WHEREAS, pursuant to RCW 35.A.11.040, Auburn has the legal authority to exercise its powers and perform any of its functions as set forth in RCW 39.34; and

WHEREAS, pursuant to RCW 39.34, the Interlocal Cooperation Act, Auburn has the legal authority to cooperate with other localities and utilities on the basis of mutual advantage and the efficient provision of municipal services; and

WHEREAS, pursuant to RCW 35A.21.150, Auburn has the legal authority to maintain a water system; and

WHEREAS, pursuant to RCW 57.08.044, Lakehaven has the legal authority, whether by contract or otherwise, to provide water service to property owners in areas outside existing district boundaries; and

WHEREAS, the parties recognize the responsibility of public water utilities to provide efficient and reliable service to their customers at reasonable cost; and

WHEREAS, Lakehaven's 1998 Draft Comprehensive Water System Plan notes a region within Auburn's Potential Annexation Area (hereinafter referred to as "Auburn's PAA") to which Lakehaven intends to provide water service; and

WHEREAS, Lakehaven is currently providing water service within Auburn's PAA; and

WHEREAS, portions of the Lakehaven water system have been sized and are situated so as to be capable of affording water to a portion of Auburn's PAA; and

WHEREAS, Auburn has evaluated water service issues and determined that it is not cost feasible to provide direct water service within its PAA adjacent to Lakehaven's water infrastructure; and

WHEREAS, Lakehaven's delivery of water service to these areas will provide the maximum efficiency in the use of existing and future facilities and water planning;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, HEREBY RESOLVES as follows:

Section 1. The Mayor of the City of Auburn is herewith authorized to execute a Water Service Boundary Agreement between the Lakehaven Utility District and the City of Auburn in substantial conformity with the agreement

attached hereto, marked as Exhibit "A" and incorporated herein by this reference.

Section 2. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

Section 3. This resolution shall be in full force and effect upon passage and signatures hereon.

DATED this 2nd day of February, 2004.

CITY OF AUBURN

PETER B. LEWIS
MAYOR

ATTEST:

Danielle E. Daskam,
City Clerk

APPROVED AS TO FORM:

Daniel B. Heid,
City Attorney

Return Address:
Auburn City Clerk
City of Auburn
25 West Main St.
Auburn, WA 98001

RECORDER'S COVER SHEET

Document Title(s) (or transactions contained therein):

19/37 Pmnt
W9278-12

Interlocal Agreement (RES 3652)

Reference Number(s) of Documents assigned or released:
☐Additional reference #'s on page _____ of document

Grantor(s)/Borrower(s) (Last name first, then first name and initials)
Auburn, City of

Grantee/Assignee/Beneficiary: (Last name first)
1. Lakehaven Utility District

Legal Description (abbreviated: i.e. lot, block, plat or section, township, range)

PER RCW 39.34

☐ Additional legal is on page of document.

Assessor's Property Tax Parcel/Account Number
N/A

☐ Assessor Tax # not yet assigned

EXHIBIT "A"

LAKEHAVEN UTILITY DISTRICT and CITY OF AUBURN INTERLOCAL AGREEMENT ESTABLISHING WATER SERVICE BOUNDARIES

THIS AGREEMENT, made and entered into this 23rd day of September, 2004, by and between **LAKEHAVEN UTILITY DISTRICT**, a Washington municipal corporation (hereinafter referred to as "Lakehaven"), and the **CITY OF AUBURN**, a Washington municipal corporation, (hereinafter referred to as "Auburn"), both being duly organized and existing under and by virtue of the laws of the State of Washington,

WITNESSETH:

WHEREAS, pursuant to RCW 35.A.11.040, Auburn has the legal authority to exercise its powers and perform any of its functions as set forth in RCW 39.34; and

WHEREAS, pursuant to RCW 39.34, the Interlocal Cooperation Act, Auburn has the legal authority to cooperate with other localities and utilities on the basis of mutual advantage and the efficient provision of municipal services; and

WHEREAS, pursuant to RCW 35A.80.010, Auburn has the legal authority to maintain a water system; and

WHEREAS, pursuant to RCW 57.08.005(3) and 57.08.044, Lakehaven, as a special purpose water/sewer district, has the legal authority, whether by contract or otherwise, to provide water service to property owners in areas outside existing district boundaries; and

WHEREAS, the parties recognize the responsibility of public water utilities to provide efficient and reliable service to their customers at reasonable cost; and

WHEREAS, Lakehaven's adopted and approved 1998 Comprehensive Water System Plan notes a region within Auburn's Potential Annexation Area (hereinafter referred to as "Auburn's PAA") to which Lakehaven intends to provide water service; and

WHEREAS, Lakehaven is currently providing water service within Auburn's PAA; and

WHEREAS, portions of the Lakehaven water system have been sized and are situated so as to be capable of affording water service to a portion of Auburn's PAA; and

WHEREAS, Auburn has evaluated water service issues and determined that it is not cost effective to provide direct water service within its PAA adjacent to Lakehaven's water infrastructure; and

WHEREAS, Lakehaven's delivery of water service to these areas will provide the maximum efficiency in the use of existing and future facilities and water planning;

NOW, THEREFORE:

IT IS HEREBY AGREED by and between the parties hereto as follows:

1. Water Service Area. The parties have agreed to a mutual water service planning boundary as depicted on the maps attached hereto as Attachment 1 and legally described in Attachment 2, which are by this reference incorporated herein. Both parties further agree that, through this designation of the service boundary, Lakehaven shall provide water service to properties mutually within its water service area and Auburn's PAA, also depicted on Attachment 1, in accordance with and subject to the terms and conditions of this Agreement.

2. Management, Regulation and Control of Water System. Lakehaven shall have the sole responsibility and authority to construct, maintain, manage, conduct and operate its water system within the area mutually designated as Lakehaven's water service area and Auburn's PAA as depicted in Attachment 1, together with any additions, extensions and betterments thereto. Lakehaven shall also be responsible for obtaining all necessary governmental franchises, approvals, easements and permits for the installation of the water system and improvements to be located therein.

3. Service Rates and Connection Charges.

a) **Permit Required.** No connection shall be made to Lakehaven's water system unless the property owner first pays the associated fees and submits the proper information to obtain a Lakehaven water connection permit, and otherwise meets the requirements for service as provided in duly adopted Resolutions of Lakehaven. The connection shall be subject to inspection for compliance with Lakehaven's standards as adopted at the time the connection is made.

b) **Rates.** The rates charged to the water customer by Lakehaven mutually within Lakehaven's water service area and Auburn's PAA, as depicted on Attachment 1, shall be fixed, altered, regulated and otherwise controlled by Lakehaven pursuant to the limitation on such authority as set forth in Chapter 57 RCW, or other applicable laws.

4. Water Availability Certificates. Lakehaven shall continue to issue water availability certificates for property located both within Auburn's PAA, as depicted in Attachment 1 and Lakehaven's Water Service Area.

5. Future Annexations. Each of the parties agree that Lakehaven shall provide water service to the area depicted in Attachment 1 without regard to the present corporate boundaries of the parties and without regard to future corporate boundaries as they may be periodically altered through annexation.

6. Lakehaven Comprehensive Water Planning. The terms of this Agreement will be included as an amendment to Lakehaven's Comprehensive Water System Plan. Lakehaven will submit to Auburn all Comprehensive Water System Plans and amendments thereto involving areas and/or system improvements within Auburn's PAA, as depicted in Attachment 1.

7. Auburn Comprehensive Water Planning. The terms of this Agreement will be included as an amendment to Auburn's Comprehensive Water Plan. Auburn will submit to Lakehaven all Comprehensive Water System Plans and amendments thereto involving area and/or system improvements within Auburn's PAA, as depicted in Attachment 1.

8. Reliance. Each party hereto acknowledges that the terms hereof will be relied upon by the other in its comprehensive planning to meet the needs of the service area designated herein.

9. Liability. The parties agree that this Agreement shall not be a source of liability for either party for any failure or interruption of service in the service area of the other party, as designated herein.

10. Government Approvals. Auburn will give notice of the adoption of this Agreement to Metropolitan/King County, to the Department of Ecology, to the Department of Health, and to any other agency with jurisdiction over, or other interest in, the terms hereof, and the parties shall cooperate and assist each other in all reasonable manner in procuring any necessary approvals hereof by those agencies.

11. Boundary Review Board. In the event that implementation of the terms hereof results in permanent water service to areas that will be outside the respective service boundaries of Lakehaven or Auburn, the parties will, at the time of such service, jointly seek King County Boundary Review Board approval of such service in accordance with RCW 57.08.047.

12. Service Amendments. Any changes to the service areas described herein shall be by mutual written agreement. Each party, through Auburn's Director of Public Works and Lakehaven's General Manager respectively, may give written permission to the other, on a case-by-case basis, to provide service to the other party's adjacent or

nearby water service area based upon considerations of economic efficiency. Such written permission(s) shall be filed with this agreement for future reference.

13. Alteration, Amendment or Modification. Lakehaven and Auburn hereby reserve the right to alter, amend or modify the terms and conditions of this Agreement only upon written consent of both parties to such alteration, amendment or modification.

14. Indemnification and Hold Harmless. Each Party hereto agrees to protect, defend, and indemnify the other Party, its officers, officials, employees and agents from any and all cost, claims judgements and/or awards of damages, arising out of or in any way resulting from the Party's default, failure of performance, or negligent conduct associated with this agreement, by the Party, its employees, subcontractors or agents. Each Party agrees that its obligations under this provision extend to any claim, demand, and/or cause of action brought by or on behalf of any of its employees, or agents. The foregoing indemnity is specifically and expressly intended to constitute a waiver of each Party's immunity under Washington's Industrial Insurance Act, RCW Title 51, as respects the other Party only, and only to the extent necessary to provide each Party with a full and complete indemnity of claims made by the other Party's employees. The Parties acknowledge that these provisions were specifically negotiated and agreed upon by them.

15. Miscellaneous. Auburn and Lakehaven agree that within the area depicted in Attachment 3, existing water customers are currently served by Auburn and that for the purposes of efficiency, water service to these customers shall be transferred to Lakehaven. Service shall be provided by a direct connection with Lakehaven's system at "R" Street NW and Abby Drive, and temporarily by a Booster Pump Station from Auburn's water system on Knickerbocker Drive until such time as a secondary waterline is constructed from Lakehaven's system and paid for pursuant to Attachment 4.

16. Integration. This agreement constitutes the entire agreement of the parties regarding the subject matter hereof, and there are no other representations or oral agreements other than those listed herein, which vary the terms of this agreement. Future agreements may occur between the parties to transfer additional or future service areas by mutual agreement.

17. Obligation Intact. Nothing herein shall be construed to alter the rights, responsibilities, liabilities, or obligations of either Lakehaven or Auburn regarding provision of water service, except as specifically set forth herein.

LAKEHAVEN UTILITY DISTRICT

Approved by Resolution No. 2004-1006 of the Lakehaven Utility District, Federal Way, Washington, at its regular meeting held on the 8th day of January, 2004.

By:

Donald T. Perry, General Manager
Lakehaven Utility District

Approved as to form:

Steven H. Pritchett, General Counsel
Lakehaven Utility District

CITY OF AUBURN

Approved by Resolution No. 3652 of the City of Auburn, Washington, at its regular meeting held on the 2nd day of February, 2004.

By:

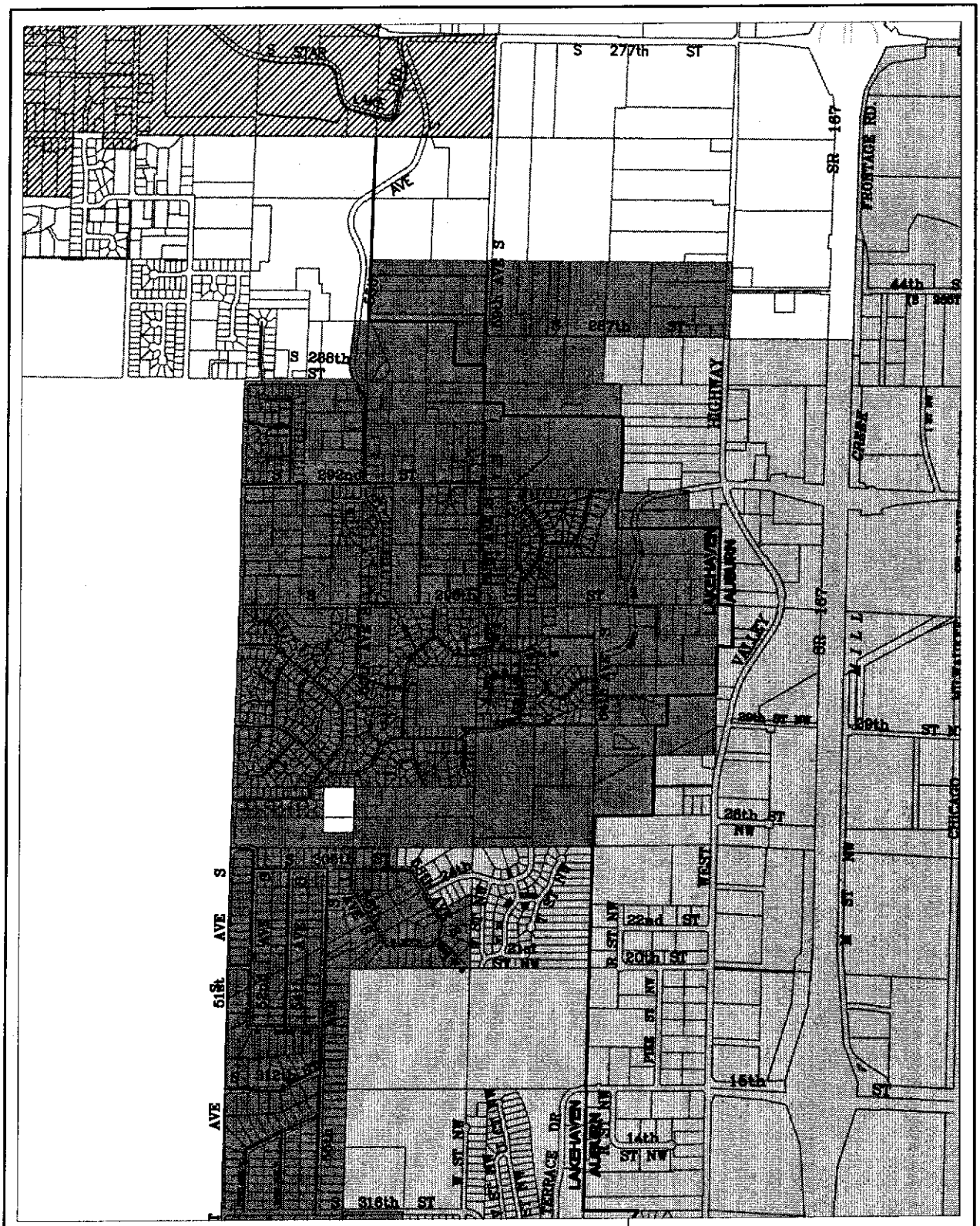
Peter B. Lewis, Mayor
City of Auburn

Attest:

Danielle Daskam, City Clerk

Approved as to form:

Daniel B. Heid, City Attorney



LEGEND

- AUBURN CITY LIMITS
- AUBURN PAA
- PROPOSED WATER SERVICE BOUNDARY
- HIGHLINE SERVICE AREA

SCALE: 1" = 1000'

Note: Information shown is for general reference purposes only and does not necessarily represent exact geographic or cartographic data as mapped.

ATTACHMENT 1

LAKEHAVEN - AUBURN INTERLOCAL AGREEMENT ESTABLISHING WATER SERVICE BOUNDARIES

PLEASE INITIAL IF APPROVED

DEC 2008

LAKEHAVEN _____ AUBURN _____

PAGE 1/2

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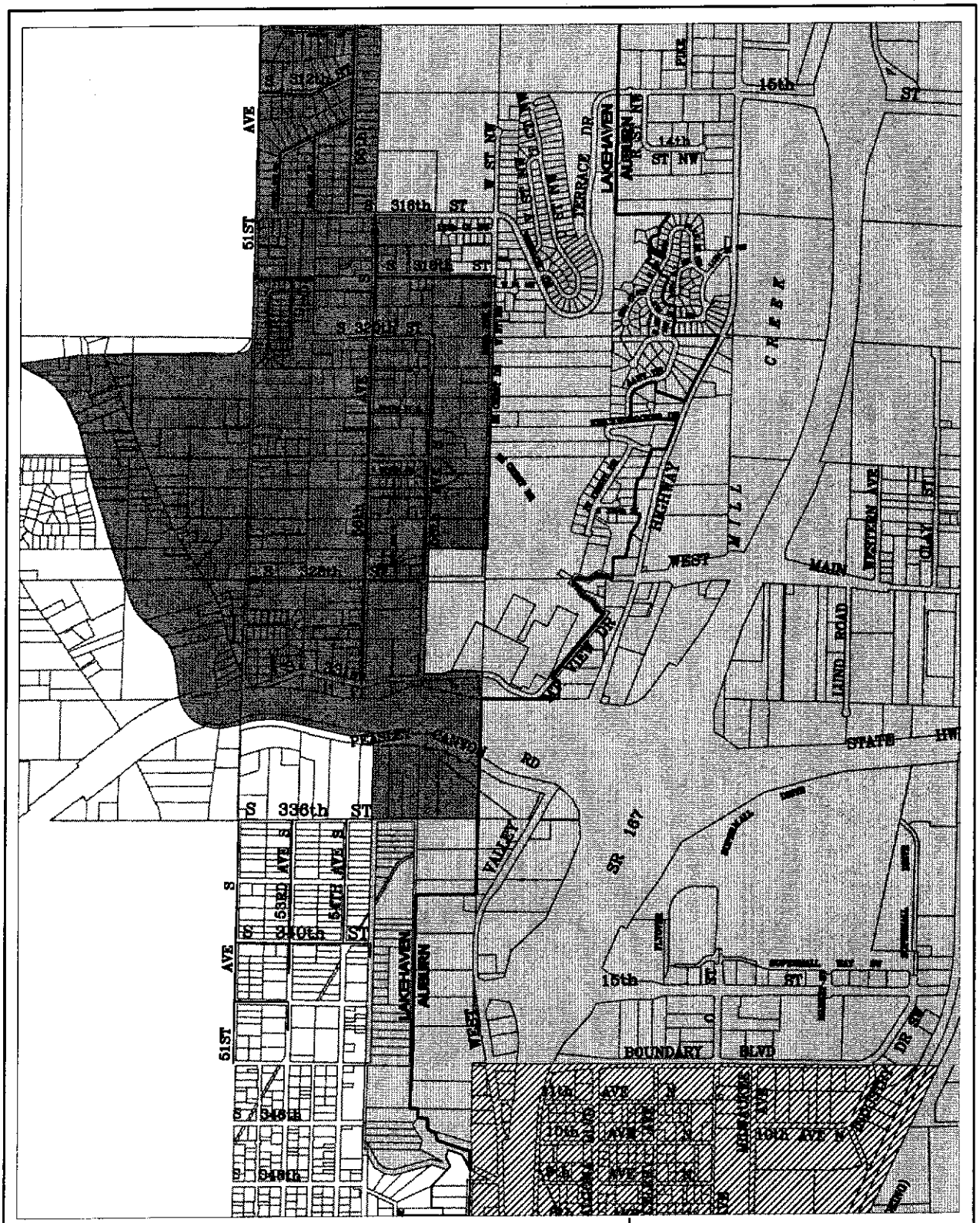


LEGEND

- AUBURN CITY LIMITS
- AUBURN PAA
- PROPOSED WATER SERVICE BOUNDARY
- ALGONA CITY LIMITS

SCALE 1" = 1500'

Note: Information shown is for general reference purposes only and does not necessarily represent exact geographic or cartographic data as mapped.

ATTACHMENT 1

LAKEHAVEN - AUBURN INTERLOCAL AGREEMENT ESTABLISHING WATER SERVICE BOUNDARIES

PLEASE INITIAL IF APPROVED

DEC 2003

LAKEHAVEN _____ AUBURN _____

Attachment 2

LAKEHAVEN UTILITY DISTRICT and CITY OF AUBURN INTERLOCAL AGREEMENT ESTABLISHING WATER SERVICE BOUNDARIES

BOUNDARY DESCRIPTION

BEGINNING at a point 170 feet east of the Northwest corner of the Northeast quarter of the Southwest quarter of Section 35, Township 22 North, Range 4 East, W.M., in King County, Washington;

THENCE south 1990 feet, more or less, to the North line of the South half of the South half of the Southwest quarter of said Section 35;

THENCE easterly along said North line to a point 300 feet west of the East line of the Southwest quarter of said Section 35;

THENCE south to a point 170 feet north of the South line of the Southwest quarter of said Section 35;

THENCE east 300 feet, more or less, to the East line of the Southwest quarter of said Section 35;

THENCE southerly along said East line to the South line of said Section 35;

THENCE continuing southerly along the West line of the Northeast quarter of Section 2, Township 21 North, Range 4 East, W.M., in King County, Washington, a distance of 221.12 feet;

THENCE easterly, parallel with the North line of said subdivision, 220.20 feet;

THENCE southerly, parallel with the West line of said subdivision, 130 feet;

THENCE easterly along the North line of Lots 1 and 2 of King County Short Plat No. 781092 as recorded under Recording Number 8112210440,records of King County, Washington, a distance of 1306.40 feet, more or less, to the Northeast corner of said Lot 2;

THENCE south along the East line of said Lot 2 a distance of 802.22 feet, more or less, to the Southeast corner of said Lot 2;

THENCE easterly, a distance of 6 feet, more or less to the Northeast corner of Tract A of Eastview Vista according to the plat thereof recorded in Volume 108, Pages 51 through 53, records of King County, Washington;

THENCE south, a distance of 34 feet, more or less, to an angle point in the boundary of said Tract A;

THENCE west, a distance of 34.80 feet, more or less, to an angle point in the boundary of said Tract A;

THENCE south, a distance of 400.44 feet, along the East line of said Tract A to a point 835.56 feet north of the South line of the Northeast quarter of said Section 2;

THENCE east, parallel the South line of the Northeast quarter of said Section 2, a distance of 1140.8 feet, more or less, to the East line of said Section 2;

THENCE south, a distance of 835.56 feet along said East line, to the Northwest corner of the Southwest quarter of Section 1, Township 21 North, Range 4 East, W.M., in King County, Washington;

THENCE east, parallel to the North line of the Southwest quarter of said Section, a distance of 149.18 feet;

THENCE south, parallel to the West line of the Southwest quarter of said Section, a distance of 450 feet;

THENCE west, parallel to the North line of the Southwest quarter of said Section, a distance of 149.18 feet to the East line of Southeast quarter of Section 2, Township 21 North, Range 4 East, W.M., in King County, Washington;

THENCE south, a distance of 532.51 feet along said East line to the North line of the South half of the South half of the North half of said subdivision;

THENCE westerly, along said North line of said subdivision, 518.77 feet;

THENCE southerly, parallel with the East line of said subdivision, 328.01 feet, more or less, to the South line of said subdivision;

THENCE westerly, along the South line of said subdivision, 130.02 feet, more or less to the Northeast corner of the West half of the Southeast quarter of the Southeast quarter of said Section 2;

THENCE southerly, along the East line of said subdivision, 984.40 feet, to the North line of the South half of the South half of last said subdivision;

THENCE westerly, along the North line of said subdivision, 650 feet, more or less, to the East line of the Southwest quarter of the Southeast quarter of said Section 2;

THENCE southerly, along said East line, 328.77 feet, more or less, to the South line of last said subdivision;

THENCE continuing southerly, along the West line of the East half of the East half of Section 11 Township 21 North, Range 4 East, W.M., in King County, Washington, a distance of 3950.28 feet, more or less to the Northwest corner of the Southeast quarter of the Southeast quarter of said Section;

THENCE easterly, along the North line of said subdivision, a distance of 588.55 feet to the most Easterly corner of Tract A of Vistara Division 2 according to the plat thereof recorded in Volume 186, Pages 70 through 76, records of King County, Washington;

THENCE southwesterly along the most Easterly line of said Tract A, a distance of 184.6 feet to the Northeast corner of Lot 16 of said plat of Vistara Division 2;

THENCE southerly along the Easterly line of said Lot 16 a distance of 76 feet;

THENCE southwesterly along last said Easterly line 77.96 feet;

THENCE southerly along last said Easterly line 51.73 feet;

THENCE southeasterly along last said Easterly line 78.15 feet;

THENCE southeasterly along said Easterly line and along the Northeast line of tract B of said plat 168 feet to the West Right-of-Way line of "R" Street Northwest as recorded in said plat;

THENCE southerly along said West Right-of Way line, a distance of 40 feet, more or less, to the most Easterly corner of Lot 18 of said plat;

THENCE northwesterly along the Northeast boundary of said Lot 18, a distance of 188.08 feet;

THENCE southeasterly along the Westerly boundary of said Lot 18, a distance of 83.72 feet, more or less, to the most Northerly corner of Lot 19 of said plat;

THENCE southwesterly along the Westerly boundary of said Lot 19, a distance of 64.76 feet;

THENCE southeasterly along the Southwesterly boundary of said Lot 19, a distance of 154.16 feet, to the most Southerly corner of said Lot 19;

THENCE southeasterly along a line crossing said Right-of-Way to the most Northerly corner of Lot 26 of said plat;

THENCE southeasterly along the **N**ortheast boundary of said Lot 26, a distance of 97.69 feet;

THENCE southerly along the Easterly boundaries of Lots 26, 25, 24 of said plat, a distance of 177.26 ft, more or less, to the Northeast corner of Lot 31 of Vistara Division 1 according to the plat thereof recorded in Volume 174, Pages 78 through 83 and according to Alteration Number 1 thereof recorded in Volume 186, Pages 31 through 33, records of King County, Washington;

THENCE southerly and southeasterly along the Eastern boundaries of Lots 31, 32, and 33 of said plat, a distance of 152.14 feet to the Northwest corner of Lot 34 of said plat;

THENCE easterly along the Northerly boundaries of Lots 34 and 35 of said plat, a distance of 80.00 feet to the Northeast corner of Lot 35 of said plat;

THENCE southerly along the Easterly boundary of Lot 35, a distance of 118.02 feet, to the Southeast corner of said lot 35;

THENCE southerly along a line, crossing the 8th Street Northwest Right-of-Way, to the Northeast corner of Lot 14 of said plat;

THENCE continuing southerly along the Eastern boundaries of Lots 14 and 13 of said plat, a distance of 153.10 feet to the North Line of Section 14, Township 21 North, Range 4 East, W.M., in King County, Washington;

THENCE East along said North line, a distance of 501.28 feet, more or less, to the West Right-of-Way line of State Route 181, also known as West Valley Highway;

THENCE southwesterly along said West Right-of-Way line, a distance of 790.91 feet to the Northeast corner of Lot 3 according to the Replat of Lot 4 Block 1 Knickerbocker Heights as recorded in Volume 90, Page 39, records of King County, Washington;

THENCE northwesterly along the Northerly boundary of said Lot 3 a distance of 342.6 feet, more or less, to the Southwest corner of Lot 2 of said Replat;

THENCE north a distance of 100 feet, more or less, along the East line of Lot 1, Auburn Short Plat 0001-89, as recorded under Recording No. 8906271138, records of King County, Washington;

THENCE westerly and southwesterly a distance of 253.5 feet, more or less, along the Northern boundary of said Lot 1 to the most Northerly corner of Lot 2 of said Short Plat;

THENCE southerly a distance of 359.06 feet, more or less, along the Westerly boundaries of Lots 2, 3, and 4 of said Short Plat to the North margin of the Knickerbocker Drive Right-of Way;

THENCE easterly along said North margin of Knickerbocker Drive Right-of Way, a distance of 475 feet, more or less, to the West line of the State Route 181 Right-of-Way which parallels the centerline of State Route 181 Right-of-Way;

THENCE southwesterly along said West line of said State Route 181 Right-of-Way to the Southern terminus of the Northeast corner radius of Lot 2, Block 3, of Knickerbocker Addition, according to the plat thereof, as recorded in Volume 45, Page 93, records of King County, Washington;

THENCE continuing southwesterly along said West line of said State Route 181 Right-of-Way, a distance of 246.18 feet, to the Southeast corner of said Lot 2;

THENCE west along the South line of said Lot 2, a distance of 150 feet;

THENCE southerly and parallel to said Right-of-Way, a distance of 343.66 feet, more or less, to a point on the North line of Lot 3, King County Short Plat No. SP-18-76, as recorded under Recording No. 7611240117, records of King County, Washington;

THENCE westerly along said North line, a distance of 43.82 feet, more or less, to the Northwest corner of said Lot 3;

THENCE southerly along the West line of said Lot 3, a distance of 120.53 feet, to the Southwest corner of said Lot 3;

THENCE westerly along the South line of Lot 2 of last said short plat, a distance of 5 feet more or less to the Northeast corner of Hi-Crest Number 2, according to the Plat thereof recorded in Volume 64, Page 58, records of King County, Washington;

THENCE south along the East line of said plat, a distance of 270 feet, to the Southeast corner of Lot 13 of said plat;

THENCE easterly along the Easterly extension of the South line of said Lot 13, a distance of 58.92 feet;

THENCE southerly, a distance of 94.97 feet to the Northeast corner of Lot B of City of Auburn Lot Line Adjustment 10-87 recorded under Recording Number 8705190464, records of King County, Washington;

THENCE southerly along the easterly boundary of said Lot B a distance of 9.82 feet;

THENCE southwesterly along said Easterly boundary a distance of 127.12 feet;

THENCE southerly parallel with said State Route 181 Right of Way to a line parallel with and 228 feet Northerly of the South line of the Northeast quarter of said Section 14.

THENCE west along said parallel line to a point 80 feet East of the West line of the Southeast quarter of the Northeast quarter of said Section 14;

THENCE south along last said parallel line a distance of 228 feet to the South line of the Northeast quarter of said Section 14 and the centerline of Mountain View Drive;

THENCE westerly along said centerline, a distance of 10 feet, more or less to the point where the centerline of said Mountain View Drive diverges from the South line of said Section 14;

THENCE northwesterly along said centerline, a distance of 154 feet;

THENCE southwesterly along said centerline, a distance of 140 feet;

THENCE northwesterly along said centerline, a distance of 138 feet;

THENCE southwesterly along said centerline, a distance of 80 feet;

THENCE southeasterly along said centerline, a distance of 114 feet;

THENCE southeasterly along said centerline, a distance of 63 feet;

THENCE southeasterly along said centerline, a distance of 140 feet;

THENCE southeasterly along said centerline, a distance of 95 feet;

THENCE southeasterly along said centerline, a distance of 101 feet;

THENCE southwesterly along said centerline, a distance of 910 feet, more or less, to the intersection of the Northwesterly prolongation of the Southwesterly line of the lands described in instrument filed under Recording Number 8512300596, Records of King County, Washington;

THENCE southwesterly along last said line to a point on the West line of the east 470.26 feet of the Northwest quarter of the Southeast quarter of said Section 14 which is 190.27 feet northerly of the South line of said subdivision;

THENCE southerly along the West line of the east 470.26 feet of said Northwest quarter of said Southeast quarter of said Section 14, a distance of 190.27 feet, more or less to the North line of Southwest quarter of the Southeast quarter of said Section 14;

THENCE west along said North line, a distance of 839.29 feet, more or less, to the Northwest corner of said subdivision;

THENCE south along the West line of said subdivision, a distance of 1313.19 feet, more or less, to the Northeast corner of the Northwest quarter of Section 23, Township 21 North, Range 4 East, W.M.;

THENCE south along the East line of said subdivision, a distance of 821.24 feet;

THENCE west, parallel to the North line of the Northwest quarter of said Section 23, a distance of 653.06 feet, more or less, to the Northerly projection of the centerline of 58th Avenue South;

THENCE southerly, along said centerline of 58th Avenue South, to the North line of the Southwest quarter of said Section 23;

THENCE south parallel to the East line of said subsection, a distance of 496 feet, more or less, to the North line of Lot 3, Block 25 of Jovita Heights, according to the plat thereof, as recorded in Volume 20, Page 12, records of King County, Washington;

THENCE east along the North line of said Lot 3, a distance of 80 feet, more or less, to the Northeast corner of said Lot 3;

THENCE southerly along the East line of said Lot 3 and the East line of Lot 4 of said plat to the Northerly margin of Iowa Drive according to said Plat of Jovita Heights, a distance of 92.82 feet;

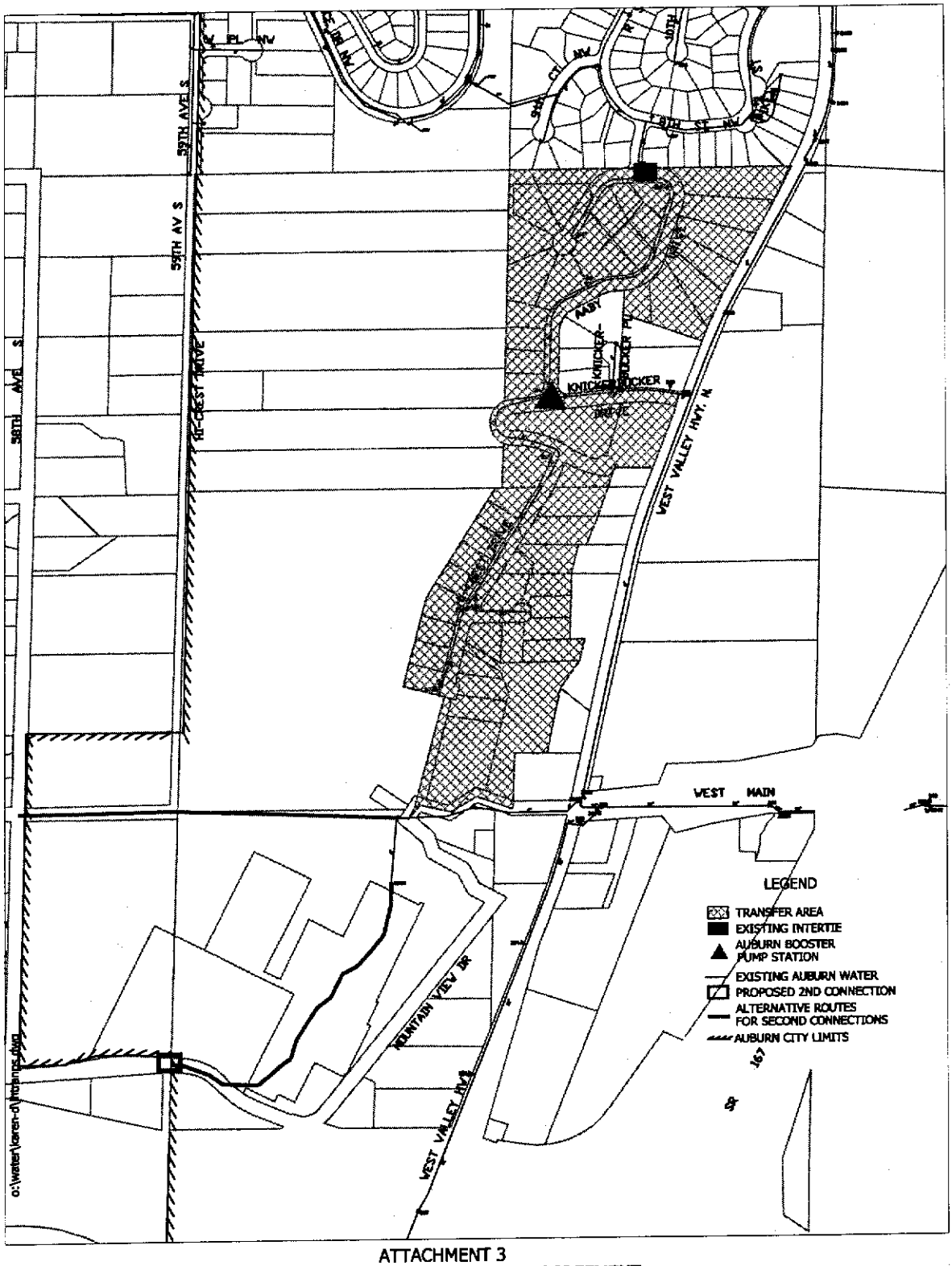
THENCE easterly along said Northerly margin, a distance of 107.89 feet;

THENCE southerly along said Northerly margin, a distance of 114.85 feet;

THENCE southeasterly along said Northerly margin, a distance of 93.86 feet;

THENCE southeasterly along said Northerly margin, a distance of 81.99 feet;

THENCE southeasterly along said Northerly margin, a distance of 390 feet, more or less, to the East line of the Southwest quarter of said Section 23 and the terminus of this boundary description.



ATTACHMENT 3
LAKEHAVEN - AUBURN INTERLOCAL AGREEMENT
ESTABLISHING WATER SERVICE BOUNDARIES
TRANSFER AREA MAP

Attachment 4

LAKEHAVEN UTILITY DISTRICT and CITY OF AUBURN INTERLOCAL AGREEMENT ESTABLISHING WATER SERVICE BOUNDARIES

TRANSFER AREA CONDITIONS

1. Auburn will transfer ownership of the water infrastructure within the area depicted on Attachment 3, including but not limited to, the Booster Pump Station on Knickerbocker Drive, via Bill-of-Sale to Lakehaven. Auburn will also ensure the subject water facilities are in good operational condition and provide all documents and drawings pertaining to as-built information and operational manuals for the facilities.

2. Since Lakehaven's existing system alone can not currently provide minimum fire flow requirements, additional water system facility improvements will be required. The facility improvements (hereinafter referred to as the "secondary water line") include approximately 2000 feet of 8-inch water main and a Pressure Reducing Valve (PRV) station. The water main will connect between Lakehaven's water system in its 578-pressure zone, through a PRV station, to the existing water main in Hi-Crest Drive. Two possible routes for the secondary water line are depicted on Attachment 3, but the actual route for the secondary water line shall be the one deemed by both parties to the Agreement to be most beneficial and efficient of all alternatives identified and analyzed at the time design commences, and not necessarily limited to the two routes depicted.

3. Auburn shall design the secondary water line in accordance with Lakehaven's standards, and provide permanent easements as necessary.

4. Lakehaven shall have the secondary water line constructed and will be reimbursed for funds used to construct the secondary water line, including interest, by a Charge-in-lieu-of-Assessment applied to adjacent benefiting lands (currently Auburn's property) that the secondary water line is intended to serve and by applying a surcharge on Lakehaven's water rates to the transferring customers. The surcharge shall be the difference between Auburn's water rates and Lakehaven's water rates and shall remain in place until all amounts owing from the construction of the secondary water line are paid. When all costs have

been reimbursed, the surcharge will no longer apply and the transferred customers will revert to Lakehaven's then-current rates.

5. Auburn shall permanently make available to Lakehaven the current equivalent annual and instantaneous quantity of water necessary to serve the transferring area in exchange for full credit against applicable Capital Facilities Charges of Lakehaven.

6. The current equivalent annual quantity of water is approximately 255 gallons/day/Equivalent Residential Unit (transfer area has ~ 42 ERU's). The instantaneous quantities are defined historically by the total existing Booster Pump Station capacity. The existing Booster Pump Station has a 90 gpm pump and a 300 gpm pump. The water shall be used as needed to provide domestic water service or emergency fire flows. The water rate Lakehaven will pay Auburn shall be Auburn's current wholesale water rate it charges the City of Algona, or the Lakehaven emergency water rate as determined in accordance with the Emergency Water Supply Agreement for the Lakehaven/Auburn Intertie No. 1 as adopted by Auburn Resolution 3443, whichever is less.

PNWF W2305-12

1

200508220499 8 PGS
08-22-2005 10:30am $0.00
PIERCE COUNTY, WASHINGTON

Return Address:
Auburn City Clerk
City of Auburn
25 West Main St.
Auburn, WA 98001

RECORDER'S COVER SHEET

Document Title(s) (or transactions contained therein):

Interlocal Agreement (RES 3760)

Reference Number(s) of Documents assigned or released:
☐Additional reference #'s on page _____ of document

Grantor(s)/Borrower(s) (Last name first, then first name and initials)
Auburn, City of

Grantee/Assignee/Beneficiary: (Last name first)
1. Bonney Lake, City of

Legal Description (abbreviated: i.e. lot, block, plat or section, township, range)

PER RCW 39.34

☐ Additional legal is on page of document.

Assessor's Property Tax Parcel/Account Number
N/A

☐ Assessor Tax # not yet assigned

#39

RESOLUTION NO. 3760

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR AND CITY CLERK TO EXECUTE AN ADDENDUM TO AN INTERLOCAL AGREEMENT BETWEEN THE CITY OF AUBURN AND THE CITY OF BONNEY LAKE FOR THE ESTABLISHMENT OF SANITARY SEWER SERVICE BOUNDARIES

WHEREAS, in March of 1998 the City Council of the City of Auburn adopted Resolution No. 2925 authorizing the Mayor and City Clerk to execute a settlement agreement that was subsequently signed by the City of Auburn and the City of Bonney Lake; and

WHEREAS, among other items, that settlement agreement set forth a water service area boundary between the City of Auburn and the City of Bonney Lake; and

WHEREAS, subsequent to approval of the settlement agreement the Potential Annexation Areas (PAA) for the City of Auburn and City of Bonney Lake were amended to coincide with the water service area boundary; and

WHEREAS, since the time of the agreement it has been found that a parcel was divided by the water service area boundary set forth in said settlement agreement, and by the subsequent PAA boundary established based on the water service area boundary, and said parcel lies partially within and partially outside of the Auburn PAA; and

WHEREAS, part of the Lake Tapps Parkway East extension's right-of-way also lies partially within and partially outside of the Auburn water service area boundary established by the settlement agreement, and partially within and partially outside the subsequent PAA boundary established based on the water service area boundary; and

WHEREAS, sound growth management and transportation planning principles are best served by including entire parcels and entire street right-of-ways entirely within a PAA.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, HEREBY RESOLVES as follows:

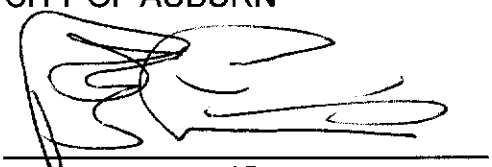
Section 1. The Mayor and City Clerk are hereby authorized to execute Addendum No. 1 to the Settlement Agreement between the City of Auburn and the City of Bonney Lake in substantial conformity with the Addendum attached hereto, marked as Exhibit "A" and incorporated herein by this reference.

Section 2. That the Mayor is authorized to implement such other administrative procedures as may be necessary to carry out the directives of this legislation.

Section 3. That this Resolution shall take effect and be in full force upon passage and signatures hereon.

Dated and Signed this 7th day of February, 2005.

CITY OF AUBURN

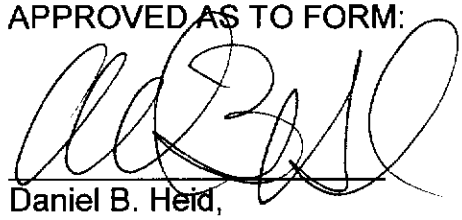


PETER B. LEWIS
MAYOR

ATTEST:

Danielle E. Daskam,
City Clerk

APPROVED AS TO FORM:



Daniel B. Heid,
City Attorney

ADDENDUM NO. 1

ADDENDUM TO SETTLEMENT AGREEMENT BETWEEN THE CITY OF BONNEY LAKE AND THE CITY OF AUBURN RELATING TO WATER SERVICE AREA BOUNDARY

THIS ADDENDUM is made and entered into this 14th day of February, 2005, by and between the **CITY OF BONNEY LAKE**, a municipal corporation of the State of Washington (hereinafter referred to as "Bonney Lake") and the **CITY OF AUBURN**, a municipal corporation of the State of Washington (hereinafter referred to as the "Auburn"), as an addendum to the Settlement Agreement between the parties executed on the 5th day of March, 1998.

W I T N E S S E T H:

WHEREAS, in March 1998 the City Council of the City of Auburn passed Resolution No. 2925 authorizing the Mayor and City Clerk to execute a settlement agreement that was subsequently signed by the City of Auburn and the City of Bonney Lake; and

WHEREAS, among other items, the settlement agreement set forth a water service area boundary between the City of Auburn and the City of Bonney Lake; and

WHEREAS, Exhibit B to the settlement agreement implied that Auburn's Urban Growth Area (UGA) was established to conform with the water service area boundary set forth in the settlement agreement; and

WHEREAS, subsequent to approval of the settlement agreement the Potential Annexation Area (PAA) for the City of Auburn was amended to coincide with the water service area boundary; and

WHEREAS, Exhibit B to the settlement agreement stated that the UGA and water service area boundary was established to follow property lines; and

WHEREAS, since the time of the agreement it has been found that a parcel was divided by the water service area boundary set forth in said settlement agreement, and by the subsequent PAA boundary established based on the water service area boundary, and said parcel lies partially within and partially outside of the Auburn PAA; and

WHEREAS, part of the Lake Tapps Parkway East extension's right-of-way also lies partially within and partially outside of the Auburn water service area boundary established by the settlement agreement, and partially within and partially outside the subsequent PAA boundary established based on the water service area boundary; and

WHEREAS, sound growth management and planning principles are best served by including entire parcels within a PAA.

NOW THEREFORE in consideration of their mutual covenants, conditions and promises, the PARTIES DO HEREBY AGREE as follows:

ITEM ONE: ADDITION OF PROPERTY
The Settlement Agreement is revised to include a portion of Pierce County parcel # 052005-4046, a portion of the Lake Tapps Parkway as it extends from the west boundary of 182nd Ave East west to Auburn's existing Urban Growth Area, and a portion of the natural gas pipe line parcel as noted in the attached Exhibit C. Exhibit C, attached hereto and incorporated by reference as if fully set forth herein, shall provide both a graphical representation and a legal description for the parcels that are to be included in Auburn's UGA for urban services and incorporated into the area that Bonney Lake shall be the water purveyor for within Auburn's UGA as defined in the original settlement agreement between Auburn and Bonney Lake.

ITEM TWO: REMAINING TERMS UNCHANGED:
That all other provisions of the Settlement Agreement between the parties executed on the 5th day of March, 1998, shall remain unchanged, and in full force and effect.

IN WITNESS WHEREOF the parties hereto have executed this Agreement as of the day and year first above written.

CITY OF BONNEY LAKE

ROBERT YOUNG, Mayor

Attest:

Harwood Edvalson, City Clerk

Approved as to form:

James Dionne, City Attorney

CITY OF AUBURN

PETER B. LEWIS, Mayor

Attest:

Danielle E. Daskam. City Clerk

Approved as to form:

Daniel B. Heid, City Attorney

EXHIBIT C

ADDENDUM 1

AUBURN BONNEY LAKE SETTLEMENT AGREEMENT

LEGAL DESCRIPTION OF AREA

THAT PORTION OF SECTION 5, TOWNSHIP 20 NORTH, RANGE 5 EAST, W.M. IN PIERCE COUNTY WASHINGTON, DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEAST CORNER OF THE WEST HALF OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SAID SECTION 5;

THENCE WESTERLY ALONG THE SOUTH LINE OF THE NORTH HALF OF THE SOUTHEAST QUARTER OF SAID SECTION 5 A DISTANCE OF 1360 FEET, MORE OR LESS, TO THE NORTHWESTERLY LINE OF THE LANDS CONVEYED TO EL PASO NATURAL GAS COMPANY BY DEED RECORDED UNDER PIERCE COUNTY AUDITOR'S NUMBER 2410280;

THENCE NORTHEASTERLY ALONG SAID NORTHWESTERLY LINE A DISTANCE OF 1880 FEET, MORE OR LESS, TO THE NORTH LINE OF THE SOUTHEAST QUARTER OF SAID SECTION 5;

THENCE EASTERLY ALONG THE NORTH LINE OF SAID SOUTHEAST QUARTER A DISTANCE OF 700 FEET, MORE OR LESS, TO THE WEST LINE OF THE LANDS GRANTED TO PIERCE COUNTY FOR 182ND AVENUE EAST DESCRIBED IN DEED RECORDED UNDER PIERCE COUNTY AUDITOR'S NUMBER 2257762;

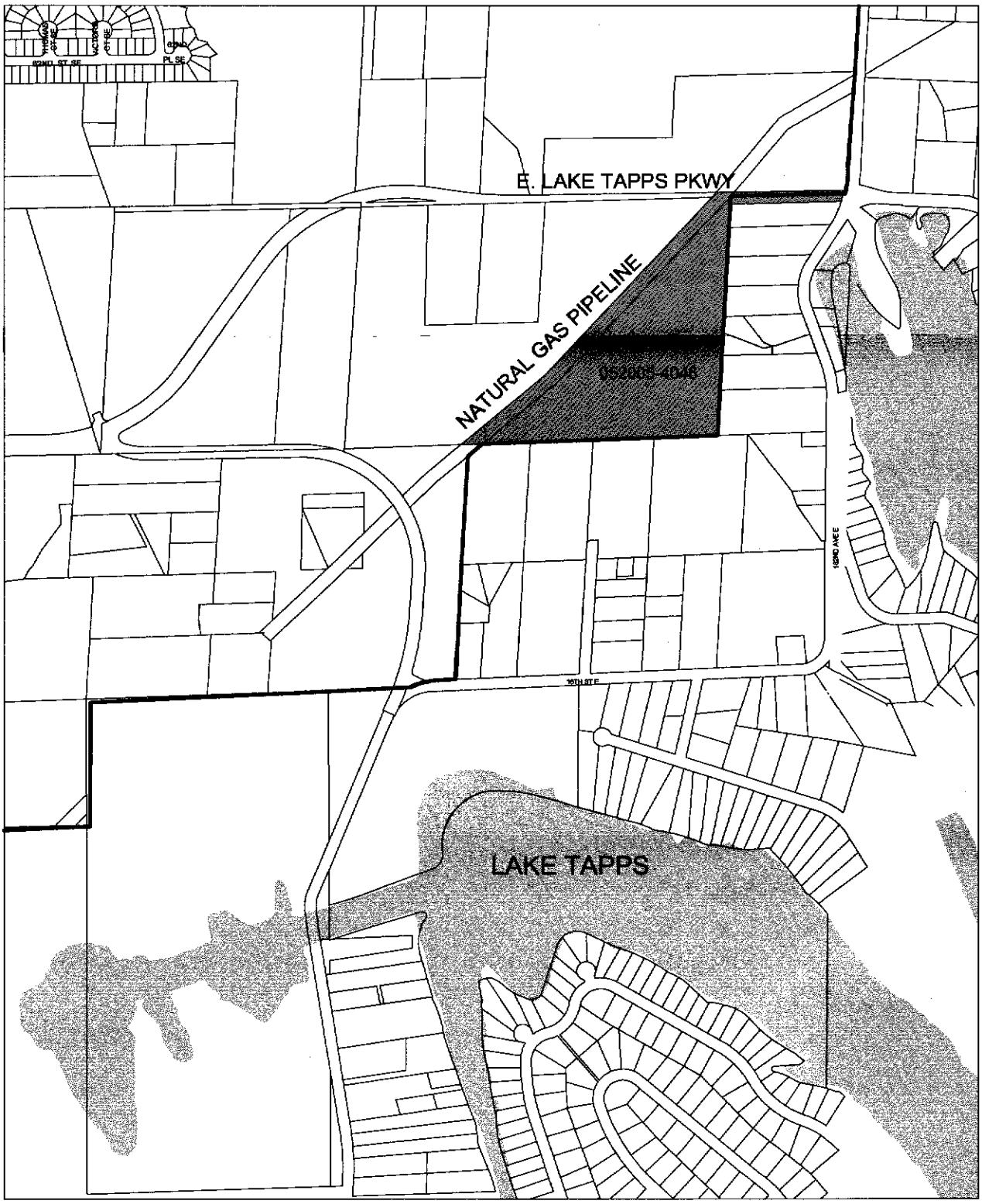
THENCE SOUTHERLY ALONG THE WEST LINE OF 182ND AVENUE EAST AS DESCRIBED IN SAID INSTRUMENT A DISTANCE OF 40 FEET, MORE OR LESS, TO THE SOUTH LINE OF THE LANDS CONVEYED TO PIERCE COUNTY IN DEED RECORDED UNDER AUDITORS FILE NUMBER 9902110924;

THENCE WESTERLY ALONG LAST SAID SOUTH LINE AND ALONG THE SOUTH LINE OF THE LANDS CONVEYED TO PIERCE COUNTY IN DEED RECORDED UNDER AUDITORS FILE NUMBER 200405180889 AND DEPICTED IN MAP ON FILE IN THE OFFICE OF THE DIRECTOR OF PIERCE COUNTY PUBLIC WORKS AND UTILITIES IN TACOMA, WASHINGTON, ENTITLED "LAKE TAPPS PARKWAY EAST – RIGHT OF WAY PLAN - CRP 5486" AND BEARING APPROVAL DATE OF NOVEMBER 17, 2003, A DISTANCE OF 600 FEET, MORE OR LESS, TO THE EAST LINE OF THE WEST HALF OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SAID SECTION 5;

THENCE SOUTHERLY ALONG THE EAST LINE OF SAID WEST HALF OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SAID SECTION 5 A DISTANCE OF 1220 FEET, MORE OR LESS, TO THE POINT OF BEGINNING.

H:\StaffFiles\WQ\Utility - Sewer\le\Bonney Lake\Addendum Settlement Legal Description.DOC

EXHIBIT C


E. LAKE TAPPS PKWY
NATURAL GAS PIPELINE
052007-4046
LAKE TAPPS

Return Address:
Auburn City Clerk
City of Auburn
25 West Main St.
Auburn, WA 98001

200602100022 55
PACIFIC NW TIT INTERLOCA 44.00
PAGE001 OF 013
02/10/2006 15:46
KING COUNTY, WA

RECORDER'S COVER SHEET

Document Title(s) (or transactions contained therein):

Interlocal Agreement (Resolution No. 3817) PNWT-W3326-12 (13)/44

Reference Number(s) of Documents assigned or released:
☐Additional reference #'s on page _____ of document

Grantor(s)/Borrower(s) (Last name first, then first name and initials)
Auburn, City of

Grantee/Assignee/Beneficiary: (Last name first)

1. Covington Water District
2. King County Water District No. 111

Legal Description (abbreviated: i.e. lot, block, plat or section, township, range)

PER RCW 39.34

☐ Additional legal is on page of document.

Assessor's Property Tax Parcel/Account Number
N/A

☐ Assessor Tax # not yet assigned

Said document(s) were filed for record by Pacific Northwest Title as accommodation only. It has not been examined as to proper execution or as to its affect upon title.

RESOLUTION NO. 3817

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR AND CITY CLERK TO EXECUTE AN INTERIM WATER SALES AGREEMENT BETWEEN THE CITY OF AUBURN AND COVINGTON WATER DISTRICT AND WATER DISTRICT NO. 111

WHEREAS, the City Council of the City of Auburn, Washington, adopted Resolution No. 3482 on June 17, 2002, authorizing the execution of an Interim Water Sales Agreement between Covington Water District (Covington), King County Water District No. 111 (WD 111) and the City of Auburn (Auburn) under the authority of their respective enabling legislation and under the authority of Chapter 39.34 RCW, the Interlocal Cooperation Act; and

WHEREAS, the parties desire to continue the intent of the Agreement to avoid unpredictable water sales and create a predictable and reliable cost for wholesale water to be sold by Auburn to Covington and WD 111; and

WHEREAS, it is in the public interest for the parties herein to continue the intent of the interim water sales agreement; and

WHEREAS, this Agreement supersedes and replaces the Interim Water Sales Agreement between Auburn, Covington and WD 111, which was approved by Resolution No. 3482 and executed on June 17, 2002.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, HEREBY RESOLVES as follows:

Section 1. The Mayor is hereby authorized to execute an Interim Water Sales Agreement between Auburn and Covington and WD 111 in substantial conformity with the agreement attached hereto, marked as Exhibit "A" and incorporated herein by this reference.

Section 2. That the Mayor is authorized to implement such other administrative procedures as may be necessary to carry out the directives of this legislation.

Section 3. That this Resolution shall take effect and be in full force upon passage and signatures hereon.

Dated and Signed this 22nd day of February, 2005.

CITY OF AUBURN

PETER B. LEWIS
MAYOR

ATTEST:

Danielle E. Daskam,
City Clerk

APPROVED AS TO FORM:

Daniel B. Heid,
City Attorney

Exhibit "A"

INTERIM WATER SALES AGREEMENT
between
COVINGTON WATER DISTRICT,
KING COUNTY WATER DISTRICT NO. 111
and the
CITY of AUBURN

This Agreement ("Agreement") is made and entered into this 22nd day of February 2005, by and between Covington Water District (Covington) a Municipal Corporation, King County Water District No. 111 (WD III), a Municipal Corporation (collectively referred to herein as "the Districts") and the City of Auburn (Auburn), a Municipal Corporation.

Recitals:

A. The parties to this Agreement are also parties to "Interlocal Agreement 2 for the Lea Hill Intertie Project between Covington Water District, King County Water District #111, and the City of Auburn" ("IA2").

B. The parties desire to avoid unpredictable water sales and create a predictable and reliable cost for wholesale water to be sold by Auburn to the Districts.

C. By guaranteeing a minimum purchase of water for a given period of time, i.e., a take or pay approach, the cost of water, which to a significant extent is based on peaking factors, can be minimized for all of Auburn's customers.

D. This Agreement is intended to establish a rate for a fixed block of water for the mutual benefit of the parties of this Agreement.

E. It is in the interest of the Districts to have a predictable supply of water available, and in Auburn's interest to have a predictable and consistent source of revenue from the sale of such water.

F. The parties are authorized to enter into this Agreement under the authority of their respective enabling legislation and under the authority of Chapter 39.34 RCW, the Interlocal Cooperation Act.

G. The 1.5 million gallons of water per day ("MGD") take or pay water provided for in this Agreement is a portion of and not in addition to the 5 MGD as addressed in IA2.

Now, therefore, in consideration of the mutual covenants and promises

contained herein, and for other good and valuable consideration, the adequacy of which is hereby acknowledged, the parties hereby agree as follows:

1) **TAKE OR PAY:** The Districts agree to purchase an average of 1.5 MGD of water from Auburn on a take or pay basis. Take or pay shall mean that the Districts shall pay for 1.5 MGD whether or not the water is actually taken by the Districts (the "take or pay" water also referred to in this Agreement as "the Block" of water; provided

the Block of water may be modified as set forth in Paragraph 5 "Annual Review and Adjustment" herein). If the Districts cannot accept 1.5 mgd due to an emergency, as defined in Paragraph 7, they will be billed for the water they receive at the Block rate.

2) **CHARGES FOR WATER:** The Districts shall pay the rate per one hundred cubic feet of water ("CCF") for the 1.5 MGD Block shown in Exhibit 1, attached hereto, which is by this reference incorporated, except as further addressed in Paragraph 3 herein. Any water taken in excess ("Excess Water") during the summer (June 1 through September 30) shall be billed at the summer overage rate shown in Exhibit 1. Any water taken during an emergency within the Covington and/or WD 111 systems, as defined in Paragraph 7, shall be billed at the 1.5 mgd Block rate. Auburn shall send one monthly bill to WD 111 for all water purchased by the Districts.

3) **QUANTITY AVAILABLE / DELIVERED:** The 1.5 MGD Block of water shall be defined as a block of water to be delivered at an average rate of 1.5 MGD measured over a rolling 3 day period with total quantities delivered within any single day being no more than 10% more or less than 1.5 MGD at the Auburn Intertie Pump Station meter (Master Meter). If the Districts are unable for any reason to accept the Block of water, the minimum monthly payment shall be 1.5 MGD multiplied by the rate then in effect pursuant to Paragraph 2 above. If Auburn is

unable to deliver the amount of water requested by the Districts, up to the Block of water, then Auburn will bill the Districts for the amount of water actually delivered at the block rate pursuant to Paragraph 2 above. For the take or pay water Block provided for herein, the Districts will be served on the same basis and with the same reliability as service is provided to Auburn's retail customers, and any curtailment, restrictions or limitations on delivery shall be on same basis as curtailment, restrictions or limitations on delivery to Auburn's retail customers.

4) **ANNUAL TRUE UP OF THE TAKE OR PAY QUANTITY DELIVERED:** The Master Meter is located at the Lea Hill Intertie Pump Station to measure the flow of water.

The Master Meter will be read in January of each year to adjust for differences between the Master Meter and the water calculated to have been sold under this "take or pay" agreement. Billing for differences between the Master Meter and the calculated quantities will be charged or credited at the "take or pay" rate to the District's accounts.

5) **ANNUAL REVIEW AND ADJUSTMENT:** The initial Block of 1.5 MGD shall remain in effect through December 31, 2010. Each year, the "take or pay" Block may be increased by mutual agreement. By September 1 of each year the Districts shall notify Auburn of their

intent to continue without change or request an increase in the Block quantity. Any requested change in the Block quantity would be effective January 1 of the year following the request. In the event that neither party communicates its intent under this provision, the Block shall be deemed to continue unchanged.

6) **TERM:** This Agreement shall remain in full force and effect from the first day of the month following the execution of this Agreement through December 31, 2010; provided that this Agreement shall automatically be renewed for an additional year at the conclusion of the term of this Agreement or any extension thereof unless any party provides the others with notice of an intent not to extend this Agreement, which notice shall be received by the other parties not less than one year prior to the expiration of the term of this Agreement or any extension thereof. The termination of this Agreement shall not affect any rights or obligations under IA2.

7) **EMERGENCIES:** For purposes of this Agreement, an emergency shall be defined as resulting from a water shortage, a major water line break, fire demand, contamination to the water supply system, mechanical equipment failure, electrical equipment failure or Puget Sound Energy facility failure, or any other mutually agreed upon emergency within the water supply system. An emergency period shall be for no more than five (5) working days without written request

by the Districts and approval by Auburn in writing to extend the emergency period. The City may change, reduce or limit the time for or temporarily discontinue any water supplied for an emergency in excess of the Block quantity without notice. Prior to a planned interruption or limiting of emergency service, the City will notify the Districts of such not less than three days prior to the service disruption. The City agrees to use best efforts and reasonable diligence to notify the Districts as soon after it becomes aware of the need for emergency service disruption and further will, to the extent practical, limit the service disruption to daylight hours.

8) **JOINT AND SEVERAL OBLIGATION:** The obligation of the Districts as set forth therein shall be a Joint and Several obligation of the Districts. Allocation of the take or pay Block of water and the payment for such water shall be negotiated between the Districts outside of this Agreement.

9) **PRIOR AGREEMENT SUPERSEDED:** This Agreement supersedes and replaces the Interim Water Sales Agreement between Auburn, Covington and WD 111 executed on June 17, 2002.

In witness whereof the participants hereto have caused this Agreement to be executed by their proper officers on the 22nd day of February, 2005.

CITY OF AUBURN

PETER B. LEWIS
MAYOR

ATTEST:

Danielle E. Daskam,
City Clerk

APPROVED AS TO FORM:

Daniel B. Heid,
City Attorney

[redacted]

COVINGTON WATER DISTRICT

JUDY NELSON
GENERAL MANAGER

ATTEST:

APPROVED AS TO FORM:

District Attorney

KING COUNTY WATER DISTRICT NO. 111

WILLIAM C. HALL
GENERAL MANAGER

ATTEST:

APPROVED AS TO FORM:

District Attorney

[redacted]

Interim Water Sales Agreement
Between
Covington Water District,
King County Water District No. 111
And the
City of Auburn

Exhibit 1

Take or Pay Monthly Rates				
Year	Base Charge*	1.5 MGD and Winter Overage Rate	Summer Overage	
2005	$175.00	$0.85	1.5 MGD rate + $0.25	
2006	$175.00	$0.85	1.5 MGD rate + $0.25	
2007	$175.00	$0.85	1.5 MGD rate + $0.25	
2008	$175.00	0.85 X CPI**	1.5 MGD rate + $0.25	
2009	$175.00	2008 Rate X CPI**	1.5 MGD rate + $0.25	
2010	$175.00	2009 Rate X CPI**	1.5 MGD rate + $0.25	

*Covington and WD 111 are each responsible for paying a Base Charge of $175.00 per month per district.
** CPI means the Consumer Price Index – Urban for the Seattle – Tacoma – Bremerton area for the month of October of the prior year, divided by the October value of the year prior to that (see example below).

Example:

CPI for 2008 equals the October 2007 CPI value divided by the October 2006 value.

[redacted]

RESOLUTION NO. 3886

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR AND CITY CLERK TO EXECUTE A LEASE AGREEMENT BETWEEN THE CITY AND NEW CINGULAR WIRELESS PCS, LLC, FOR THE PURPOSE OF LEASING PROPERTY FOR COMMUNICATION EQUIPMENT

THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, IN A REGULAR MEETING DULY ASSEMBLED, HEREBY RESOLVES as follows:

Section 1. The Mayor and City Clerk of the City of Auburn are herewith authorized to execute a Lease Agreement between the City and New Cingular Wireless PCS, LLC, in substantial conformity with the agreement attached hereto, for the purpose of leasing property at 5702 South 316th Street, Auburn, for communication equipment. A copy of said Agreement is attached hereto and denominated Exhibit "A" and incorporated herein by this reference.

Section 2. That the Mayor is authorized to implement such other administrative procedures as may be necessary to carry out the directives of this legislation.

Section 3. That this Resolution shall take effect and be in full force upon passage and signatures hereon.

Dated and Signed this 19th day of Sept, 2005.

CITY OF AUBURN

PETER B. LEWIS
MAYOR

ATTEST:

Danielle E. Daskam,
City Clerk

APPROVED AS TO FORM:

Daniel B. Heid,
City Attorney

SITE LEASE AGREEMENT

THIS SITE LEASE AGREEMENT ("Lease") is by and between the City of Auburn, a municipal corporation under the existing laws of the State of Washington, having a mailing address of 25 West Main, Auburn, WA 98001 ("Landlord") and New Cingular Wireless PCS, LLC, a Delaware limited liability company, successor in interest to AT&T Wireless Services of Washington, LLC, an Oregon limited liability company, dba AT&T Wireless, by AT&T Wireless Services, Inc., a Delaware corporation, its Member, having a mailing address of 6100 Atlantic Boulevard, Norcross, GA 30071 ("Tenant").

1. Lease Agreement.

(a) Landlord hereby leases to Tenant a portion of the real property legally described as follows:

> **"THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 11, TOWNSHIP 21 NORTH, RANGE 4 EAST W.M., EXCEPT THE WEST 663 FEET OF THE NORTH 663 FEET OF THE SOUTH 693 FEET THEREOF, AND EXCEPT THE SOUTH 30 FEET THEREOF CONVEYED TO THE CITY OF AUBURN FOR SOUTH 316TH STREET, BY INSTRUMENT RECORDED UNDER RECORDING NO. 8503210865 AS PROVIDED BY RESOLUTION NO. 1565 OF THE CITY OF AUBURN; SITUATE IN THE CITY OF AUBURN, COUNTY OF KING, STATE OF WASHINGTON",**

(collectively referred to hereinafter as the "Property").

The Lease includes the right to operate a personal communications service antenna installation on Landlord's property, on the terms and conditions set forth herein.

(b) Tenant agrees to the Lease, subject to the following terms and conditions. Landlord hereby leases to Tenant the use of that portion of the Property as legally described as follows:

> **"COMMENCING AT THE SOUTHEAST CORNER OF THE WEST 663.0 FEET OF THE NORTH 663.0 FEET OF THE SOUTH 693.0 FEET OF THE NORTHEAST ONE QUARTER OF THE SOUTHWEST ONE QUARTER OF SECTION 11, TOWNSHIP 21 NORTH, RANGE 4 E., W.M.; THENCE NORTH 0° 25' 35" EAST ALONG THE EAST LINE OF SAID PARCEL 249.00 FEET; THENCE SOUTH 89 ° 34' 25" EAST 40.00 FEET TO THE TRUE POINT OF BEGINNING; THENCE CONTINUING SOUTH 89 ° 34' 25" EAST 80.00 FEET; THENCE SOUTH 0 ° 25' 35" WEST 75.00 FEET; THENCE NORTH 89 ° 34' 25" WEST 80.00 FEET; THENCE NORTH 0 ° 25' 35" EAST 75.00 FEET TO THE TRUE POINT OF BEGINNING; SITUATED IN THE CITY OF AUBURN, RECORDS OF KING COUNTY, WASHINGTON"**

(collectively referred to hereinafter as the "Lease Area").

The Lease Area, located at 5702 South 316th Street, Auburn, Washington, comprises approximately an area not to exceed 6,000 square feet.

(c) The Lease shall be nonexclusive and shall not preclude Landlord from granting a similar lease, right, license, franchise, etc., to other carriers or other persons for telecommunications or any other purpose, so long as the subsequent agreement protects Tenant's rights granted by this Lease.

(d) Landlord further hereby leases to Tenant the use of that portion of the Property as legally described as follows:

"BEGINNING AT THE SOUTHEAST CORNER OF THE WEST 663.0 FEET OF THE NORTH 663.0 FEET OF THE SOUTH 693.0 FEET OF THE NORTHEAST ONE QUARTER OF THE SOUTHWEST ONE QUARTER OF SECTION 11, TOWNSHIP 21 NORTH RANGE 4 E., W.M.; THENCE NORTH 0 ° 25' 35" EAST 249.00 FEET; THENCE SOUTH 89 ° 34' 25" EAST 40.00 FEET; THENCE SOUTH 0 ° 25' 35" WEST 75.00 FEET THENCE SOUTH 89 ° 34' 25" EAST 80.00 FEET; THENCE SOUTH 0 ° 25' 35" WEST 47.00 FEET; THENCE NORTH 89 ° 34' 25" WEST 90.00 FEET; THENCE SOUTH 0 ° 25' 35" WEST 40.00 FEET; THENCE SOUTH 48 ° 00' 00" EAST 80.00 FEET; THENCE SOUTH 23 ° 30' 00" EAST 33.60 FEET MORE OR LESS TO THE NORTH MARGIN OF SOUTH 316TH STREET; THENCE SOUTH 88 ° 39' 09" WEST ALONG SAID NORTH MARGIN 103.52 TO THE POINT OF BEGINNING; SITUATED IN THE CITY OF AUBURN, RECORDS OF KING COUNTY, WASHINGTON"

(collectively referred to hereinafter as the "Access and Utility Easement").

The Access and Utility Easement comprises approximately an area not to exceed 16,155 square feet.

2. Term. The initial term of this Lease shall be five (5) years commencing on September 1, 2005 ("Commencement Date"), and terminating at midnight on the last day of the initial term ("Initial Term").

3. Antenna Facilities. Tenant may use the Lease Area for the transmission and reception of radio communication signals and for the construction, installation, operation, maintenance, repair, removal or replacement of related facilities necessary for the operation of a telecommunications facility as well as for access and utilities. These facilities include an antenna tower (not to exceed 150 feet in height) and base, together with a supporting outbuilding for housing of electronic equipment related to the antennas and wireless communications system and an emergency generator (collectively, the "Antenna Facilities"), the maintenance of which shall not violate ACC 8.28.010 regarding noise.

4. Rent. Tenant shall pay Landlord, as rent, Twelve Thousand and no/100 dollars ($12,000.00) per year ("Rent"). Rent shall be payable within twenty (20) days following the Commencement Date and thereafter the Rent will be payable yearly, no later than the anniversary of the Commencement Date to City of Auburn Water Utility Fund, Account Number 430.369.900, at Landlord's address specified in Section 12 below. The Rent shall increase annually over the Rent payable the preceding year in proportion to the increase of the "All Items" category of the Consumer Price Index for Urban Wage Earners and Clerical Workers published by the Bureau of Labor Statistics of the U.S. Department of Labor for Seattle-Everett Metropolitan Area (the "Index"). The first adjustment shall be based on the amount, if any, by which the Index for the 12th month of the Lease term has increased over the Index for the month preceding the commencement of the lease term. Subsequent adjustments will be based on the amount, if any, by which the Index for each subsequent 12th month of the Lease term has increased over the Index for the 12th month of the preceding 12-month period. It shall be the responsibility of the Landlord to track the CPI and notify the Tenant of increases or reductions in the Rent. Landlord shall notify Tenant within 90 days of the commencement of the Renewal Term as to the revised

rate at which the Rent shall be increased annually thereafter. Landlord will invoice Tenant for back Rent due or refund over payment as necessary to correct the payment received for the first year of the Renewal Term. If at any time the CPI ceases to incorporate a significant number of items, if a substantial change is made in the method of establishing the CPI, or if issuance of the CPI shall be discontinued, then the Landlord and Tenant shall mutually agree upon another standard recognized cost of living index issued by the United States Government, provided that if the parties cannot reach agreement on such other standard cost of living index, then the Landlord shall select the index closest to the CPI. In either case, the substitute index chosen shall result in increases in the Rent similar to those that had been, or would have been, generated by the CPI. If this Lease is terminated at a time other than on the anniversary of the Commencement Date, Rent shall be prorated as of the date of termination for any reason (other than a default by Tenant) and all prepaid Rent shall be refunded to Tenant within sixty (60) days.

5. Renewal. Tenant may extend this Lease for (5) additional, five-year terms (each a "Renewal Term"). Each Renewal Term shall be on the same terms and conditions as set forth herein, including the Rent increase set forth in Section 4, above. This Lease shall automatically renew for each successive Renewal Term unless Tenant notifies Landlord, in writing, of Tenant's intention not to renew this Lease, at least ninety (90) days prior to the expiration of the Initial Term or any Renewal Term. Landlord may, during any Renewal Term, notify Tenant, in writing, of Landlord's intention not to renew this Lease for an additional Renewal Term, which notice shall be provided to Tenant at least one hundred and eighty (180) days prior to the expiration of the then in effect Renewal Term. Landlord may, during the final one hundred and eighty (180) days of the Initial Term or any Renewal Term, conduct a market survey to determine the fair market value of the Lease. The Rent for the next Renewal Term will be established by the results of the market survey with each subsequent years Rent governed by the terms of Section 4, however, under no circumstance will the Rent decrease as a result of the market survey below the amount of the most recently established rate in existence prior to the market survey. If Landlord and Tenant cannot reach agreement on the Rent for the next Renewal Term **prior to the end of the initial or any renewal term** the Lease will not renew. If Tenant shall remain in possession of the Lease Area at the expiration of this Lease or any Renewal Term without a written agreement, such tenancy shall be deemed a month-to-month tenancy under the same terms and conditions of this Lease.

6. Interference. Tenant and Landlord shall not operate in a manner which interferes with the other party's operations on the Property. Tenant's Antenna Facilities and the use thereof shall not interfere with the use of any other communication or similar equipment of any kind and nature owned or operated by Landlord or other lessee, licensees, franchisees, etc., existing and operating on the Property prior in time to the commencement of this Lease, and subsequent to the installation by Tenant of the Antenna Facilities, Landlord agrees to exercise reasonable care to assure equipment of subsequent providers leasing space on the Property does not interfere with Tenant's Antenna Facilities operations. The Landlord, however, is not in any way responsible or liable for any interference with Tenant's use of Landlords Property, which may be caused by the use and operation of any other tenant's equipment, even if caused by new technology, so long as such equipment continues to operate within its existing frequencies and in compliance with all applicable laws and FCC rules and regulations. In the event there is interference between Tenant and any third party, such interference will be resolved by and between the parties affected; however, if such interference cannot be resolved to Tenant's satisfaction within forty-eight (48) hours from commencement of such interference, then the parties acknowledge that Tenant will suffer irreparable injury, and therefore, Tenant will have the right, in addition to any other rights that it may have at law or in equity, to terminate this Lease upon 30 days notice to Landlord and restore the Landlord's Property to its original condition, reasonable wear and tear and loss due to casualty or other causes beyond Tenant's control excepted.

7. Improvements; Utilities; Access.

(a) Tenant shall have the right, at its expense, to erect and maintain on the Lease Area, improvements, personal property and facilities necessary to operate its communications system, including, antenna tower and base, radio transmitting and receiving antennas, and related cables and conduits, equipment shelters and/or cabinets and related cables and utility lines and a location based system, including coaxial cable, base units and other associated equipment as such location based system may be permitted by any county, state or federal agency/department. Tenant shall have the right to alter, replace, and expand within the confines of the Lease Area as defined in Section 1 and without interference to other providers / tenants, enhance and upgrade the Antenna Facilities at any time during the term of this Lease. Tenant shall cause all construction to occur lien-free and in compliance with all applicable laws and ordinances. Landlord acknowledges that it shall not interfere with any aspects of construction, including, attempting to direct construction personnel as to the location of or method of installation of the Antenna Facilities. The Antenna Facilities shall remain the exclusive property of Tenant. Tenant shall have the right to remove the Antenna Facilities at any time during and upon the expiration or termination of this Lease.

(b) Tenant shall, at its sole expense, secure the Lease Area with a perimeter security fence including a gate at the entrance.

(c) Tenant shall, at Tenant's expense, keep and maintain the Lease Area and Antenna Facilities now or hereafter located on the Property in commercially reasonable condition and repair during the term of this Lease, normal wear and tear and loss due to casualty or other causes beyond Tenant's control excepted. Upon termination or expiration of this Lease, the Lease Area and Antenna Facilities areas shall be returned to Landlord in good, usable condition, normal wear and tear and loss due to casualty or other causes beyond Tenant's control excepted, within ninety (90) days.

(d) Tenant shall have the right to install utilities, power and telephone, at Tenant's expense, and to improve the present utilities on the Property (including, but not limited to, the installation of emergency power generators). Landlord agrees to cooperate with Tenant in its reasonable efforts to acquire necessary utility service. Tenant shall, wherever practicable, install separate meters for utilities used on the Property by Tenant. Landlord shall diligently correct any variation, interruption or failure of utility service within Landlord's control.

(e) Tenant shall have 24-hours-a-day, 7-days-a-week access to the Lease Area ("Access") at all times during the Initial Term of this Lease and any Renewal Term. In the event Landlord, its employees or agents unreasonably deny Access to Tenant, its employees or agents, Tenant shall, without waiving any other rights that it may have at law or in equity, deduct from Rent amounts due under this Lease an amount equal to Fifty and no/100 Dollars ($50.00) per day for each day that Access is impeded or denied.

8. Termination. Except as otherwise provided herein, this Lease may be terminated, without any penalty or further liability as follows:

(a) upon thirty (30) days' written notice by Landlord if Tenant fails to cure a default for payment of amounts due under this Lease within that thirty (30) day period;

(b) immediately if Tenant is unable to obtain, maintain, or otherwise forfeits or cancels any license (including, without limitation, an FCC license), permit or any Governmental Approval necessary to the installation and/or operation of the Antenna Facilities or Tenant's business;

(c) upon ninety (90) days' written notice by Tenant if the Lease Area or the Antenna Facilities are, or become unacceptable under Tenant's design or engineering specifications for its Antenna Facilities or the communications system to which the Antenna Facilities belong;

(e) at the time title to the Property transfers to a condemning authority, pursuant to a taking of all or a portion of the Property sufficient in Tenant's determination to render the Lease Area unsuitable for Tenant's use. Landlord and Tenant shall each be entitled to pursue their own separate awards with respect to such taking.

(f) Landlord may terminate this Lease if Landlord needs the Lease Area for expansion of Landlord's responsibility to provide its services, and Landlord has no reasonable or economical alternative site available, provided Landlord provides Tenant written notice twelve (12) months in advance of Landlord's need to re-establish Landlord's sole use of the Lease Area. Upon Tenant's receipt of written notice, Tenant shall have six (6) months to submit to Landlord alternative locations for its Antenna Facilities. Such alternative locations may be on the Property or other properties owned or managed by Landlord. Landlord shall evaluate such alternatives and advise Tenant in writing if one or more of the alternatives is suitable to accommodate Tenant's Antenna Facilities. To be a suitable alternative location, such location will not unreasonably result in any interruption of the communications service of Tenant on Landlord's Property; nor will it impair, or in any manner alter, the quality of communications service provided by Tenant on and from Landlord's owned or managed properties. Tenant shall submit additional relevant information to assist the Landlord in making such evaluation. Landlord shall give each alternative location proposed by Tenant full and fair consideration, within a reasonable time so as to allow for the relocation work to be performed in a timely manner. If, in Tenant's reasonable judgment, no suitable alternative location can be found, Tenant shall remove its Antenna Facilities as otherwise provided in this Section 7 (c) of this Lease. If an alternative location for Tenant's Antenna Facilities is found, Landlord and Tenant agree to enter into a new Lease Agreement with the same terms and conditions of this Lease.

(g) If, during the term of this Lease there is a determination made pursuant to an official unappealable order of the Federal Communications Commission or any other applicable law, order, ordinance, regulation, directive, or standard as stated above that use of the Antenna Facilities by the Tenant poses a human health hazard which cannot be remediated, then (a) Tenant shall immediately cease all operations of the Antenna Facilities, and (b) the Lease shall terminate as of the date of such order without further liability. If for reasons related to public health, safety or welfare, Landlord determines that this Lease must be terminated, then Landlord reserves rights of unilateral termination and will do so by providing Tenant with a six (6) month written notice.

(h) Tenant shall be entitled to a pro rata refund of its prepaid Rent for any termination of this Lease by Landlord pursuant to Subsection 8(f) or 8(g).

9. Default and Right to Cure. Notwithstanding anything contained herein to the contrary and without waiving any other rights granted to it at law or in equity, each party shall have the right, but not the obligation, to terminate this Lease on written notice pursuant to Section 12 hereof, to take effect immediately, if the other party (i) fails to perform any covenant for a period of thirty (30) days after receipt of written notice thereof to cure or (ii) commits a material breach of this Lease and fails to diligently pursue such cure to its completion after sixty (60) days' written notice to the defaulting party.

10. Taxes. Landlord shall pay when due all real property taxes or other fees and assessments for the Property, including the Lease Area. In the event that Landlord fails to pay any such real property taxes or other fees and assessments, Tenant shall have the right, but not the obligation, to pay such owed amounts and deduct them from Rent amounts due under this Lease. Notwithstanding the foregoing, Tenant shall pay any personal property tax, State leasehold tax, excise tax, real property tax or any other tax or fee which are directly attributable to the presence or installation of Tenant's Antenna Facilities, only for so long as this Lease has not expired of its own terms or is not terminated by either party. Landlord hereby grants to Tenant the right to challenge, whether in a Court, Administrative Proceeding, or other venue, on behalf of Landlord and/or Tenant, any personal property or real property tax assessments, State leasehold

(d) immediately upon written notice by Tenant if the Lease Area or the Antenna Facilities are destroyed or damaged so as in Tenant's reasonable judgment to substantially and adversely affect the effective use of the Antenna Facilities. In such event, all rights and obligations of the parties shall cease as of the date of the damage or destruction, and Tenant shall be entitled to the reimbursement on a prorated basis of any Rent prepaid by Tenant. If Tenant elects to continue this Lease, then all Rent shall abate until the Lease Area and/or the Antenna Facilities are restored to the condition existing immediately prior to such damage or destruction; or

(e) at the time title to the Property transfers to a condemning authority, pursuant to a taking of all or a portion of the Property sufficient in Tenant's determination to render the Lease Area unsuitable for Tenant's use. Landlord and Tenant shall each be entitled to pursue their own separate awards with respect to such taking.

(f) Landlord may terminate this Lease if Landlord needs the Lease Area for expansion of Landlord's responsibility to provide its services, and Landlord has no reasonable or economical alternative site available, provided Landlord provides Tenant written notice twelve (12) months in advance of Landlord's need to re-establish Landlord's sole use of the Lease Area. Upon Tenant's receipt of written notice, Tenant shall have six (6) months to submit to Landlord alternative locations for its Antenna Facilities. Such alternative locations may be on the Property or other properties owned or managed by Landlord. Landlord shall evaluate such alternatives and advise Tenant in writing if one or more of the alternatives is suitable to accommodate Tenant's Antenna Facilities. To be a suitable alternative location, such location will not unreasonably result in any interruption of the communications service of Tenant on Landlord's Property; nor will it impair, or in any manner alter, the quality of communications service provided by Tenant on and from Landlord's owned or managed properties. Tenant shall submit additional relevant information to assist the Landlord in making such evaluation. Landlord shall give each alternative location proposed by Tenant full and fair consideration, within a reasonable time so as to allow for the relocation work to be performed in a timely manner. If, in Tenant's reasonable judgment, no suitable alternative location can be found, Tenant shall remove its Antenna Facilities as otherwise provided in this Section 7 (c) of this Lease. If an alternative location for Tenant's Antenna Facilities is found, Landlord and Tenant agree to enter into a new Lease Agreement with the same terms and conditions of this Lease.

(g) If, during the term of this Lease there is a determination made pursuant to an official unappealable order of the Federal Communications Commission or any other applicable law, order, ordinance, regulation, directive, or standard as stated above that use of the Antenna Facilities by the Tenant poses a human health hazard which cannot be remediated, then (a) Tenant shall immediately cease all operations of the Antenna Facilities, and (b) the Lease shall terminate as of the date of such order without further liability. If for reasons related to public health, safety or welfare, Landlord determines that this Lease must be terminated, then Landlord reserves rights of unilateral termination and will do so by providing Tenant with a six (6) month written notice.

(h) Tenant shall be entitled to a pro rata refund of its prepaid Rent for any termination of this Lease by Landlord pursuant to Subsection 8(f) or 8(g).

9. Default and Right to Cure. Notwithstanding anything contained herein to the contrary and without waiving any other rights granted to it at law or in equity, each party shall have the right, but not the obligation, to terminate this Lease on written notice pursuant to Section 12 hereof, to take effect immediately, if the other party (i) fails to perform any covenant for a period of thirty (30) days after receipt of written notice thereof to cure or (ii) commits a material breach of this Lease and fails to diligently pursue such cure to its completion after sixty (60) days' written notice to the defaulting party.

10. Taxes. Landlord shall pay when due all real property taxes or other fees and assessments for the Property, including the Lease Area. In the event that Landlord fails to pay

any such real property taxes or other fees and assessments, Tenant shall have the right, but not the obligation, to pay such owed amounts and deduct them from Rent amounts due under this Lease. Notwithstanding the foregoing, Tenant shall pay any personal property tax, State leasehold tax, excise tax, real property tax or any other tax or fee which are directly attributable to the presence or installation of Tenant's Antenna Facilities, only for so long as this Lease has not expired of its own terms or is not terminated by either party. Landlord hereby grants to Tenant the right to challenge, whether in a Court, Administrative Proceeding, or other venue, on behalf of Landlord and/or Tenant, any personal property or real property tax assessments, State leasehold tax or excise tax that may affect Tenant. If Landlord receives notice of any personal property or real property tax assessment, State leasehold tax or excise tax against the Landlord, which may affect Tenant and is directly attributable to Tenant's installation, Landlord shall provide timely notice of the assessment to Tenant sufficient to allow Tenant to consent to or challenge such assessment. Further, Landlord shall provide to Tenant any and all documentation associated with the assessment and shall execute any and all documents reasonably necessary to effectuate the intent of this Section 10.

11. Insurance and Subrogation and Indemnification.

(a) Tenant shall provide Commercial General Liability Insurance naming Landlord (the City of Auburn) as additional insured in an aggregate amount of Two Million and no/100 dollars ($2,000,000.00). Tenant may satisfy this requirement by obtaining the appropriate endorsement to any master policy of liability insurance Tenant may maintain.

(b) Tenant shall indemnify, protect, defend and hold Landlord and its employees and agents harmless from and against any and all claims, liabilities, judgments, costs, damages, and expenses, including reasonable attorney's fees, arising out of or in any way related to Tenant's operation of the Antenna Facilities, including, but not limited to, the installation, maintenance, operation or removal thereof, except to the extent that such claim, liability, judgment, cost, damage or expense arises out of the negligent act or omission, or willful misconduct of Landlord or its employees or agents. Landlord shall not be liable to Tenant, its agents, employees and contractors for damage to the Antenna Facilities or any other property belonging to Tenant from any cause, except for any damage caused by the negligent act or omission or willful misconduct of Landlord or its employees or agents. Tenant waives all claims against Landlord and its employees and agents for damage to persons or Antenna Facilities or property arising for any reason other than a claim based on the negligent act or omission or willful misconduct of Landlord or its employees or agents. Landlord and its employees and agents shall have no liability to Tenant for any interruption of any utility service unless caused by the negligent act or omission or willful misconduct of Landlord or its employees or agents.

Should a court of competent jurisdiction determine that this Lease is subject to RCW 4.24.115, then, in the event of liability for damages arising out of bodily injury to persons or damages to property caused by or resulting from the concurrent negligence of the Tenant and the Landlord, its officers, officials, employees and volunteers, the Landlord's liability hereunder shall be only to the extent of the Landlord's negligence. It is further specifically and expressly understood that the indemnification provided herein constitutes the Tenant's waiver of immunity under Industrial Insurance, Title 51 RCW, solely for the purposes of this indemnification. This waiver has been mutually negotiated by the parties. The provisions of this section shall survive the expiration or termination of this Lease.

12. Notices. All notices, requests, demands and other communications shall be in writing and are effective three (3) days after deposit in the U.S. mail, certified and postage paid, or upon receipt if personally delivered or sent by next-business-day delivery via a nationally recognized overnight courier to the addresses set forth below. Landlord or Tenant may from time to time designate any other address for this purpose by providing written notice to the other party.

If to Tenant, to:

c/o Cingular Wireless LLC
Attn: Network Real Estate Administration
6100 Atlantic Boulevard
Norcross, GA 30071
Re: Site – SS02_Auburn

With a copy to:

Cingular Wireless PCS, LLC
Attn: Legal Department
15 East Midland Avenue
Paramus, NJ 07652
Re: Site – SS02_Auburn

If to Landlord, to:

Public Works Director
City of Auburn
25 West Main St.
Auburn, WA 98001

With a copy to:

City Attorney
City of Auburn
25 West Main St.
Auburn, WA 98001

13. Quiet Enjoyment, Title and Authority. Landlord covenants and warrants to Tenant that (i) Landlord has full right, power and authority to execute this Lease; (ii) it has good and unencumbered title to the Property free and clear of any liens or mortgages, except those disclosed to Tenant and which will not interfere with Tenant's rights to or use of the Lease Area; and (iii) execution and performance of this Lease will not violate any laws, ordinances, covenants, or the provisions of any mortgage, lease, or other agreement binding on Landlord.

14. Environmental Laws. Landlord represents that it has no knowledge of any substance, chemical or waste (collectively, "Hazardous Substance") on the Property that is identified as hazardous, toxic or dangerous in any applicable federal, state or local law or regulation. Landlord and Tenant shall not introduce or use any Hazardous Substance on the Property in violation of any applicable law. Landlord shall be responsible for, and shall promptly conduct any investigation and remediation as required by any applicable environmental laws, for all spills or other releases of any Hazardous Substance not caused in whole or in part by Tenant, that have occurred or which may occur on the Property. Each party agrees to defend, indemnify and hold harmless the other from and against any and all administrative and judicial actions and rulings, claims, causes of action, demands and liability (collectively, "Claims") including, but not limited to, damages, costs, expenses, assessments, penalties, fines, losses, judgments and reasonable attorney fees that the indemnitee may suffer or incur due to the existence or discovery of any Hazardous Substances on the Property or the migration of any Hazardous Substance to other properties or the release of any Hazardous Substance into the environment (collectively, "Actions"), that relate to or arise from the indemnitor's activities on the Property. Landlord agrees to defend, indemnify and hold Tenant harmless from Claims resulting from Actions on the Property not caused by Landlord or Tenant prior to and during the Initial Term and any Renewal Term of this Lease. The indemnifications in this section specifically include, without limitation, costs incurred in connection with any investigation of site conditions or any cleanup, remedial, removal or restoration work required by any governmental authority. This Section 14 shall survive the termination or expiration of this Lease.

15. Assignment and Subleasing. All of the terms and provisions contained herein shall inure to the benefit of and shall be binding upon the parties hereto and their respective heirs, legal representatives, successors and assigns. This Lease shall not be assigned by Tenant without the express written consent of Landlord, which consent shall not be unreasonably withheld, delayed or conditioned. Any attempted assignment in violation of this Section shall be void. The transfer of the rights and obligations of Tenant to a parent, subsidiary, or other affiliate of Tenant, or to any successor-in-interest or entity acquiring fifty-one percent (51%) or more of Tenant's stock or assets, shall not be deemed an assignment. Tenant shall give to Landlord thirty (30) days' prior written notice of any such transfer.

Additionally, Tenant may, upon notice to Landlord, mortgage or grant a security interest in this Lease and the Antenna Facilities, and may assign this Lease and the Antenna Facilities to any mortgagees or holders of security interests, including their successors or assigns (collectively "Mortgagees"), provided such Mortgagees agree to be bound by the terms and provisions of this Lease. In such event, Landlord shall execute such consent to leasehold financing as may reasonably be required by Mortgagees. Landlord agrees to notify Tenant and Tenant's Mortgagees simultaneously of any default by Tenant and to give Mortgagees the same right to cure any default as Tenant or to remove any property of Tenant or Mortgagees located on the Lease Area, except that the cure period for any Mortgagees shall not be less than thirty (30) days after receipt of the default notice, as provided in Section 9 of this Lease. All such notices to Mortgagees shall be sent to Mortgagees at the address specified by Tenant. Failure by Landlord to give Mortgagees such notice shall not diminish Landlord's rights against Tenant, but shall preserve all rights of Mortgagees to cure any default and to remove any property of Tenant or Mortgagees located on the Lease Area.

The Lease Area shall be used exclusively as a site for a wireless telecommunications facility. The Tenant may allow use of all or a portion of the Lease Area or their Antenna Facilities by others, with prior written approval of the Landlord.

16. Removal of Antenna Facilities. The Antenna Facilities are and shall remain the property of the Tenant and upon the expiration or earlier termination of this Lease, Tenant shall, at Tenant's sole cost and expense, remove the Antenna Facilities and restore the Lease Area to its original condition, normal wear and tear and loss due to casualty or other causes beyond Tenant's control excluded.

17. Miscellaneous.

(a) The substantially prevailing party in any litigation, including any arbitration to which the parties shall submit, arising hereunder shall be entitled to its reasonable attorneys' fees and court costs, including appeals, if any.

(b) This Lease constitutes the entire agreement and understanding of the parties, and supersedes all offers, negotiations and other agreements. There are no representations or understandings of any kind not set forth herein. Any amendments to this Lease must be in writing and executed by both parties. At such time as the Auburn City Council approves any regulation affecting telecommunications, Tenant agrees to amend this Lease, as determined by the Landlord in order to comply with any future ordinance related to telecommunications provided, however, that in no event shall such regulation (i) materially interfere with or affect Tenant's operation of its Antenna Facilities; or (ii) increase Tenant's financial obligations under the terms of this Lease, except as provided herein, or impose some new financial obligations not already contemplated by this Lease. No amendment, change or modification of this Lease shall be valid, unless in writing and signed by all parties hereto.

(c) Each party agrees to cooperate with the other in executing any documents (including a Memorandum of Lease in substantially the form attached hereto as Exhibit A) necessary to protect its rights or use of the Lease Area. The Memorandum of Lease may be recorded in place of this Lease by either party. In the event the Property is encumbered by a mortgage or deed of trust, Landlord agrees, upon request of Tenant, to obtain and furnish to Tenant a non-disturbance and attornment agreement for each such mortgage or deed of trust, in a form reasonably acceptable to Tenant. Tenant may obtain title insurance on its interest in the Lease Area.

(d) This Lease shall be construed in accordance with the laws of the state in which the Property is located.

(e) If any term of this Lease is found to be void or invalid, such finding shall not affect the remaining terms of this Lease, which shall continue in full force and effect. The parties agree that if any provisions are deemed not enforceable, they shall be deemed modified to the extent necessary to make them enforceable. No provision of this Lease will be deemed waived by either party unless expressly waived in writing signed by the waiving party. No waiver shall be implied by delay or any other act or omission of either party. No waiver by either party of any provision of this Lease shall be deemed a waiver of such provision with respect to any subsequent matter relating to such provision.

(f) The persons who have executed this Lease represent and warrant that they are duly authorized to execute this Lease in their individual or representative capacity as indicated.

(g) This Lease may be executed in any number of counterpart copies, each of which shall be deemed an original, but all of which together shall constitute a single instrument.

(h) All Exhibits referred to herein and any Addenda are incorporated herein for all purposes. The parties understand and acknowledge that Exhibit A (Memorandum of Lease) is attached to this Site Lease Agreement. The terms of all Exhibits are incorporated herein for all purposes.

(i) If Landlord is represented by any broker or any other leasing agent, Landlord is responsible for all commission fees or other payment to such agent, and agrees to indemnify and hold Tenant harmless from all claims by such broker or anyone claiming through such broker. If Tenant is represented by any broker or any other leasing agent, Tenant is responsible for all commission fee or other payment to such agent, and agrees to indemnify and hold Landlord harmless from all claims by such broker or anyone claiming through such broker.

18. Headings. The caption and paragraph headings used in this Lease are inserted for convenience of reference only and are not intended to define, limit or affect the interpretation or construction of any term or provision hereof.

19. Liens. Except with respect to activities for which Landlord is responsible, Tenant shall pay as due all claims for work done on, and for services rendered or material furnished to, the Antenna Facility, and shall keep the Antenna Facility free from all liens.

LANDLORD: City of Auburn

By: _____
Peter B. Lewis

Its: Mayor

Date: SEP 19 2005

Taxpayer ID Number: 91-6001228

TENANT:

New Cingular Wireless PCS, LLC
a Delaware limited liability company

By: _____
Print Name: E. DON MACLEOD
Its: EXECUTIVE DIRECTOR
Date: 8-18-05

(acknowledgements to follow on next page)

STATE OF WA)
) ss.
COUNTY OF KING)

I certify that I know or have satisfactory evidence that Peter B Lewis is the person who appeared before me, and said person acknowledged that he signed this instrument, on oath stated that he was authorized to execute the instrument and acknowledged it as the MAYOR, of City of Auburn, to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

Dated: Sept. 19, 2005

Daniel E Daskam
Notary Public
Print Name Danielle E Daskam
residing at Enumclaw
My commission expires 10-25-07

DANIELLE E. DASKAM
NOTARY PUBLIC
STATE OF WASHINGTON
COMMISSION EXPIRES
10-25-07

(Use this space for notary stamp/seal)

STATE OF WASHINGTON)
) ss.
COUNTY OF KING)

I certify that I know or have satisfactory evidence that E. DON MacLEOD is the person who appeared before me, and said person acknowledged that he signed this instrument, on oath stated that he was authorized to execute the instrument and acknowledged it as the EXECUTIVE DIRECTOR, of New Cingular Wireless PCS, LLC, the limited liability company, to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

Dated: 8.10.05

Heather M Wright
Notary Public
Print Name HEATHER M WRIGHT
residing at SEATTLE, WA
My commission expires 3.14.09

Notary Public
State of Washington
HEATHER MAREE WRIGHT
My Appointment Expires Mar 14, 2009

(Use this space for notary stamp/seal)

Exhibit A

MEMORANDUM OF LEASE

to the Site Lease Agreement executed on the 19th day of Sept, 2005, by and between the City of Auburn, as Landlord, and New Cingular Wireless PCS, LLC, as Tenant.

(MOL to follow on next page)

Return to:

Graham & Dunn PC/Busch
Pier 70
2801 Alaskan Way
Suite 300
Seattle, WA 98121

Re: Cell Site #SS02; Cell Site Name: Auburn

State: Washington
County: King

MEMORANDUM
OF
LEASE

THIS MEMORANDUM OF LEASE is by and between the City of Auburn, a municipal corporation under the existing laws of the State of Washington, having a mailing address of 25 West Main, Auburn, WA 98001 ("Landlord") and New Cingular Wireless PCS, LLC, a Delaware limited liability company, having a mailing address of 6100 Atlantic Boulevard, Norcross, GA 30071 ("Tenant").

1. Landlord and Tenant entered into a certain Site Lease Agreement ("Lease") on the 19th day of Sept, 2005, for the purpose of installing, operating and maintaining a communications facility and other improvements. All of the foregoing are set forth in the Lease.

2. Landlord is leasing to Tenant a portion of the Property described in Exhibit A annexed hereto.

3. The initial term of the five (5) years commences on September 1, 2005. The Lease will automatically renew for five (5) separate consecutive periods of five (5) years each upon the same terms and conditions of the Lease, unless Tenant notifies Landlord in writing of Tenant's intention not to renew the Lease at least ninety (90) days prior to the expiration of the existing term. Unless earlier terminated, the Lease will expire on August 31, 2035.

4. This Memorandum of Lease is not intended to amend or modify, and shall not be deemed or construed as amending or modifying, any of the terms, conditions or provisions of the Lease, all of which are hereby ratified and affirmed. In the event of a conflict between the provisions of this Memorandum of Lease and the provisions of the Lease, the provisions of the Lease shall control.

5. The Lease shall be binding upon and inure to the benefit of the parties and their respective heirs, successors, and assigns, subject to the provisions of the Lease.

IN WITNESS WHEREOF, the parties have executed this Memorandum of Lease as of the day and year first above written.

LANDLORD: City of Auburn

By: _____
Peter B. Lewis

Its: Mayor

Date: SEP 19 2005

Taxpayer ID Number: 91-6001228

TENANT:

New Cingular Wireless PCS, LLC,
a Delaware limited liability company

By: _____
Print Name: E. DAN MACLEOD
Its: EXECUTIVE DIRECTOR
Date: 8-10-05

(acknowledgements to follow on next page)

STATE OF WA)
) ss.
COUNTY OF KING)

I certify that I know or have satisfactory evidence that Peter B. Lewis is the person who appeared before me, and said person acknowledged that he signed this instrument, on oath stated that he was authorized to execute the instrument and acknowledged it as the MAYOR, of City of Auburn, to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

Dated: Sept 19, 2005

Danielle E Daskam
Notary Public
Print Name Danielle E Daskam
residing at Enumclaw
My commission expires 10-25-07

DANIELLE E. DASKAM NOTARY PUBLIC STATE OF WASHINGTON COMMISSION EXPIRES 10-25-07

(Use this space for notary stamp/seal)

STATE OF WASHINGTON)
) ss.
COUNTY OF KING.)

I certify that I know or have satisfactory evidence that E. DON MACLEOD is the person who appeared before me, and said person acknowledged that he signed this instrument, on oath stated that he was authorized to execute the instrument and acknowledged it as the EXECUTIVE DIRECTOR, of New Cingular Wireless PCS, LLC, the limited liability company, to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

Dated: 8.10.05

Heather M Wright
Notary Public
Print Name HEATHER M. WRIGHT
residing at SEATTLE, WA
My commission expires 3.14.09

Notary Public
State of Washington
HEATHER MAREE WRIGHT
My Appointment Expires Mar 14, 2009

(Use this space for notary stamp/seal)

EXHIBIT A
DESCRIPTION OF PROPERTY

to the Memorandum of Lease executed on the 19th day of Sept, 2005 by and between the City of Auburn, as Landlord, and New Cingular Wireless PCS, LLC, as Tenant.

The Property is described and/or depicted as follows:

"THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 11, TOWNSHIP 21 NORTH, RANGE 4 EAST W.M., EXCEPT THE WEST 663 FEET OF THE NORTH 663 FEET OF THE SOUTH 693 FEET THEREOF, AND EXCEPT THE SOUTH 30 FEET THEREOF CONVEYED TO THE CITY OF AUBURN FOR SOUTH 316TH STREET, BY INSTRUMENT RECORDED UNDER RECORDING NO. 8503210865 AS PROVIDED BY RESOLUTION NO. 1565 OF THE CITY OF AUBURN; SITUATE IN THE CITY OF AUBURN, COUNTY OF KING, STATE OF WASHINGTON",

AGREEMENT FOR THE SALE OF WHOLESALE WATER

BETWEEN
THE CITY OF TACOMA,
DEPARTMENT OF PUBLIC UTILITIES, WATER DIVISION

AND

CASCADE WATER ALLIANCE

TABLE OF CONTENTS

Subject		Page
1	Definitions	2
2	Implementation Agreements and Exhibits to the Agreement	4
3	Effective Date and Term of the Agreement	4
4	Sale and Purchase of Wholesale Water	5
5	Commencement of Wholesale Water Deliveries	5
6	Wholesale Water Supply	5
7	Wholesale Water Quality, Delivery Pressure and Metering	7
8	Wholesale Service Connection and Interconnection Facilities	7
9	Pricing of Wholesale Water	8
10	Payments	10
11	Planning and Coordination	12
12	Termination of the Section 6.2 Water Deliveries	12
13	Water Management and Scheduling	13
14	Meter Ownership, Calibration and Maintenance	13
15	Wholesale Water Deliveries in Excess of Schedules	14
16	Sharing Water Shortages	15
17	Title and Risk of Loss	15
18	Regulatory Compliance	15
19	No Right or Claim to Water	15
20	Audit and Access to Records	16
21	Dispute Resolution	16
22	Uncontrollable Forces	16
23	Notices	17
24	Default of Obligation	17
25	Representations and Warranties	18
26	Assignment and Other Arrangements	18
27	Waivers	19
28	Amendments	19
29	Entire Agreement	19
30	Interpretation of Agreement	19
31	Governing Law and Venue	19
32	Duty of Good Faith	20
33	Counterparts	20

This Agreement for the Sale of Wholesale Water ("Agreement") between the City of Tacoma, Department of Public Utilities, Water Division (Tacoma) and Cascade Water Alliance ("Cascade"), is made and entered into effective this 13th day of October, 2005 (Effective Date). Tacoma and Cascade are sometimes referred to herein in the singular as "Party" and in the plural as "Parties".

WHEREAS, Tacoma is a municipality organized and operating under the laws of the State of Washington; and

WHEREAS, Cascade is a public nonprofit corporation established by Interlocal Contract under the authority of Chapter 39.34 RCW, the Interlocal Cooperation Act, and incorporated under Chapter 24.03 to further the interests of its members with respect to water supply and to work cooperatively with other water supply entities; and

WHEREAS, Tacoma and Cascade have the responsibility to plan, design, construct and operate water supply facilities to meet the municipal, commercial and industrial water supply needs of their respective customers and member organizations; and

WHEREAS, Tacoma, which has nearly completed the construction of its Second Supply Project, expects to have the supply capacity, together with Tacoma's other water resources, to meet Tacoma's projected water supply needs for the next fifty years, in addition to meeting a portion of the water needs of Tacoma's project partners, Lakehaven Utility District, Covington Water District and the City of Kent; and

WHEREAS, Cascade is contracting for, and has plans to construct additional water supplies to supplement its existing water supplies to meet its immediate and long-term water supply needs; and

WHEREAS, Tacoma and Cascade are each seeking cost effective ways to utilize available regional capacity, and to plan for water resources to meet the full future water supply needs of their respective customers; and

WHEREAS, Cascade could make beneficial use of available supply in Tacoma's Second Supply Project both permanently and in the near term until such time as other water resources are available to meet the needs of Cascade and its member utilities; and

WHEREAS, Cascade wishes to purchase from Tacoma, and Tacoma wishes to sell to Cascade a supply of water both permanently and for a finite period of years.

NOW, THEREFORE, the Parties agree as follows.

1. DEFINITIONS

1.1 When used with initial capitalization in this Agreement, the following terms shall have the meanings set forth below.

1.1.1 "Due Date" means the date by which payment of any invoice issued pursuant to section 10 of this Agreement is due to Tacoma, which date shall be the close of business on the thirtieth (30th) day after an invoice is issued, provided, however, that if such thirtieth day falls on a Saturday, Sunday or legal holiday observed by Tacoma, the Due Date shall be extended until the close of business of the next regular business day of Tacoma.

1.1.2 "Effective Date" shall have the meaning given such term in section 3.

1.1.3 "Flow Control Valve" means the valve located in the vicinity of the Point(s) of Delivery for Cascade that controls the volume of water that is delivered to Cascade.

1.1.4 "Howard Hanson Dam Additional Storage Project" or "Storage Project" shall have the meaning given such term in the Project Agreement.

1.1.5 "Implementation Agreement" means a written agreement executed by the Superintendent of Tacoma Water and the General Manager of Cascade setting out the understandings of the Parties regarding the implementation and administration of this Agreement as set forth in section 2.

1.1.6 "Initial Delivery Date" means the date on which Tacoma actually commences delivery of wholesale water pursuant to the terms of this Agreement.

1.1.7 "Interest Rate" means for each day that it is applied a rate equal to one-three hundred and sixty-fifth (1/365) of the prime interest rate for preferred customers established from time to time by the Bank of America, or such other bank as may be designated by the Parties, plus three (3) percentage points.

1.1.8 "Interconnection Facilities" mean the facilities, other than the Wholesale Service Connection, that need to be constructed by Cascade to take delivery of wholesale water through the Wholesale Service Connection and convey such water to Cascade's transmission main.

1.1.9 "Isolation Valve" means a positive shut off valve that shall be

installed at the location in each water system that is used to accept or deliver water through the Wholesale Service Connection.

1.1.10 "Minimum Monthly Bill" shall have the meaning given such term in section 9.2.

1.1.11 "Operating Year" means any consecutive twelve (12) month period commencing on each July 1st, and ending on the following June 30th.

1.1.12 "Peak Season" means the period starting June 1 and ending September 31 during each year during the Term.

1.1.13 "Peaking Factor" means the factor set forth in section 6.3.

1.1.14 "Project Agreement" means the Second Supply Project Agreement between the City of Tacoma and the City of Kent, Covington Water District and Lakehaven Utility District.

1.1.15 "Project Operator" means Tacoma in its role as the party responsible for the operation and maintenance of the Tacoma Second Supply Project.

1.1.16 "Requested Initial Delivery Date" means the date designated by Cascade pursuant to section 5.2 for Tacoma to commence delivery of wholesale water pursuant to section 6 of this Agreement.

1.1.17 "Second Diversion Right or Permit and First Diversion Claim" means those water rights that authorize Tacoma to divert and use water from the Green River (together, the Diversion Rights).

1.1.18 "Surcharge Rate" means a rate equal to four times the highest wholesale water rate for sales to Cascade for the period of excess use.

1.1.19 "TMC" means the City of Tacoma 's Municipal Code.

1.1.20 "Uncontrollable Force" means any event or occurrence that is beyond the reasonable control of a Party and which by the exercise of due diligence and reasonable foresight such Party could not have reasonably been expected to avoid or remove, and includes but is not limited to flood, earthquake, storm, accident, fire, lightning and other natural catastrophes, epidemic, war, labor or material shortage, strike or labor dispute, acts of terrorism or sabotage, and also includes restraint by an order of a court of competent jurisdiction or by regulatory authorities against any action taken or not taken by a Party, after a good faith effort by such Party to obtain: (a)

relief from such order; or (b) any necessary authorizations or approvals from any governmental agency or regulatory authority.

1.1.21 "Wholesale Service Connection" means a physical connection between water mains of the Parties to this Agreement, at a specifically identified point or points, where water will be transferred from one Party's system to the facilities of the other Party.

1.1.22 "Wholesale Water Sales" means sales of water by Tacoma to entities that are not retail customers of Tacoma and which resell to end users the water that they purchase from Tacoma.

2. IMPLEMENTATION AGREEMENTS AND EXHIBITS TO THE AGREEMENT

2.1 The Superintendent of Tacoma Water and the General Manager of Cascade may, at their discretion, execute Implementation Agreements regarding the implementation or administration of this Agreement in a manner that does not affect the substantive rights of the parties under this Agreement.

2.2 The following exhibits, which are attached to this Agreement, are hereby made a part of and incorporated into this Agreement as if fully set forth herein:

Exhibit A - Map locating the Wholesale Service Connection, delivery meter and related facilities.
Exhibit B - Sample Weekly Operations Report
Exhibit C - Arbitration Procedures

The Superintendent of Tacoma Water and the General Manager of the Cascade are authorized to prepare Exhibits showing the Wholesale Service Connection and the location of the delivery meter upon the installation of those facilities and to adopt such Exhibits for purposes of this Agreement.

2.3 If and to the extent that there is a conflict between the terms set forth in an Implementation Agreement or in any of the foregoing Exhibits and those set forth in the body of this Agreement, the terms set forth in the body of this Agreement shall prevail.

3. EFFECTIVE DATE AND TERM OF THE AGREEMENT

3.1 This Agreement shall take effect when executed by the Parties, and shall remain in full force and effect until the date that Tacoma ceases making Wholesale Water Sales, unless terminated (in whole or in part) earlier in accordance with sections 11, 12 or 24 ("Term"). The Term of this Agreement may be extended by written agreement of the Parties.

3.2 All obligations incurred during the Term shall survive the termination or expiration of this Agreement.

4. SALE AND PURCHASE OF WHOLESALE WATER

4.1 For the Term of this Agreement, Tacoma agrees to sell and make available to Cascade, and Cascade agrees to accept delivery of and pay for quantities of wholesale water, all pursuant to the provisions of this Agreement.

4.2 The water sold by Tacoma to Cascade pursuant to this Agreement shall be water available from the Diversion Rights. The use made of such wholesale water shall be subject to the restrictions on the place of use applicable to the Diversion Rights, copies of which have been provided to Cascade by Tacoma.

5. COMMENCEMENT OF WHOLESALE WATER DELIVERIES

5.1 Tacoma shall stand ready to commence deliveries of the amounts of wholesale water set forth in section 6 not later than October 1, 2008. If the Howard Hanson Storage Project is not operational by October 1, 2012, then Tacoma may, based on Tacoma's forecast of its water supplies without the Howard Hanson Storage Project, reduce its obligation to sell water to Cascade under section 6.2 (including a reduction to zero deliveries) by providing written notice to Cascade of such reduction to its water deliveries not less than ninety (90) days prior to the date the adjusted deliveries will commence.

5.2 Except as provided in section 5.1 deliveries of wholesale water by Tacoma to Cascade pursuant to section 6 shall commence on the Requested Initial Delivery Date designated by Cascade by written notice provided to Tacoma not less than ninety (90) days prior to the Requested Initial Delivery Date, which date cannot occur prior to October 1, 2008.

6. WHOLESALE WATER SUPPLY

6.1 From the Initial Delivery Date until the date that Tacoma ceases making Wholesale Water Sales, Tacoma shall make available to Cascade at the Wholesale Service Connection wholesale water in the amount of four million gallons per day (4 MGD) at a uniform hourly delivery rate.

6.2 In addition to the wholesale water deliveries set forth in section 6.1, on and after the Initial Delivery Date, Tacoma shall make available to Cascade at the Wholesale Service Connection wholesale water in the following amounts:

6.2.1 From the Initial Delivery Date through December 31, 2026, six million gallons per day (6 MGD) at a uniform hourly delivery rate.

6.2.2 From January 1, 2027 through December 31, 2027, 4 million gallons per day (4 MGD) at a uniform hourly delivery rate.

6.2.3 From January 1, 2028 through December 31, 2028, three million gallons per day (3 MGD) at a uniform hourly delivery rate.

6.2.4 From January 1, 2029 through December 31, 2029, two million gallons per day (2 MGD) at a uniform hourly delivery rate.

6.2.5 From January 1, 2030 through December 31, 2030, one million gallons per day (1 MGD) at a uniform hourly delivery rate.

6.2.6 On and after January 1, 2031, Tacoma shall have no obligation to provide to Cascade and Cascade shall have no right to receive from Tacoma wholesale water deliveries pursuant to this section 6.2.

6.3 The wholesale water deliveries set forth in sections 6.1 and 6.2 may, as requested by Cascade, be increased during the Peak Season by a Peaking Factor of 1.33. For example, application of the Peaking Factor to the wholesale water deliveries set forth in section 6.1 would result in deliveries of 5.32 million gallons per day.

6.4 Cascade may request in writing that Tacoma investigate the feasibility of providing to Cascade wholesale water on a temporary basis in addition to the amounts set forth in sections 6.1 and 6.2. The written request from Cascade to Tacoma shall state with specificity the wholesale water amounts requested (including Peak Season deliveries), the requested commencement date and termination date of such deliveries. Upon receipt of such written request, Tacoma will review its water demand and supply forecasts expeditiously to determine if, in the sole judgment of Tacoma, it will have sufficient water supplies to fulfill the request for additional deliveries of wholesale water in whole or in part. In the event that Tacoma determines that it can fulfill, in whole or in part, the request of Cascade for additional deliveries of wholesale water, such additional deliveries shall be priced according to Tacoma's wholesale water rate, which additional supply shall be subject to the Surcharge Rate only if Cascade takes such temporary water in excess of the amounts which Tacoma has agreed to supply. Tacoma and Cascade shall, prior to the commencement of such additional deliveries, execute an agreement setting forth all of the terms and conditions applicable to such additional temporary deliveries.

7. WHOLESALE WATER QUALITY, DELIVERY PRESSURE AND METERING

7.1 The quality of wholesale water made available to Cascade pursuant to section 6 shall be in compliance with all applicable state and federal drinking water laws, regulations and standards, and at the pressures agreed to by the Parties.

7.2 The amounts of wholesale water made available to Cascade will be measured by a delivery meter located at or in the vicinity of the Wholesale Service Connection, as agreed to by the Parties.

8. WHOLESALE SERVICE CONNECTION AND INTERCONNECTION FACILITIES

8.1 All costs associated with the design and construction of the Wholesale Service Connection, including the water main, service pipe, automated remote valve shut off, meter(s), appurtenances and vaults, shall be the responsibility of Cascade. Tacoma shall be responsible for preparation of the design of the Wholesale Service Connection and for the cost of repair and maintenance of the Wholesale Service Connection up to and including the outlet of the meter. The meter(s) shall be located as close to the Wholesale Service Connection as possible. Tacoma will coordinate the design and construction of the Wholesale Service Connection with Cascade. All Wholesale Service Connections with Tacoma are required to have automated meter reading (AMR) installed on them. Cascade will be responsible for the costs of installing the phone connection for the AMR and the costs to install the equipment with the meter.

8.2 Cascade shall be responsible for designing, engineering, permitting, constructing and financing any and all Interconnection Facilities necessary for Cascade to accept delivery of the wholesale water made available by Tacoma pursuant to section 6.

8.3 Cascade will submit to Tacoma for review, revision and approval the designs, specifications and construction schedule for the Interconnection Facilities. Tacoma will not unreasonably delay its review of designs, specifications and construction schedules submitted to it by Caseade, and will not unreasonably withhold its approval of such designs, specifications and construction schedule.

8.4 Cascade will not commence construction of the Interconnection Facilities unless and until Cascade has received from Tacoma approved designs, specifications, and construction schedule (as such documents may be revised by Tacoma).

8.5 Cascade will construct and operate the Interconnection Facilities in a manner that is consistent with the provisions of all permits, regulatory approvals and agreements governing the construction and operation of the Second Supply Project.

8.6 Prior to the submission to Tacoma of designs, specifications and construction schedule for the Interconnection Facilities, Cascade and Tacoma will negotiate a mutually agreeable amount of compensation payable by Caseade to Tacoma for the use of any property, rights of way and for work performed by Tacoma staff and consultants in facilitating the construction of Interconnection Facilities, exclusive of the activities undertaken by Tacoma pursuant to section 8.3.

8.7 Cascade agrees that Tacoma owns the Isolation Valve directly off of the Tacoma system, piping from the Tacoma Isolation Valve to the meter, the meter vault and the meter and telemetry equipment, all as will be set forth on Exhibit A. Maintenance and operation costs for this equipment are the responsibility of Tacoma. Any capital costs related to this equipment, including upgrades or replacement and renewal are the responsibility of Caseade.

8.8 The Wholesale Service Connection shall be governed by the terms of this Agreement. No future Wholesale Service Connections shall be permissible without a subsequent and separate written agreement between the Parties. Neither Party shall be obligated to agree to or execute any agreement or permit with the other Party to construct additional Wholesale Service Connection(s).

9. PRICING OF WHOLESALE WATER

9.1 Commencing with the month in which deliveries of wholesale water to Cascade pursuant to section 6 begin, and for each month thereafter during the Term, Cascade will pay to Tacoma a monthly payment equal to the amount of wholesale water delivered in such month, as measured at the delivery meter, times the wholesale water service rate plus the readiness to serve charge as set forth in TMC Section 12.10.400 of the City of Tacoma Water Rates and Regulations (or the successor TMC Section), subject to Cascade's obligation to pay the Minimum Monthly Bill in accordance with section 9.2

9.2 Regardless of whether Cascade has or has not established a Requested Initial Delivery Date, Cascade shall for the period 2009 through 2026 pay not less than the Minimum Monthly Bill. The Minimum Monthly Bill shall be determined by multiplying the Minimum Daily Purchase Amount ("P") set forth below, times the number of days in each month ("D"), times the wholesale water service rate ("R"), (P x D x R = monthly minimum payment).

Calendar Year	Minimum Daily Purchase Amount (in MGD)
2009	2.0
2010	2.0
2011	2.0
2012	3.0
2013	3.0

2014	3.0
2015	4.0
2016	4.0
2017	4.0
2018	5.0
2019	5.0
2020	6.0
2021	6.0
2022	7.0
2023	7.0
2024	8.0
2025	8.0

Provided, however, after the Initial Delivery Date, whenever Tacoma declares a supply curtailment or cannot otherwise deliver the minimum water supply Cascade shall be billed only for the water actually delivered.

9.3 In the event that the sum of the Minimum Monthly Bills for a calendar year exceeds the sum of the payments made by Cascade during such calendar year pursuant to Section 9.1, then Tacoma will bill Cascade in February of the immediately following calendar year during the period of 2010 through 2026 the amount by which the sum of the Minimum Monthly Bills for such calendar year exceeded the payments made pursuant to Section 9.1 during such calendar year.

9.4 The water service rate and the readiness to serve charge may be periodically adjusted and shall be applicable as set forth in the rate schedule as adopted by the Public Utility Board and Tacoma City Council.

9.5 Cascade shall pay Tacoma System Development Charges ("SDCs") of $16,484,000 for water supplied pursuant to section 6.1 as follows:

9.5.1 Within one-hundred and twenty (120) days of the Effective Date, Cascade will pay Tacoma an initial payment of twenty percent (20%) of the SDCs or $3,296,800.

9.5.2 After such initial payment, the remaining balance of the SDCs will be paid in not more than ten (10) equal annual payments, with the first such payment due on the first anniversary of the Effective Date and thereafter on each successive anniversary until the SDCs are paid in full.

9.6. Cascade shall pay Tacoma a Capacity Reservation Fees ("CRFs") of $9,420,442 for water supplied pursuant to section 6.2 as follows:

9.6.1 Within one-hundred and twenty (120) days of the Effective Date, Cascade will pay Tacoma an initial payment of twenty percent (20%) of

the CRFs or $1,884,088.

9.6.2 After such initial payment, the remaining balance of the CRFs will be paid in not more than ten (10) equal annual payments, with the first such payment due on the first anniversary of the Effective Date and thereafter on each successive anniversary until paid in full.

9.7 In addition to the annual payments pursuant to sections 9.5 and 9.6, Cascade will on the same date pay Tacoma interest calculated on a monthly basis (the first day of every month) on the outstanding unpaid balance of the SDCs and CRFs calculated using the prime interest rate, as reported by the Wall Street Journal ten days before the date that the monthly interest calculation is made, minus two percent (2%). Cascade may, at its election, prepay all or any portion of the SDCs and/or CRFs outstanding balance, in which case the interest accrued to the date of such prepayment shall also be paid to Tacoma, and the remaining unpaid balance shall be paid in equal installments.

9.8 If Tacoma exercises its option pursuant to section 5.1 to reduce water deliveries under section 6.2, then the CRFs payable under section 9.6 will be reduced proportionately. For example, if the total deliveries under section 6.2 are reduced by Tacoma by twenty percent (20%), then the total amount of CRFs payable under section 9.5 will be reduced by twenty percent (20%). Such reduction will be accomplished by first eliminating any CRFs not yet paid by CWA, and then by Tacoma refunding to Cascade any CRFs (or portions thereof) already paid starting with the most recent CRFs payment made by Cascade until such proportionate reduetion is achieved. Any such refunds shall include interest calculated from the date of payment to the date of the refund, at the interest rate described in section 9.7. Any such refund shall be paid by Tacoma to Cascade within ninety (90) days of the notice issued pursuant to section 5.1.

9.9 An interest component will be paid by Tacoma to Cascade on the CRF payments eliminated or refunded pursuant to section 9.8. For the CRFs (or portions thereof) that are eliminated or refunded pursuant to section 9.8, the interest component will be calculated from the Effective Date to the date the payment of any refund is due pursuant to section 9.8. Such interest component will be the sum of the annual interest calculated for each of the years that the amount refunded or eliminated was outstanding, using the interest rate for each such year charged Cascade by Tacoma pursuant to section 9.7.

10. PAYMENTS

10.1 Tacoma shall prepare and forward to Cascade in the first week of each month during the Term an invoice for the payment of amounts due pursuant to this Agreement for the preceding month. Each such invoice shall set forth the payment due from Cascade to Tacoma. In addition, during the first week of each February during the

2010 through 2026 period, when required pursuant to section 9.3, Tacoma shall prepare and forward to Cascade an invoice for any amounts due to Tacoma under section 9.3.

10.2 Cascade may request from Tacoma, and Tacoma shall promptly provide to Cascade, any documentation or other information that Cascade may reasonably require to understand the nature of the costs contained in any invoice issued pursuant to this section 10.

10.3 Payment of any and all invoices forwarded to Cascade by Tacoma pursuant to this section 10 shall be due and payable by Cascade on or before the Due Date, with payment to be made by wire transfer or such other means as agreed to by Tacoma and Cascade.

10.4 If full payment of any invoice is not received by Tacoma on or before the Due Date, such payment shall be considered past due, and the unpaid amount of such invoice shall accrue interest at the Interest Rate. Further, if an invoice or any portion thereof remains unpaid for a period of thirty (30) days after the Due Date, Tacoma may elect to suspend deliveries due to Cascade pursuant to section 6 until Cascade has paid all amounts due and owing, and any late payment charges due thereon.

10.5 If Cascade disputes all or any portion of an invoice issued by Tacoma pursuant to this section 10, Cascade shall pay such invoice in full, and shall indicate in writing to Tacoma the portions of the invoice that Cascade disputes and the reasons therefore. The Parties shall make a good faith effort to resolve such dispute. If such efforts are unsuccessful, either Cascade or Tacoma may seek resolution of the dispute pursuant to section 21.

10.6 If the resolution of any dispute over an invoice, whether by agreement of the Parties or by dispute resolution pursuant to section 21, results in the payment of money from Tacoma to Cascade, such payment shall include an interest payment for the period commencing with the date the disputed invoice was paid, and ending on the date the payment resolving the dispute is made to the Cascade, calculated using the Interest Rate.

10.7 Cascade hereby covenants and agrees that it shall establish, maintain and collect rates or charges for water and other services, facilities and commodities sold, furnished or supplied by it to its members which shall be adequate to provide revenues sufficient to enable Cascade to make the payments required to be made pursuant to the terms of this Agreement, and to pay all other charges and obligations payable from or constituting a charge or lien upon such revenues.

10.8 Payments by Cascade of SDCs, CRFs or of amounts under each invoice issued pursuant to this section 10 shall constitute an operating expense for water purchased by Cascade.

11. PLANNING AND COORDINATION

11.1 Cascade will develop a long-term supply plan and acquire additional water supplies to establish a firm supply for its members. Cascade shall provide to Tacoma a copy of such long-term supply plan, which plan shall also demonstrate that Cascade has planned for and has the ability to develop sufficient water supplies for its members to replace the wholesale water deliveries set forth in section 6.2 upon the expiration of such water delivery obligation under this Agreement. If Cascade cannot demonstrate by December 1, 2015 to the satisfaction of Tacoma that it will develop sufficient replacement water supplies to replace the water sale set forth in section 6.2, then the water delivery obligation set forth in section 6.2 may be terminated in whole or in part by Tacoma no sooner than January 1, 2016 by providing Cascade written notice of such termination six months prior to date of termination established by Tacoma in such written notice. In such event, the water delivery obligation of Tacoma to Cascade under this Agreement shall be limited to the delivery obligation set forth in sections 6.1 and 6.3.

11.2 In the event that Tacoma exercises it right to terminate its entire delivery obligation under section 6.2 pursuant to section 11.1, then Tacoma will make a payment to Cascade not later than sixty (60) days after the effective date of such termination. If such termination occurs in 2016, the payment from Tacoma to Cascade will be the sum of $4,148,111. If such termination occurs in any year subsequent to 2016, the payment due from Tacoma to Cascade shall be reduced by the amount of $415,000 for each year after 2016 that such termination occurs. If Tacoma only terminates its delivery obligation under section 6.2 in part, then the payment due from Tacoma to Cascade will be prorated to reflect the percentage of the total water deliveries under section 6.2 that were terminated pursuant to section 11.1. For example, if twenty percent (20%) of the total water delivery obligation under section 6.2 is terminated pursuant to section 11.1, then the payment due by Tacoma to Cascade will equal twenty percent (20%) of $4,146,111.

11.3 The Parties will seek to adopt conservation plans and to coordinate regional supply scheduling and other operational programs that promote efficient use of water supplies, facilities, financial and staff resources.

12. TERMINATION OF THE SECTION 6.2 WATER DELIVERIES

If after October 1, 2008 Tacoma has stood ready to serve water pursuant to Section 6 for a five year period, and during such period Cascade has not established a Requested Initial Delivery Date for the delivery amounts set out in section 6.2, then Tacoma may terminate its water delivery obligations under section 6.2 of this Agreement by providing Cascade written notice of such termination not less than one hundred eighty (180) days prior to the date of termination specified in such notice. In the event of such termination, Cascade shall not be obligated to make any further annual payments under section 9.6. The permanent supply purchased by Cascade under section 6.1 of this Agreement, and all payment obligations associated therewith, shall be unaffected by such termination.

13. WATER MANAGEMENT AND SCHEDULING

13.1 Not later than May 1 of each year during the Term prior to a year in which deliveries will be made pursuant to section 6, Cascade will submit to Tacoma a written draft operating plan for the next Operating Year. Each such draft operating plan will include, but not be limited to, the amount of Diversion Rights water that Cascade expects to receive pursuant to this Agreement in each week during the next Operating Year.

13.2 Scheduling Delivery of Wholesale Water within an Operating Year

13.2.1 Prior to 10:00 A.M. on any Thursday during each Operating Year, Cascade may submit to Tacoma, in the manner and in the form established by Tacoma, a schedule for wholesale water deliveries for the following seven (7) days. Such schedule shall contain at a minimum a uniform rate of water deliveries for each day of the schedule, and shall take effect on the day following the Thursday the schedule is submitted. Schedules so submitted shall remain in effect until replaced by a subsequent schedule submitted in accordance with this subsection 13.2.1. Tacoma shall take all reasonable actions required to ensure that the amount of wholesale water scheduled by Cascade is available to it.

13.2.2 Tacoma may revise schedules submitted pursuant to subsection 13.2.1, if and to the extent any such schedule calls for deliveries that are in excess of Cascade's rights under this Agreement or is inconsistent with Project operating constraints. Tacoma shall notify Cascade if its schedule is revised pursuant to this subsection 13.2.2. In the event that a change in circumstances necessitates a change to a schedule then in effect, Cascade may request a change to such schedule, and Tacoma shall take all reasonable actions to accommodate such schedule change.

13.3 As Project Operator, Tacoma reserves the right to revise schedules submitted by Cascade as Tacoma determines may be necessary to comply with permits, authorizations, regulations or orders applicable to the Project, or to deal with Uncontrollable Forces that affect the ability to fulfill such schedules. Tacoma will provide Cascade with as much notice as is practicable under the circumstances of any such revision, and Tacoma shall treat Cascade the same as other wholesale customers in making such revisions.

14. METER OWNERSHIP, CALIBRATION AND MAINTENANCE

14.1 The cost of installing the initial and any replacement delivery meter shall be borne by Cascade.

14.2 Tacoma shall be responsible for the calibration and testing of the delivery meter. No less frequently than once each year the delivery meter shall be tested for accuracy, and the results of such testing shall be made available to Cascade at no charge. The costs of the annual delivery meter test shall be billed to Cascade. In addition to the annual meter test, Cascade may test the delivery meter at any reasonable time and at Cascade's expense. The results of any additional delivery meter test shall be made available to Tacoma at no charge.

14.3 Tacoma shall establish the size and the flow range within which the delivery meter must operate. Should Tacoma determine that the delivery meter is operating outside the flow range so established, it shall notify Cascade in writing of such operation, and the size of the replacement meter needed to operate within the flow range. Tacoma shall provide Cascade an opportunity to discuss the problem with the existing delivery meter, and the need for the proposed replacement delivery meter. After providing such written notice, Tacoma may replace the faulty delivery meter and bill Cascade for the costs of procuring and installing such meter, and Cascade shall be obligated to pay such bill.

14.4 The Flow Control Valve for Cascade shall be owned by and shall be under the control of Cascade. Cascade shall be responsible for the operation and control of its Flow Control Valve. Upon reasonable notice to Cascade, Tacoma shall have the right to enter the meter and/or valve vault or vaults of Cascade for any reason related to this Agreement or the Project Agreement.

14.5 Tacoma shall have access to, but not control of, the control signals from each meter station, and access to the vault in which the delivery meter is located. The costs of equipment necessary to receive any such control signals shall be borne by Cascade.

15. WHOLESALE WATER DELIVERIES IN EXCESS OF SCHEDULES

15.1 Nothing in this Agreement shall prohibit Cascade from requesting, or Tacoma from agreeing to deliver, permanent wholesale water in excess of the limits set forth in section 6.

15.1.1 Such agreed upon deliveries will not be subject to the Surcharge Rate.

15.1.2 Unless otherwise agreed to by the Parties, such deliveries shall be priced in accordance with section 9.1; provided that additional permanent water shall be subject to a full SDC offset by a credit in the amount of any Capacity Reservation Fee paid for water supplied pursuant to section 6.2 converted to permanent supply.

15.2 Should Tacoma determine that Cascade is receiving deliveries of wholesale water at the Wholesale Service Connection in excess of its scheduled amounts, Tacoma shall notify Cascade of the excess deliveries, and Cascade shall promptly take the steps necessary to reduce its deliveries to amounts equal to its scheduled amounts, or to revise its schedules to reflect the level of deliveries it is receiving.

15.3 If Cascade has not taken action to revise its schedules or to reduce its deliveries to a level equal to its scheduled amounts within twenty-four hours of receiving notice from Tacoma pursuant to subsection 15.2, Tacoma may take any action it deems necessary to reduce the deliveries to a level equal to Cascade's scheduled amounts, and charge Cascade the Surcharge Rate for any excess deliveries made after the expiration of the twenty-four hour notice period.

16. SHARING WATER SHORTAGES

In the event there is a water shortage or drought that requires Tacoma to institute a water rationing or water use restriction program for Tacoma's retail customers, Tacoma will institute reductions to deliveries of wholesale water made pursuant to this Agreement that are comparable in magnitude and duration to those Tacoma imposes on its retail customers.

17. TITLE AND RISK OF LOSS

Title and risk of loss to wholesale water delivered by Tacoma to Cascade pursuant to section 6 of this Agreement will pass from Tacoma to Cascade when such wholesale water reaches that portion of the Interconnection Facilities owned by Cascade.

18. REGULATORY COMPLIANCE

Cascade understands and agrees that the operation of the Project, and the water available from the Diversion Rights is subject to permits, authorization, and the jurisdiction of regulatory agencies and courts with the authority to issue orders and regulations regarding the Project and the Diversion Rights water. Cascade understands and agrees that Tacoma as Project Operator must comply with all such valid permits, authorizations, orders and regulations, and that such valid permits, authorizations, orders and regulations may affect the ability of Tacoma to fulfill its wholesale water deliveries under this Agreement.

19. NO RIGHT OR CLAIM TO WATER

Cascade and each of its members agrees that they have only a contract right to wholesale water as set forth in section 6 of this Agreement, and further agrees they have no claim or right to a supply of water from Tacoma upon the expiration or termination of this Agreement on any basis whatsoever.

20. AUDITS AND ACCESS TO RECORDS

Upon reasonable prior notice to Tacoma, Cascade, or any consultant of Cascade, shall be given access during normal business hours to the books, records and accounts related to this Agreement in the possession of Tacoma at the location where such books, records and accounts are located. Tacoma shall not be obligated to collate, organize or analyze the information sought by Cascade or by Cascade's consultant. Cascade shall pay Tacoma its established rate for any documents reproduced for Cascade or its consultant.

21. DISPUTE RESOLUTION

21.1 Any and all disputes arising under this Agreement shall be resolved pursuant to this section 21.

21.2 The Parties shall make good faith efforts to resolve by informal discussion any dispute arising under this Agreement.

21.3 If at any time during the good faith efforts to resolve any dispute arising under this Agreement either of the Parties determines that such informal discussions will not result in a resolution of the issue(s) in dispute, such Party may initiate the dispute resolution process in accordance with Exhibit C. Any such dispute resolution process shall be conducted pursuant to the provisions of Exhibit C.

21.4 In the event that a Party moves to set aside or modify the final report of the referee in court, and that Party is not the prevailing party in the final disposition of the dispute through the judicial proceedings (including any appeals), then the moving Party will be obligated to pay all of the costs incurred by the other Party in the dispute resolution process (including any judicial proceedings), which costs shall include, but not be limited, to attorneys fees.

21.5 Pending resolution of any dispute, the Parties shall continue to fulfill their respective duties under this Agreement.

22. UNCONTROLLABLE FORCES

22.1 A Party shall not be in breach of this Agreement as a result of such Party's failure to perform its obligations under this Agreement, other than the obligation to pay money when due and owing, when such failure is due to an Uncontrollable Force, to the extent that such Party, despite the exercise of due diligence, is unable to remove such Uncontrollable Force. Nothing in this Agreement shall be construed to require any Party to prevent or settle any strike or labor dispute in order to obtain relief under this section 22.

22.2 Any Party subject to an Uncontrollable Force that may impair its performance under this Agreement shall notify the other Party as soon as practicable. Any

Party subject to an Uncontrollable Force shall be excused from performance under this Agreement only for the duration of and to the extent of the Uncontrollable Force. Any Party subject to an Uncontrollable Force shall take all reasonable actions to remove the Uncontrollable Force. Neither the occurrence of an Uncontrollable Force nor the provisions of this section 22 shall relieve any Party of its obligation to pay money when due under the terms of this Agreement.

22.3 Uncontrollable Force shall not relieve Cascade of its payment obligations hereunder, except that Cascade shall not be required to make payments pursuant to section 9.1 for more than 6 months after water deliveries from Tacoma cease, and Cascade's obligation to make payment under section 9.1 shall not be reinstated until monthly water deliveries from Tacoma re-commence.

23. NOTICES

23.1 All notices, requests, demands, waivers, consents and other communications required hereunder shall be in writing, and shall be delivered by one or more of the following means: (i) in person, (ii) by overnight delivery service, (iii) by first class mail with postage prepaid, (iv) by facsimile providing confirmation of completed transmission, or (v) by such other means as may be approved by the Parties. Service of any such notice, request, demand, waiver, consent or other communication shall be deemed to have been duly given and to have become effective upon receipt.

23.2 Any and all notices, demands, waivers, consents and other communications shall be forwarded to each of the Parties at the following addresses:

To Tacoma:
Water Superintendent
Tacoma Water
P. O. Box 11007
Tacoma, WA 98411

To Cascade:
Manager
Cascade Water Alliance
1400 112th Avenue S.E. – Suite 220
Bellevue, WA 98004

23.3 Either Party may change the address to which notices shall be sent by giving notice of such change in accordance with subsection 23.1.

24. DEFAULT OF OBLIGATION

24.1 If Cascade fails to make any payment in full when due under this Agreement for a period of ninety (90) days or more after the Due Date, Tacoma shall make written demand upon Cascade to make payment in full within ten (10) days of the

date of such written demand. If the failure to pay is not cured with the ten (10) day time period, Cascade shall be deemed to be in default.

24.2 In addition to the remedies provided in section 10, if Cascade has been in default of payment for a period of sixty (60) days or more, then Tacoma may terminate this Agreement by providing Cascade with written notice not less than six (6) months prior to the date of termination set forth in such written notice.

25. REPRESENTATIONS AND WARRANTIES

25.1 The Parties hereby represent and warrant to one another the following:

25.1.1 Each Party is duly authorized and validly existing under the laws of, and is authorized to exercise it powers, rights and privileges and is in good standing in, the State of Washington, and has full power and authority to carry on its business as presently conducted and execute this Agreement and perform the transactions on its part contemplated by this Agreement.

25.1.2 The execution, delivery and performance of this Agreement, and the consummation of the transactions contemplated hereby have been duly authorized by the appropriate board or council, and no other act or proceeding on the part of any Party is necessary to authorize this Agreement, or the transactions contemplated hereby.

25.1.3 The execution, delivery and performance by each of the Parties of this Agreement does not: (a) contravene any law; or (b) conflict with or result in a breach of or default under any material agreement or instrument to which any Party is a party or by which it is bound.

25.1.4 There are no actions, suits, claims or proceedings pending or, to the best of each Party's knowledge, threatened against either Party that is likely to impair the consummation or the transactions contemplated hereby.

25.1.5 This Agreement, when executed and delivered, will constitute a valid and binding obligation of each Party, and will be enforceable against each such Party in accordance with its terms.

26. ASSIGNMENT AND OTHER ARRANGEMENTS

The rights and obligations of this Agreement may not be sold, assigned or otherwise transferred in whole or in part by Cascade or Tacoma without the prior written consent of the other, which consent shall not be unreasonably withheld; provided that should Cascade dissolve, then Tacoma will extend to any individual member of Cascade,

or any combination thereof, the right to assume Cascade's rights and obligations under this Agreement.

27. WAIVERS

Except as otherwise provided herein or as agreed to by the Parties, no provision of this Agreement may be waived except as documented or confirmed in writing. Any waiver at any time by a Party of its rights with respect to a default under this Agreement or with any other matter arising in connection therewith, shall not be deemed a waiver with respect to any subsequent default or matter. Either Party may waive any notice or agree to accept a shorter notice than specified in this Agreement. Such waiver of notice or acceptance of shorter notice by a Party at any time regarding a notice shall not be considered a waiver with respect to any subsequent notice required by this Agreement.

28. AMENDMENTS

No change, amendment or modification of any provision of this Agreement shall be valid unless set forth in a written amendment to this Agreement signed by the Parties.

29. ENTIRE AGREEMENT

This Agreement sets forth the entire agreement of the Parties, and supersedes any and all prior agreements with respect to the subject matter of this Agreement. The rights and obligations of the Parties hereunder shall be subject to and shall be governed by this Agreement.

30. INTERPRETATION OF THE AGREEMENT

The Parties participated in the drafting of this Agreement. In interpreting this Agreement, no inference shall be drawn against either Party as the drafter of this Agreement. The headings used herein are for convenience of reference only, and shall not affect the meaning or interpretation of this Agreement.

31. GOVERNING LAW AND VENUE

This Agreement shall be governed by and construed in accordance with the laws of the State of Washington (regardless of the laws that might otherwise govern under applicable principles of conflicts of law of such state). Except in respect of a lawsuit or judicial action or proceeding commenced by a third party in another jurisdiction, the Parties (i) agree that any lawsuit, judicial action or proceeding arising out of or relating to this Agreement must be heard in the Superior Court of the State of Washington, in and for the County of Snohomish or Thurston, or the United States District Court for the Western District of Washington, (ii) waive any objection to the laying of venue of any such suit, action or proceeding, (iii) irrevocably submit to the jurisdiction of any such

court in any such lawsuit or judicial action or proceeding, and (iv) consent to service of process by mail in respect to any such lawsuit or judicial action or proceeding.

32. DUTY OF GOOD FAITH

The Parties agree that in taking actions or making determinations required or provided for under this Agreement, each Party shall act in fairness and in good faith.

33. COUNTERPARTS

This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

IN WITNESS WHEREOF, the Parties have duly executed this Agreement on the date first above written.

City of Tacoma
Department of Public Utilities

By: _____

Title: Director of Utilities

Approved as form:

_____
Chief Assistant City Attorney

Cascade Water Alliance:

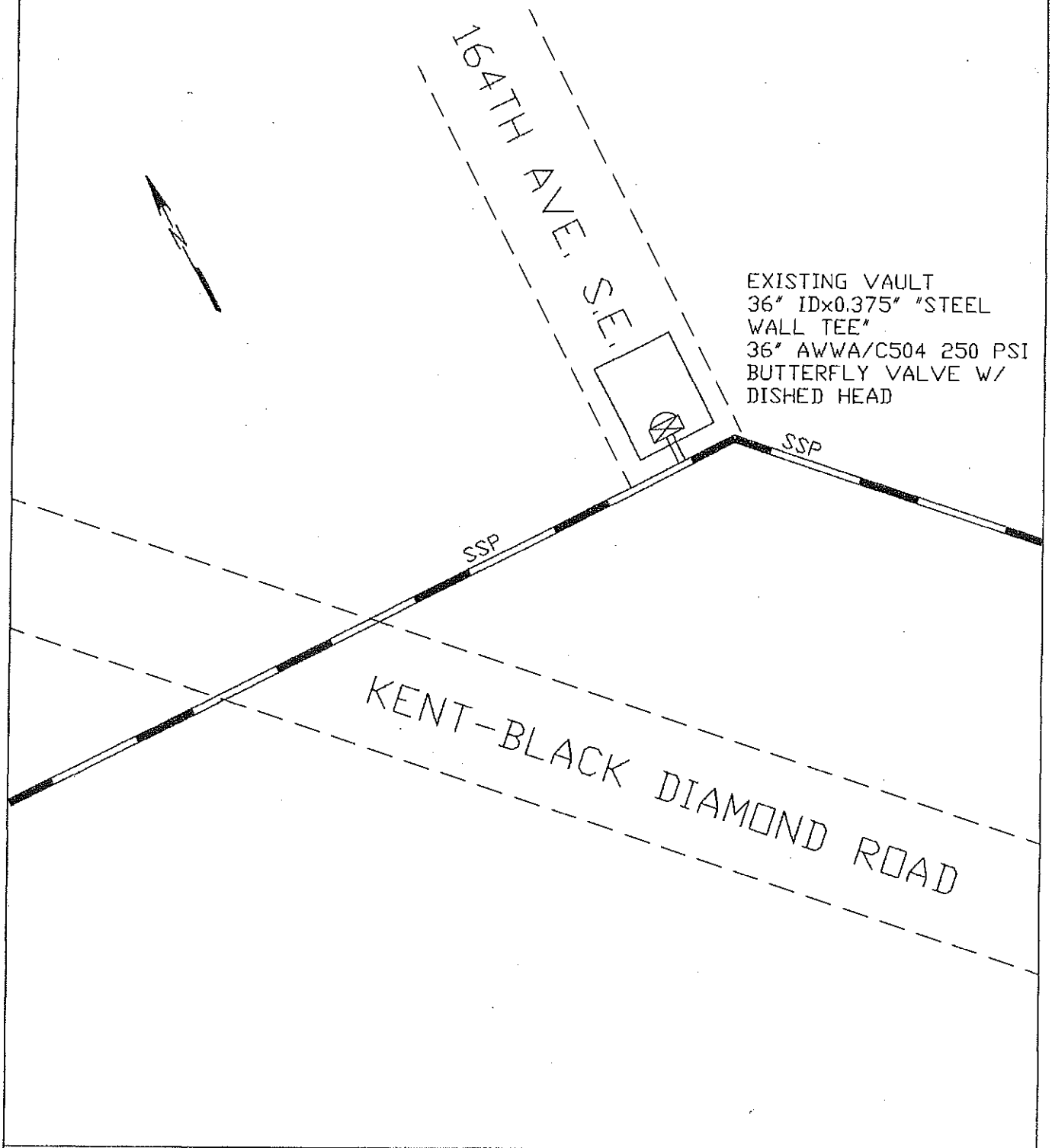
By: _____

Title: Chair

Approved as form:

_____

CONCEPTUAL WHOLESALE SERVICE CONNECTION TO CASCADE WATER ALLIANCE



DEPARTMENT OF PUBLIC UTILITIES – TACOMA WATER

Date 9/30/05 Project SSP W.O.	EXHIBIT 'A'	SCALE N.T.S.
Design PML Drawn SRL Digitize SRL Check	MANAGER	DRAWING

SAMPLE WEEKLY OPERATIONS REPORT
Exhibit 'B'

SSP Weekly 8 AM Operations Report — WEEK OF 12/26/2005 TO 1/1/2006

		Monday 29	Tuesday 30	Wednesday 31	Thursday 1	Friday 2	Saturday 3	Sunday 4
INSTANTANEOUS SOURCE DATA								
Howard Hanson Reservoir	-FEET							
Green River at Palmer	-CFS							
Limit at Palmer	-CFS							
Green River at Auburn	-CFS							
Limit at Auburn	-CFS							
Reservoir Inflow	-CFS							
Available 2nd Water Right Diversion	-MGD							
24 HOUR SOURCE DATA								
TOTAL DIVERSION	-MG							
1ST DIVERSION								
2ND DIVERSION								
HEADWORKS FLOW METER, P-1	-MG							
HEADWORKS FLOW METER, SSP	-MG							
NF WELLS	-MG							
WATER QUALITY DATA (P5 at Headworks)								
TURBIDITY (Max.) RIVER	-NTU							
FINISHED WATER	-NTU							
WATER TEMP. (Min.)	-F							
FLUORIDE (Ave.)	-mg/L							
CL RESIDUAL (Ave.)	-PPM							
UVT	%							
PH (Ave.)								
PARTICIPANT DELIVERY (previous day)								
TACOMA METER TOTAL	-MG							
ADJUSTED TOTAL	-MG							
SW 356TH & 15 AVE SW	-MG							
WHOLESALE CUSTOMER METERS	-MG							
CASCADE WATER ALLIANCE	-MG							
KENT METER TOTAL	-MG							
ADJUSTED TOTAL	-MG							
217th Ave SE 288th ST	-MG							
124TH AVE SE & SE 296TH ST	-MG							
120TH AVE SE & SE 296TH ST	-MG							
COVINGTON WD METER TOTAL	-MG							
ADJUSTED TOTAL	-MG							
22048 SE 288th St.	-MG							
188TH AVE SE & SE 304TH ST	-MG							
148TH AVE SE & SE 296TH ST	-MG							
LAKEHAVEN UD METER TOTAL	-MG							
ADJUSTED TOTAL	-MG							
44th AVE. S. & 313th SST	-MG							
1ST WAY S & S 332ND ST	-MG							
SW 356TH ST & 15TH AVE SW	-MG							
TOTAL OF ALL DELIVERY METERS	-MG							
DIFFERENCE FROM SSP METER	-MG							
% OF TOTAL								
TACOMA 2nd Div SHARE	-MG							
TACOMA O&M SHARE	-MG							
KENT 2nd div / O&M SHARE	-MG							
COVINGTON WD 2nd div / O&M SHAR	-MG							
LAKEHAVEN UD 2nd div / O&M SHARE	-MG							
PARTICIPANT SCHEDULES (previous day)								
TACOMA PROJECT	-MG							
TACOMA 1ST DIV	-MG							
KENT PROJECT	-MG							
KENT 1ST DIV	-MG							
COVINGTON WD PROJECT	-MG							
COVINGTON WD 1ST DIV	-MG							
LAKEHAVEN UD PROJECT	-MG							
LAKEHAVEN UD 1ST DIV	-MG							
SCHEDULE DEVIATIONS (previous day)								
TACOMA	-MG							
KENT	-MG							
COVINGTON WD	-MG							
LAKEHAVEN UD	-MG							

Exhibit C – Dispute Resolution Proccdurcs

The following procedures shall govern the resolution of any dispute arising under the Agreement between the Parties that cannot be resolved by good-faith negotiations between the Parties, unless the Parties mutually agree to use different procedures to resolve a specific dispute by executing a document setting forth such different procedures. The Parties agree that these dispute resolution procedures are intended to be used in conjunction with and governed by R.C.W 4.48, and both Parties hereby waive their right to a trial by jury for any dispute arising under this Agreement.

1. The Party that believes that continued good-faith negotiations will not produce a resolution of the issue(s) that is the subject of such negotiations will notify the other Party in writing that they are invoking the dispute resolution procedures of this Exhibit C.

2. Within twenty (20) days of the date of such notice invoking the dispute resolution procedures of this Exhibit C, the Parties shall meet and select an individual to recommend to the court as referee of the dispute resolution process in accordance with R.C.W. 4.48.020. The Parties shall select an individual who is qualified as a juror as provided by statute, competent as a juror between the Parties, a duly admitted and practicing attorney, and has experience presiding over civil litigation of contract disputes. The Parties will use the following procedure to select the recommended referee:

    2.1 Each Party will make a list of three individuals that are qualified pursuant to section 2 to serve as referee and exchange such list with the other Party. If the Parties agree upon a person from either list, or if both Parties list the same person, that person will be the recommended referee.

    2.2 If the Parties are unable to agree upon a referee after exchanging their respective lists, they will make a joint list setting forth all six candidates from the two lists.

3. Upon the selection of the recommended referee, or the creation of the joint list pursuant subsection 2.2, the Party that invoked the dispute resolution procedures shall file a complaint in the superior court of the appropriate county as set forth in section 31 of the Agreement, setting forth the issues(s) in dispute, and the other Party shall file an answer to such complaint. Not later than twenty (20) days after the filing of the answer, the Parties shall jointly file a motion, with the Agreement (including Exhibit C) attached, with the court requesting an order of reference that:

    3.1 Directs that the issue(s) raised by the complaint and answer be resolved pursuant to R.C.W. 4.48 by reference to a referee;

3.2 Appoints pursuant to R.C.W. 4.48.020 either the recommended referee selected by the Parties pursuant to 2.1, or a single referee from the joint list prepared pursuant to subsection 2.2; and

3.3 Directs the referee conduct the proceeding in accordance with the procedures set out in sections 4-10 of this Exhibit C.

4. In accordance with R.C.W 4.48.060, the Parties hereby waive their rights to discovery and cross-examination, and direct that the proceeding be conducted in the same manner as a motion for summary judgment as follows:

   4.1 The Parties shall present their respective positions by written briefs and affidavits, and without testimonial evidence or cross-examination;

   4.2 Oral argument will be conducted before the referee; and

   4.3 The burdens of proof and persuasion that pertain in a civil trial shall apply, rather than those that apply to motions for summary judgment.

5. After appointment of the referee, the Parties shall endeavor in good faith to prepare for the referee a joint statement of facts and the questions to be decided in the proceeding. In the absence of an agreed to joint statement of facts and questions to be decided, each Party may include its own statement of facts and questions to be decided in its initial brief.

6. Within ninety (90) days after the submission of the joint statement of facts and questions to be decided, or within ninety (90) days after the appointment of the referee if the Parties cannot agree to a joint submission of facts and questions to be decided, each Party shall submit to the referee a one page statement of the proposed resolution and/or award it seeks for each of the issues in dispute, and its initial brief. The statement and initial brief (excluding any attached affidavits or evidentiary documents) shall not exceed fifty (50) 8 ½ x 11" double spaced pages with 1 ½ inch margins, number 12 point type face. The statement and initial brief shall be filed simultaneously by e-mail and regular mail with the referee and opposing Party.

7. Within thirty (30) days after the date the Parties filed their initial briefs, the Parties shall file their respective reply briefs with the referee and the opposing Party. The reply briefs (excluding any attached affidavits or evidentiary documents) shall not exceed twenty-five (25) 8 ½ x 11" double spaced pages with 1 ½ inch margins, number 12 point type face. The reply briefs shall be filed simultaneously by e-mail and regular mail with the referee and opposing Party.

8. After the reply briefs have been filed, if the referee deems that additional responses are needed, then the referee may request the Parties file a

supplemental brief only as to those specific matters or questions raised by the referee. Such supplemental briefs shall be limited to fifteen (15) 8 ½ x 11" double spaced pages with 1 ½ inch margins, number 12 point type face, and filed at such time as requested by the referee. Any such supplemental briefs shall be filed simultaneously by e-mail and regular mail upon the referee and opposing Party.

9. When all briefs have been filed, the referee will schedule oral argument on the issue(s) in dispute.

10. After the completion of oral argument, the referee will prepare his/her proposed report in accordance with R.C.W. 4.48.70 and shall provide a copy of the proposed report to the Parties, who shall have the right to suggest changes and modifications to the proposed report, all in accordance with R.C.W. 4.48.110. The referee will file the final report with the court within twenty (20) days of the completion of the process under R.C.W.4.48.110.

11. Either Party may move the court to modify or set aside, in whole or in part, the final report of the referee. If the court modifies or sets aside, in whole or in part, the final report of the referee and makes another reference, then this Exhibit C shall also apply to such reference.

12. Except as provided in section 21 of the Agreement, each Party shall be responsible for its own costs of the dispute resolution process (including any judicial proceedings), and the Parties shall each pay one-half of the other costs of the dispute resolution proceeding, including the fees of the referee. The fees of the referee shall be established in accordance with R.C.W. 4.48.100.

CITY OF AUBURN WASHINGTON

Daily Cash Balance Report - Summarized

Printed: 03 May 2011, 11:00 AM
User: tashton

Date From: Wednesday, April 27, 2011 Date To: Wednesday, April 27, 2011

Payment Type	Debit	Credit	Net
Cash			
Payment	$1,621.32	$133.99	$1,487.33
Total for Cash	**$1,621.32**	**$133.99**	**$1,487.33**
Check			
Payment	$1,748,549.07	$40.00	$1,748,509.07
Total for Check	**$1,748,549.07**	**$40.00**	**$1,748,509.07**
Direct Deposit			
Payment	$839,114.35	$0.00	$839,114.35
Total for Direct Deposit	**$839,114.35**	**$0.00**	**$839,114.35**
Master Card			
Payment	$3,899.84	$0.00	$3,899.84
Total for Master Card	**$3,899.84**	**$0.00**	**$3,899.84**
Online Mastercard			
Payment	$145.00	$0.00	$145.00
Total for Online Mastercard	**$145.00**	**$0.00**	**$145.00**
Online Visa			
Payment	$347.00	$0.00	$347.00
Total for Online Visa	**$347.00**	**$0.00**	**$347.00**
VISA			
Payment	$3,349.53	$0.00	$3,349.53
Refund	$0.00	$300.00	($300.00)
Total for VISA	**$3,349.53**	**$300.00**	**$3,049.53**
Total	**$2,597,026.11**	**$473.99**	**$2,596,552.12**

RESOLUTION NO. 4008

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR AND CITY CLERK TO TERMINATE EMERGENCY WATER SUPPLY INTERTIE AGREEMENT NO. 2 BETWEEN THE CITY OF AUBURN AND LAKEHAVEN UTILITY DISTRICT

WHEREAS, pursuant to RCW 39.34, the Interlocal Cooperation Act, the City of Auburn and Lakehaven Utility District entered into Emergency Water Supply Intertie Agreement #2 in 1998; and

WHEREAS, Lakehaven Utility District and City of Auburn Interlocal Agreement (Resolution No. 3652) establishing water service boundaries has been executed; and

WHEREAS, portions of the Lakehaven water system have been constructed to supply water to apportion of Auburn's PAA; and

WHEREAS, Auburn has evaluated water service issues and determined that it is not cost feasible to provide direct water service within its PAA above the 160-foot elevation adjacent to Lakehaven's water infrastructure; and

WHEREAS, Lakehaven's delivery of water service to these areas will provide the maximum efficiency in the use of existing and future facilities and water planning; and

WHEREAS, the constructed intertie facility is within the Lakehaven Utility District water service area and would need to be relocated to serve as an emergency connection; and

WHEREAS, if an emergency intertie is required one would be constructed at the location covered under emergency water supply agreement no.1.

NOW, THEREFORE, THE COUNCIL OF THE CITY OF AUBURN, WASHINGTON, IN A REGULAR MEETING DULY ASSEMBLED, HEREWITH RESOLVES THAT:

Section 1. The Mayor of the City of Auburn is herewith authorized to terminate the Emergency Water Supply Intertie Agreement No. 2 between the City and Lakehaven Utility District attached hereto, marked as Exhibit "A" and incorporated herein by this reference.

Section 2. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

Section 3. This resolution shall be in full force and effect upon passage and signatures hereon.

DATED this 17th day of April, 2006.

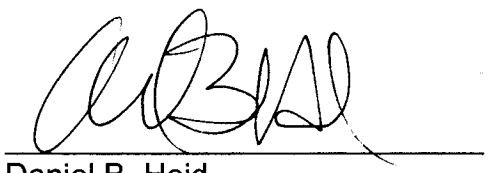
CITY OF AUBURN

PETER B. LEWIS
MAYOR

ATTEST:

Danielle E. Daskam,
City Clerk

APPROVED AS TO FORM:



Daniel B. Heid,
City Attorney

EMERGENCY WATER SUPPLY AGREEMENT
Lakehaven/Auburn Intertie No. 2

THIS AGREEMENT made and entered into by and between the City of Auburn, hereinafter referred to as City, and Lakehaven Utility District, hereinafter referred to as "District".

WITNESSETH:

WHEREAS, the City has water facilities in the vicinity of a water main of the District, and

WHEREAS, the City can increase fire protection reliability for its customers if water is available from the District, and

WHEREAS, the District is willing to provide to the City service necessary to increase fire fighting reliability upon the terms and conditions set forth herein,

NOW, THEREFORE, IT IS MUTUALLY AGREED as follows:

1. The District hereby grants to the City the right to connect a water meter and appurtenances to the end of the 8-inch water main located in a vault at the intersection of "R" Street NW on Abby Drive in King County, Washington.

2. The meter described in Paragraph No. 1 herein is installed to increase fire fighting reliability or emergency water supply. Water shall not be withdrawn from the supply without the prior written approval of the District. At such time the City shall state the requested time of commencement, duration of use and quantity of water to be so used.

3. The City shall comply with all District resolutions and rules relating to connection to the District's water system including, but not limited to, the District's written approval of plans and specifications for the connection prior to construction.

4. The City shall pay to the District the same connection fee, rates and charges and monthly service charges, except for capital facilities charge, as are established from time to time by District resolution and as are applicable to the use of a six (6)-inch meter. The current monthly service charge for a six (6)-inch meter is $238.20 per month. The current rate for water use is $ 0.48/ccf for winter usage (November - June) and $ 0.96/ccf for summer usage (July - October) and these rates shall be in effect until such time as the District amends its rate resolution or until a meter of different size is utilized.

5. This Agreement shall not authorize or permit the City to take water from the connection described herein beyond what is described in paragraph 2.

ORIGINAL

Exhibit "A", Resolution No. 2954

6. The cost of the meter installation pursuant to this Agreement shall be fully reimbursed by the City and shall become the property of the District upon completion of installation.

7. (a.) In case of emergency or whenever the public health, safety, or the equitable distribution of water so demands, the District may change, reduce or limit the time for or temporarily discontinue the supply of water without notice; (b.) Water service may be temporarily interrupted, limited for purposes of making repairs, extensions or doing other necessary work; and (c.) The District shall not be responsible for any damage resulting from interruption, change or failure of the water supply, and the City shall save and hold harmless the District from any loss, damages or suites to or by customers of the City resulting from interruption, change or failure of water supply provided by this Agreement, except damages arising out of the District's negligence. Prior to a planned interruption or limiting of service, the District will notify the City of such not less than three days prior to the service disruption. The District agrees to use best efforts and reasonable diligence to notify City as soon after it becomes aware of the need for service disruption and further will, to the extent practical, limit the service disruptions to daylight hours.

8. In the event of non-performance of any provision herein by the City, District may shut off water supplied pursuant to this Agreement.

9. This Agreement may be terminated by either party hereto upon 60-days written notice to the other party.

IN WITNESS WHEREOF, we have hereunto set our hands and seals.

CITY OF AUBURN
King County, Washington

By: Charles A. Booth 5-6-98
Mayor Date

Approved as to form:
By: 4/23/98
City Attorney Date

LAKEHAVEN UTILITY DISTRICT
King County, Washington

By: Donald T. Davis 5/15/98
General Manager Date

Approved as to form:
By: 5/18/98
General Counsel Date

ORIGINAL

RESOLUTION NO. 4018

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR AND CITY CLERK TO EXECUTE A LEASE AGREEMENT BETWEEN THE CITY AND CLEARWIRE LLC, FOR THE PURPOSE OF LEASING PROPERTY FOR COMMUNICATION EQUIPMENT

THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, IN A REGULAR MEETING DULY ASSEMBLED, HEREBY RESOLVES as follows:

Section 1. The Mayor and City Clerk of the City of Auburn are herewith authorized to execute a Lease Agreement between the City and Clearwire LLC, for the purpose of leasing space on the Lakeland Hills water reservoir, for communication equipment. A copy of said Agreement is attached hereto and denominated Exhibit "A" and incorporated herein.by this reference.

Section 2. That the Mayor is authorized to implement such other administrative procedures as may be necessary to carry out the directives of this legislation.

Section 3. That this Resolution shall take effect and be in full force upon passage and signatures hereon.

Dated and Signed this 1st day of May, 2006.

CITY OF AUBURN

PETER B. LEWIS
MAYOR

ATTEST:

Danielle E. Daskam,
City Clerk

APPROVED AS TO FORM:

Daniel B. Heid,
City Attorney

SITE LEASE AGREEMENT

THIS SITE LEASE AGREEMENT ("Lease") is by and between the City of Auburn, a municipal corporation under the existing laws of the State of Washington, having a mailing address of 25 West Main, Auburn, WA 98001 ("Landlord") and, Clearwire LLC, a Nevada limited liability company, ("Tenant").

1. Lease Agreement. Landlord hereby leases to Tenant the property generally described and depicted in Exhibit A, Memorandum of Lease, attached hereto and incorporated by reference ("Lease Area"), including space on Landlord's water tank located on the Property ("Water Tank Area"), said lease area being a portion of the real property legally described in Exhibit A ("Property"). The Lease shall be nonexclusive and shall not preclude Landlord from granting a similar lease, right, license, franchise, etc., to other carriers or other persons for telecommunications or any other purpose, so long as the subsequent agreement protects Tenant's rights granted by this Lease.

2. Term. This Lease shall commence on the date of full execution hereof ("Commencement Date"), and run for a period of five (5) years terminating at midnight on the fifth anniversary of the Commencement Date ("Initial Term").

3. Tenant's Use of the Lease Area - Antenna Facilities.

(a) Tenant's use of the Lease Area and Property shall be strictly limited to those uses set forth in this Section 3. Tenant may use the Lease Area for the transmission and reception of radio communication signals and for the construction, installation, operation, maintenance, repair, removal or replacement of related facilities necessary for the operation of a telecommunications facility as well as for access and utilities. Tenant may place its ground based telecommunications equipment only within the portion of the Lease Area identified as the "Compound" on Exhibit A. Tenant may install antennas within the Water Tank Area.

(b) Tenant shall have the right, at its expense, to erect and maintain on the Lease Area, improvements, personal property and facilities necessary to operate its communications system, including, radio transmitting and receiving antennas, and related cables and conduits, equipment shelters and/or cabinets and related cables and utility lines and a location based system, including coaxial cable, base units and other associated equipment as such location based system may be permitted by any county, state or federal agency/department. Tenant shall have the right to alter, replace, and expand within the confines of the Lease Area as defined in Section 1 and without interference to other providers / tenants, enhance and upgrade the Antenna Facilities at any time during the term of this Lease. Tenant shall cause all construction and operation to occur lien-free and in compliance with all applicable laws and ordinances. Landlord acknowledges that it shall not interfere with any aspects of construction, including, attempting to direct construction personnel as to the location of or method of installation of the Antenna Facilities. The Antenna Facilities shall remain the exclusive property of Tenant. Tenant shall have the right to remove the Antenna Facilities at any time during and upon the expiration or termination of this Lease.

(c) Tenant shall, at Tenant's expense, keep and maintain the Lease Area and Antenna Facilities now or hereafter located on the Property in commercially reasonable condition and repair during the term of this Lease, normal wear and tear and loss due to casualty or other causes beyond Tenant's control excepted. Tenant may install and maintain landscape plantings within the Lease Area. Tenant shall replace any existing landscape plantings damaged during the installation or operation of Tenant's Antenna Facilities. Upon termination or expiration of this Lease, the Lease Area shall be returned to Landlord in good, usable condition, normal wear and

tear and loss due to casualty or other causes beyond Tenant's control excepted, within ninety (90) days.

(d) Tenant shall remove any and all telecommunications equipment and appurtenances installed by Metricom, Inc. on the Water Tank or Property. Rather than removing Metricom, Inc. equipment and appurtenances, Tenant may choose to utilize all or a portion of the equipment and appurtenances if it is in good and safe working order. Any Metricom, Inc. equipment removed by Tenant is to be disposed of legally at Tenant's expense.

(e) In addition to using the Lease Area, Tenant may utilize the Property to install and use underground conduits running from the Compound in a generally straight line to the base of the Water Tank and then extend up the side of the Water Tank to the Antenna Facilities.

(f) Tenant shall have the right to install utilities, power and telephone, at Tenant's expense, and to improve the present utilities on the Property (including, but not limited to, the installation of emergency power generators). Landlord agrees to cooperate with Tenant in its reasonable efforts to acquire necessary utility service. Tenant shall, wherever practicable, install separate meters for utilities used on the Property by Tenant. Landlord shall diligently correct any variation, interruption or failure of utility service within Landlord's control.

(g) Prior to installation of equipment, Tenant shall submit for Landlord review and approval, which approval shall not be unreasonably withheld or delayed, an electrical and grounding connection plan that assures no interference with the Water Tank cathodic protection system. The plan shall include a 3" minimum diameter common use conduit enclosure for cables from the ground level to top of tank. This conduit may be utilized by other telecommunication providers until such time as it is filled to capacity, at which time new providers will need to pay for upsizing. Upon Landlord approval of the plans, Tenant may proceed to install and operate the Antenna Facilities.

4. Rent.

(a) Tenant shall pay Landlord, as rent, $12,000 Thousand and no/100 dollars ($12,000.00) per year ("Rent"). Rent shall be payable within twenty (20) days following the Commencement Date and thereafter the Rent will be payable yearly, no later than the anniversary of the Commencement Date to City of Auburn Water Utility Fund, Account Number 430.369.900, at Landlord's address specified in Section 13 below. The Rent shall increase annually over the Rent payable the preceding year in proportion to the increase of the "All Items" category of the Consumer Price Index for Urban Wage Earners and Clerical Workers published by the Bureau of Labor Statistics of the U.S. Department of Labor for Seattle-Everett Metropolitan Area (the "Index"). The first adjustment shall be based on the amount, if any, by which the Index for the 12th month of the Lease term has increased over the Index for the month preceding the commencement of the lease term. Subsequent adjustments will be based on the amount, if any, by which the Index for each subsequent 12th month of the Lease term has increased over the Index for the 12th month of the preceding 12-month period. It shall be the responsibility of the Landlord to track the CPI and notify the Tenant of increases or reductions in the Rent. Landlord shall notify Tenant within 90 days of the commencement of the Renewal Term as to the revised rate at which the Rent shall be increased annually thereafter. Landlord will invoice Tenant for back Rent due or refund over payment as necessary to correct the payment received for the first year of the Renewal Term. If at any time the CPI ceases to incorporate a significant number of items, if a substantial change is made in the method of establishing the CPI, or if issuance of the CPI shall be discontinued, then the Landlord and Tenant shall mutually agree upon another standard recognized cost of living index issued by the United States Government, provided that if the parties cannot reach agreement on such other standard cost of living index, then the Landlord shall select the index closest to the CPI. In either case, the substitute index chosen shall result in increases in the Rent similar to those that had been, or would have been, generated by the CPI. If this Lease is terminated for any reason (other than a default by Tenant) at a time other than on

the anniversary of the Commencement Date, Rent shall be prorated as of the date of termination and all prepaid Rent shall be refunded to Tenant within sixty (60) days.

(b) In addition to the monetary rent described in section 4 (a), Tenant shall provide Landlord with twenty-five (25) Clearwire base data service accounts, or equivalent, for Landlord use. Tenant shall cover any service charges for the accounts provided to Landlord under this Agreement for the duration of the Initial Term and any Renewal Terms. Landlord may require additional service accounts, each additional account requested by Landlord and provided by Tenant, shall reduce the annual rent by Twenty-Five Dollars ($25.00) per month. Landlord agrees to purchase from Tenant, at Tenant's cost, any communication hardware required to utilize the accounts provided by Tenant under this Agreement.

5. Renewal. Tenant may extend this Lease for (5) additional, five-year terms (each a "Renewal Term"). Each Renewal Term shall be on the same terms and conditions as set forth herein, including the Rent increase set forth in Section 4, above. This Lease shall automatically renew for each successive Renewal Term unless Tenant notifies Landlord, in writing, of Tenant's intention not to renew this Lease, at least ninety (90) days prior to the expiration of the Initial Term or any Renewal Term. Landlord may, during any Renewal Term, notify Tenant, in writing, of Landlord's intention not to renew this Lease for an additional Renewal Term, which notice shall be provided to Tenant at least one hundred and eighty (180) days prior to the expiration of the then in effect Renewal Term. If Tenant shall remain in possession of the Lease Area at the expiration of this Lease or any Renewal Term without a written agreement, such tenancy shall be deemed a month-to-month tenancy under the same terms and conditions of this Lease.

6. Interference. Tenant and Landlord shall not operate in a manner which interferes with the other party's operations on the Property. Tenant's Antenna Facilities and the use thereof shall not interfere with the use of any other communication or similar equipment of any kind and nature owned or operated by Landlord or other lessee, licensees, franchisees, etc., existing and operating on the Property prior in time to the commencement of this Lease, and subsequent to the installation by Tenant of the Antenna Facilities, Landlord agrees to exercise reasonable care to assure equipment of subsequent providers leasing space on the Property does not interfere with Tenant's Antenna Facilities operations. The Landlord, however, is not in any way responsible or liable for any interference with Tenant's use of Landlords Property, which may be caused by the use and operation of any other tenant's equipment, even if caused by new technology, so long as such equipment continues to operate within its existing frequencies and in compliance with all applicable laws and FCC rules and regulations. In the event there is interference between Tenant and any third party, such interference will be resolved by and between the parties affected; however, if such interference cannot be resolved to Tenant's satisfaction within forty-eight (48) hours from commencement of such interference, then the parties acknowledge that Tenant will suffer irreparable injury, and therefore, Tenant will have the right, in addition to any other rights that it may have at law or in equity, to terminate this Lease upon 30 days notice to Landlord and restore the Landlord's Property to its original condition, reasonable wear and tear and loss due to casualty or other causes beyond Tenant's control excepted.

7. Access.

(a) Tenant shall have the right during the Initial Term and of this Lease and any Renewal Term for ingress and egress to the Property over the south fifteen (15) feet of Lot 6, Lakeland Hills Division Number 3, Extension, according to the plat thereof recorded in Volume 145 of Plats, pages 72 and 73, in King County Washington.

(b) Tenant shall have 24-hours-a-day, 7-days-a-week access to the Lease Area ("Access") at all times during the Initial Term of this Lease and any Renewal Term. In the event Landlord, its employees or agents unreasonably deny Access to Tenant, its employees or agents, Tenant shall, without waiving any other rights that it may have at law or in equity, deduct from Rent

amounts due under this Lease an amount equal to fifty and no/100 dollars per day for each day that Access is impeded or denied. Access to Landlord facilities beyond the Lease Area, including but not limited to the water reservoir site and the water reservoir, require 48 hours notice to the Water Division Supervisor of the City of Auburn Water Utility (phone: 253-931-3066). Access to Landlord facilities will only occur with Landlord supervision. Tenant agrees to reimburse Landlord for Landlord expenses attributed to supervising Tenant while accessing Landlord facilities. The hourly rate for Landlord supervision during City standard office hours will be $32.50 per hour in calendar year 2006. The hourly rate shall increase annually on January 1st over the hourly rate payable the preceding year by not less than three and one half percent (3.5%) or the CPI – Urban for the Seattle / Tacoma area whichever is the greater, unless a different hourly rate amount is negotiated.

8. Termination. Except as otherwise provided herein, this Lease may be terminated, without any penalty or further liability as follows:

(a) upon thirty (30) days' written notice by Landlord if Tenant fails to cure a default for payment of amounts due under this Lease within that thirty (30) day period;

(b) immediately if Tenant is unable to obtain, maintain, or otherwise forfeits or cancels any license (including, without limitation, an FCC license), permit or any Governmental Approval necessary to the installation and/or operation of the Antenna Facilities or Tenant's business;

(c) upon ninety (90) days' written notice by Tenant if the Lease Area or the Antenna Facilities are, or become unacceptable under Tenant's design or engineering specifications for its Antenna Facilities or the communications system to which the Antenna Facilities belong;

(d) immediately upon written notice by Tenant if the Lease Area or the Antenna Facilities are destroyed or damaged so as in Tenant's reasonable judgment to substantially and adversely affect the effective use of the Antenna Facilities. In such event, all rights and obligations of the parties shall cease as of the date of the damage or destruction, and Tenant shall be entitled to the reimbursement on a prorated basis of any Rent prepaid by Tenant. If Tenant elects to continue this Lease, then all Rent shall abate until the Lease Area and/or the Antenna Facilities are restored to the condition existing immediately prior to such damage or destruction; or

(e) at the time title to the Property transfers to a condemning authority, pursuant to a taking of all or a portion of the Property sufficient in Tenant's determination to render the Lease Area unsuitable for Tenant's use. Landlord and Tenant shall each be entitled to pursue their own separate awards with respect to such taking.

(f) Landlord may terminate this Lease if Landlord needs the Lease Area for expansion of Landlord's responsibility to provide its services, and Landlord has no reasonable or economical alternative site available, provided Landlord provides Tenant written notice twelve (12) months in advance of Landlord's need to re-establish Landlord's sole use of the Lease Area. Upon Tenant's receipt of written notice, Tenant shall have six (6) months to submit to Landlord alternative locations for its Antenna Facilities. Such alternative locations may be on the Property or other properties owned or managed by Landlord. Landlord shall evaluate such alternatives and advise Tenant in writing if one or more of the alternatives is suitable to accommodate Tenant's Antenna Facilities. To be a suitable alternative location, such location will not unreasonably result in any interruption of the communications service of Tenant on Landlord's Property; nor will it impair, or in any manner alter, the quality of communications service provided by Tenant on and from Landlord's owned or managed properties. Tenant shall submit additional relevant information to assist the Landlord in making such evaluation. Landlord shall give each alternative location proposed by Tenant full and fair consideration, within a reasonable time so as to allow for the relocation work to be performed in a timely manner. If, in Tenant's reasonable judgment, no suitable alternative location can be found, Tenant shall remove its Antenna Facilities as otherwise provided in this Section 3 (c) of this Lease. If an alternative location for Tenant's Antenna Facilities is found,

Landlord and Tenant agree to enter into a new Lease Agreement with the same terms and conditions of this Lease.

(g) If, during the term of this Lease there is a determination made pursuant to an official unappealable order of the Federal Communications Commission or any other applicable law, order, ordinance, regulation, directive, or standard as stated above that use of the Antenna Facilities by the Tenant poses a human health hazard which cannot be remediated, then (a) Tenant shall immediately cease all operations of the Antenna Facilities, and (b) the Lease shall terminate as of the date of such order without further liability. If for reasons related to public health, safety or welfare, Landlord determines that this Lease must be terminated, then Landlord reserves rights of unilateral termination and will do so by providing Tenant with a six (6) month written notice.

9. Default and Right to Cure. Notwithstanding anything contained herein to the contrary and without waiving any other rights granted to it at law or in equity, each party shall have the right, but not the obligation, to terminate this Lease on written notice pursuant to Section 13 hereof, to take effect immediately, if the other party (i) fails to perform any covenant for a period of thirty (30) days after receipt of written notice thereof to cure or (ii) commits a material breach of this Lease and fails to diligently pursue such cure to its completion after sixty (60) days' written notice to the defaulting party.

10. Taxes. Landlord shall pay when due all real property taxes or other fees and assessments for the Property, including the Lease Area. In the event that Landlord fails to pay any such real property taxes or other fees and assessments, Tenant shall have the right, but not the obligation, to pay such owed amounts and deduct them from Rent amounts due under this Lease. Notwithstanding the foregoing, Tenant shall pay any personal property tax, State leasehold tax, excise tax, real property tax or any other tax or fee which are directly attributable to the presence or installation of Tenant's Antenna Facilities, only for so long as this Lease has not expired of its own terms or is not terminated by either party. Landlord hereby grants to Tenant the right to challenge, whether in a Court, Administrative Proceeding, or other venue, on behalf of Landlord and/or Tenant, any personal property or real property tax assessments, State leasehold tax or excise tax that may affect Tenant. If Landlord receives notice of any personal property or real property tax assessment, State leasehold tax or excise tax against the Landlord, which may affect Tenant and is directly attributable to Tenant's installation, Landlord shall provide timely notice of the assessment to Tenant sufficient to allow Tenant to consent to or challenge such assessment. Further, Landlord shall provide to Tenant any and all documentation associated with the assessment and shall execute any and all documents reasonably necessary to effectuate the intent of this Section.

11. Indemnification.

(a) Tenant shall defend, indemnify, and hold harmless the Landlord, its officers, officials, employees and volunteers from and against any and all claims, suits, actions, or liabilities for injury or death of any person, or for loss or damage to property, which arises out of Tenant's use of Premises, or from the conduct of Tenant's business, or from any activity, work or thing done, permitted, or suffered by Tenant in or about the Premises, except only such injury or damage as shall have been occasioned by the sole negligence of the Landlord.

(b) Should a court of competent jurisdiction determine that this Lease is subject to RCW 4.24.115, then, in the event of liability for damages arising out of bodily injury to persons or damages to property caused by or resulting from the concurrent negligence of the Tenant and the Landlord, its officers, officials, employees and volunteers, the Landlord's liability hereunder shall be only to the extent of the Landlord's negligence. It is further specifically and expressly understood that the indemnification provided herein constitutes the Tenant's waiver of immunity under Industrial Insurance, Title 51 RCW, solely for the purposes of this indemnification. This

waiver has been mutually negotiated by the parties. The provisions of this section shall survive the expiration or termination of this Lease.

(c) The Tenant and the City waive all rights against each other, any of their Subcontractors, Sub-subcontractors, agents and employees, each of the other, for damages caused by fire or other perils to the extend covered by Builders Risk insurance or other property insurance obtained pursuant to the Insurance Requirements Section of this Lease or other property insurance applicable to the work. The policies shall provide such waivers by endorsement or otherwise.

12. Insurance.

The Tenant shall procure and maintain for the duration of the Lease, insurance against claims for injuries to persons or damage to property which may arise from or in connection with the performance of the work hereunder by the Tenant, its agents, representatives, or employees.

(a) Minimum Scope of Insurance. Tenant shall obtain insurance of the types described below:

(1) Automobile Liability insurance covering all owned, non-owned, hired, and leased vehicles. Coverage shall be written on Insurance Services Office (ISO) form CA 00 01 or a substitute form providing equivalent liability coverage. If necessary, the policy shall be endorsed to provide contractual liability coverage.

(2) Commercial General Liability insurance shall be written on ISO occurrence form CG 00 01 and shall cover liability arising from premises, operations, independent tenants, products-completed operations, stop gap liability, and personal injury and advertising injury and liability assumed under an insured contract. The Commercial General Liability insurance shall be endorsed to provide the Aggregate Per Project Endorsement ISO form CG 25 03 11 85. There shall be no endorsement or modification of the Commercial General Liability insurance for liability arising from explosion, collapse, or underground property damage. The Landlord shall be named as an additional insured under the Tenant's Commercial General Liability insurance policy with respect to the work performed for the Landlord using ISO Additional Insured Endorsement CG 20 10 10 01 and Additional Insured-Completed Operations endorsement CG 20 37 10 01 or substitute endorsements providing equivalent coverage.

(3) Workers' Compensation coverage as required by the Industrial Insurance laws of the State of Washington.

(b) Minimum Amounts of Insurance. Tenant shall maintain the following insurance limits:

(1) Automobile Liability insurance with a minimum combined single limit for bodily injury and property damage of $1,000,000 per accident.

(2) Commercial General Liability insurance shall be written with limits no less than $1,000,000 each occurrence, $2,000,000 general aggregate and a $2,000,000 products-completed operations aggregate limit.

(c) Other Insurance Provisions. The insurance policies are to contain, or be endorsed to contain, the following provisions for Automobile Liability, Professional Liability, and Commercial General Liability insurance:

(1) The Tenant's insurance coverage shall be primary insurance as respects the Landlord. Any insurance, self-insurance, or insurance pool coverage maintained by the Landlord shall be in excess of the Tenant's insurance and shall not contribute with it.

(2) The Tenant's insurance shall be endorsed to state that coverage shall not be cancelled by either party except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to the Landlord.

(d) Acceptability of Insurers. Insurance is to be placed with insurers with a current A.M. Best rating of not less than A:VII.

(e) Verification of Coverage. The Tenant shall furnish the Landlord with documentation of insurer's A.M. Best rating and with original certificates and a copy of amendatory endorsements, including but not necessarily limited to the additional insured endorsement, evidencing the insurance requirements of the Consultant before commencement of the work.

(f) Subcontractors. The Tenant shall include all subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for each subcontractors. All coverages for subcontractors shall be subject to all of the same insurance requirements as stated herein for the Tenant.

(g) No Limitation. Tenant's maintenance of insurance as required by the Lease shall not be construed to limit the liability of the Tenant to the coverage provided by such insurance, or otherwise limit the Landlord's recourse to any remedy available at law or in equity.

13. Notices. All notices, requests, demands and other communications shall be in writing and are effective three (3) days after deposit in the U.S. mail, certified and postage paid, or upon receipt if personally delivered or sent by next-business-day delivery via a nationally recognized overnight courier to the addresses set forth below. Landlord or Tenant may from time to time designate any other address for this purpose by providing written notice to the other party.

If to Tenant, to:

Clearwire LLC
Attn: Site Property Manager
5808 Lake Washington Blvd NE, Suite 300
Kirkland, WA 98033
Telephone: 425-216-7600
Fax: 425-216-7900

With a copy to:

Clearwire LLC
Attention: Legal Department
5808 Lake Washington Blvd NE, Suite 300
Kirkland, WA 98033
Telephone: 425-216-7600
Fax: 425-216-7900

If to Landlord, to:

Public Works Director
City of Auburn
25 West Main St.
Auburn, WA 98001

With a copy to:

City Attorney
City of Auburn
25 West Main St.
Auburn, WA 98001

14. Quiet Enjoyment, Title and Authority. Landlord covenants and warrants to Tenant that (i) Landlord has full right, power and authority to execute this Lease; (ii) it has good and unencumbered title to the Property free and clear of any liens or mortgages, except those disclosed to Tenant and which will not interfere with Tenant's rights to or use of the Lease Area; and (iii) execution and performance of this Lease will not violate any laws, ordinances, covenants, or the provisions of any mortgage, lease, or other agreement binding on Landlord.

15. Environmental Laws. Landlord represents that it has no knowledge of any substance, chemical or waste (collectively, "Hazardous Substance") on the Property that is identified as hazardous, toxic or dangerous in any applicable federal, state or local law or regulation. Landlord and Tenant shall not introduce or use any Hazardous Substance on the Property in violation of any

applicable law. Landlord shall be responsible for, and shall promptly conduct any investigation and remediation as required by any applicable environmental laws, for all spills or other releases of any Hazardous Substance not caused in whole or in part by Tenant, that have occurred or which may occur on the Property. Each party agrees to defend, indemnify and hold harmless the other from and against any and all administrative and judicial actions and rulings, claims, causes of action, demands and liability (collectively, "Claims") including, but not limited to, damages, costs, expenses, assessments, penalties, fines, losses, judgments and reasonable attorney fees that the indemnitee may suffer or incur due to the existence or discovery of any Hazardous Substances on the Property or the migration of any Hazardous Substance to other properties or the release of any Hazardous Substance into the environment (collectively, "Actions"), that relate to or arise from the indemnitor's activities on the Property. Landlord agrees to defend, indemnify and hold Tenant harmless from Claims resulting from Actions on the Property not caused by Landlord or Tenant prior to and during the Initial Term and any Renewal Term of this Lease. The indemnifications in this section specifically include, without limitation, costs incurred in connection with any investigation of site conditions or any cleanup, remedial, removal or restoration work required by any governmental authority. This Section 15 shall survive the termination or expiration of this Lease.

16. Assignment and Subleasing.

(a) The Tenant may not sublease any portion of the Lease Area, or grant any rights to the Lease Area to any third parties except as specifically set for in this Lease.

(b) All of the terms and provisions contained herein shall inure to the benefit of and shall be binding upon the parties hereto and their respective heirs, legal representatives, successors and assigns. This Lease shall not be assigned by Tenant without the express written consent of Landlord, which consent shall not be unreasonably withheld, delayed or conditioned. Any attempted assignment in violation of this Section shall be void. The transfer of the rights and obligations of Tenant to a parent, subsidiary, or other affiliate of Tenant, or to any successor-in-interest or entity acquiring fifty-one percent (51%) or more of Tenant's stock or assets, shall not be deemed an assignment. Tenant shall give to Landlord thirty (30) days' prior written notice of any such transfer.

(c) Additionally, Tenant may, upon notice to Landlord, mortgage or grant a security interest in this Lease and the Antenna Facilities, and may assign this Lease and the Antenna Facilities to any mortgagees or holders of security interests, including their successors or assigns (collectively "Mortgagees"), provided such Mortgagees agree to be bound by the terms and provisions of this Lease. In such event, Landlord shall execute such consent to leasehold financing as may reasonably be required by Mortgagees. Landlord agrees to notify Tenant and Tenant's Mortgagees simultaneously of any default by Tenant and to give Mortgagees the same right to cure any default as Tenant or to remove any property of Tenant or Mortgagees located on the Lease Area, except that the cure period for any Mortgagees shall not be less than thirty (30) days after receipt of the default notice, as provided in Section 9 of this Lease. All such notices to Mortgagees shall be sent to Mortgagees at the address specified by Tenant. Failure by Landlord to give Mortgagees such notice shall not diminish Landlord's rights against Tenant, but shall preserve all rights of Mortgagees to cure any default and to remove any property of Tenant or Mortgagees located on the Lease Area.

17. Removal of Antenna Facilities. The Antenna Facilities are and shall remain the property of the Tenant and upon the expiration or earlier termination of this Lease, Tenant shall, at Tenant's sole cost and expense, remove the Antenna Facilities and restore the Lease Area to its original condition, normal wear and tear and loss due to casualty or other causes beyond Tenant's control excluded.

18. Miscellaneous.

(a) The substantially prevailing party in any litigation, including any arbitration to which the parties shall submit, arising hereunder shall be entitled to its reasonable attorneys' fees and court costs, including appeals, if any.

(b) This Lease constitutes the entire agreement and understanding of the parties, and supersedes all offers, negotiations and other agreements. There are no representations or understandings of any kind not set forth herein. Any amendments to this Lease must be in writing and executed by both parties. At such time as the Auburn City Council approves any regulation affecting telecommunications, Tenant agrees to amend this Lease, as determined by the Landlord in order to comply with any future ordinance related to telecommunications provided, however, that in no event shall such regulation (i) materially interfere with or affect Tenant's operation of its Antenna Facilities; or (ii) increase Tenant's financial obligations under the terms of this Lease, except as provided herein, or impose some new financial obligations not already contemplated by this Lease. No amendment, change or modification of this Lease shall be valid, unless in writing and signed by all parties hereto.

(c) Each party agrees to cooperate with the other in executing any documents (including a Memorandum of Lease in substantially the form attached hereto as Exhibit A) necessary to protect its rights or use of the Lease Area. The Memorandum of Lease may be recorded in place of this Lease by either party. In the event the Property is encumbered by a mortgage or deed of trust, Landlord agrees, upon request of Tenant, to obtain and furnish to Tenant a non-disturbance and attornment agreement for each such mortgage or deed of trust, in a form reasonably acceptable to Tenant. Tenant may obtain title insurance on its interest in the Lease Area.

(d) This Lease shall be construed in accordance with the laws of the state in which the Property is located.

(e) If any term of this Lease is found to be void or invalid, such finding shall not affect the remaining terms of this Lease, which shall continue in full force and effect. The parties agree that if any provisions are deemed not enforceable, they shall be deemed modified to the extent necessary to make them enforceable. No provision of this Lease will be deemed waived by either party unless expressly waived in writing signed by the waiving party. No waiver shall be implied by delay or any other act or omission of either party. No waiver by either party of any provision of this Lease shall be deemed a waiver of such provision with respect to any subsequent matter relating to such provision.

(f) The persons who have executed this Lease represent and warrant that they are duly authorized to execute this Lease in their individual or representative capacity as indicated.

(g) This Lease may be executed in any number of counterpart copies, each of which shall be deemed an original, but all of which together shall constitute a single instrument.

(h) All Exhibits referred to herein and any Addenda are incorporated herein for all purposes. The parties understand and acknowledge that Exhibit A (Memorandum of Lease) is attached to this Site Lease Agreement. The terms of all Exhibits are incorporated herein for all purposes.

(i) If Landlord is represented by any broker or any other leasing agent, Landlord is responsible for all commission fees or other payment to such agent, and agrees to indemnify and hold Tenant harmless from all claims by such broker or anyone claiming through such broker. If Tenant is represented by any broker or any other leasing agent, Tenant is responsible for all commission fee or other payment to such agent, and agrees to indemnify and hold Landlord harmless from all claims by such broker or anyone claiming through such broker.

19. Headings. The caption and paragraph headings used in this Lease are inserted for convenience of reference only and are not intended to define, limit or affect the interpretation or construction of any term or provision hereof.

20. Liens. Except with respect to activities for which Landlord is responsible, Tenant shall pay as due all claims for work done on, and for services rendered or material furnished to, the Antenna Facility, and shall keep the Antenna Facility free from all liens.

LANDLORD: City of Auburn

By: _____
Peter B. Lewis, Mayor

Date: MAY 1 2006

Taxpayer ID Number: 91-6001228

TENANT: Clearwire LLC, a Nevada limited liability company

By: _____
Print Name: John Saw
Its: VP
Date: 5/12/06

(acknowledgements to follow on next page)

STATE OF WA)
) ss.
COUNTY OF KING)

I certify that I know or have satisfactory evidence that Peter B Lewis is the person who appeared before me, and said person acknowledged that he signed this instrument, on oath stated that he was authorized to execute the instrument and acknowledged it as the Mayor, of City of Auburn, to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

Dated: May 1, 2006

Daniel E Daskam
Notary Public
Print Name Danielle E Daskam
residing at Enumclaw
My commission expires 10-25-07

DANIELLE E. DASKAM NOTARY PUBLIC COMMISSION EXPIRES 10-25-07 STATE OF WASHINGTON

(Use this space for notary stamp/seal)

STATE OF Washington)
) ss.
COUNTY OF King)

I certify that I know or have satisfactory evidence that John Saw is the person who appeared before me, and said person acknowledged that he signed this instrument, on oath stated that he was authorized to execute the instrument and acknowledged it as the VP, of Clearwire, the limited liability company, to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

Dated: May 2, 2006

Rachel Nessa Titus
Notary Public
Print Name Rachel Nessa Titus
residing at Seattle
My commission expires 9/19/09

RACHEL NESSA TITUS NOTARY PUBLIC COMMISSION EXPIRES 9-19-09 STATE OF WASHINGTON

(Use this space for notary stamp/seal)

Exhibit A

MEMORANDUM OF LEASE

to the Site Lease Agreement executed on the 1st day of May, 2006, by and between the City of Auburn, as Landlord, and Clearwire, as Tenant.

(MOL to follow on next page)

Return to:

Auburn City Clerk
25 West Main Street
Auburn, WA 98001

MEMORANDUM
OF
LEASE

THIS MEMORANDUM OF LEASE is by and between the City of Auburn, a municipal corporation under the existing laws of the State of Washington, having a mailing address of 25 West Main, Auburn, WA 98001 ("Landlord") and Clearwire LLC ("Tenant").

1. Landlord and Tenant entered into a certain Site Lease Agreement ("Lease") on the 1st day of May, 2006, for the purpose of installing, operating and maintaining a communications facility and other improvements. All of the foregoing are set forth in the Lease.

2. Landlord is leasing to Tenant a portion of the Property described in Exhibit 1 annexed hereto.

3. The initial term of the five (5) years commences on September 1, 2005. The Lease will automatically renew for five (5) separate consecutive periods of five (5) years each upon the same terms and conditions of the Lease, unless Tenant notifies Landlord in writing of Tenant's intention not to renew the Lease at least ninety (90) days prior to the expiration of the existing term. Unless earlier terminated, the Lease will expire on August 31, 2035.

4. This Memorandum of Lease is not intended to amend or modify, and shall not be deemed or construed as amending or modifying, any of the terms, conditions or provisions of the Lease, all of which are hereby ratified and affirmed. In the event of a conflict between the provisions of this Memorandum of Lease and the provisions of the Lease, the provisions of the Lease shall control.

5. The Lease shall be binding upon and inure to the benefit of the parties and their respective heirs, successors, and assigns, subject to the provisions of the Lease.

IN WITNESS WHEREOF, the parties have executed this Memorandum of Lease as of the day and year first above written.

LANDLORD: City of Auburn

By: _____
Peter B. Lewis
Its: Mayor
Date: MAY 1 2006

Taxpayer ID Number: 91-6001228

TENANT:

By: _____
Print Name: John Saw
Its: VP
Date: 5/12/06

(acknowledgements to follow on next page)

STATE OF WA)
) ss.
COUNTY OF KING)

I certify that I know or have satisfactory evidence that Peter B. Lewis is the person who appeared before me, and said person acknowledged that he signed this instrument, on oath stated that he was authorized to execute the instrument and acknowledged it as the Mayor, of City of Auburn, to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

Dated: May 1, 2006

Danielle E. Daskam
Notary Public
Print Name Danielle E Daskam
residing at Enumclaw
My commission expires 10-25-07

DANIELLE E. DASKAM NOTARY PUBLIC COMMISSION EXPIRES 10-25-07 STATE OF WASHINGTON

(Use this space for notary stamp/seal)

STATE OF Washington)
) ss.
COUNTY OF King)

I certify that I know or have satisfactory evidence that John Sahr is the person who appeared before me, and said person acknowledged that he signed this instrument, on oath stated that he was authorized to execute the instrument and acknowledged it as the VP, of Clearwire, the limited liability company, to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

Dated: 5/12/06

Rachel Nessa Titus
Notary Public
Print Name Rachel Nessa Titus
residing at Seattle
My commission expires 9/19/09

RACHEL NESSA TITUS NOTARY PUBLIC COMMISSION EXPIRES 9-19-09 STATE OF WASHINGTON

(Use this space for notary stamp/seal)

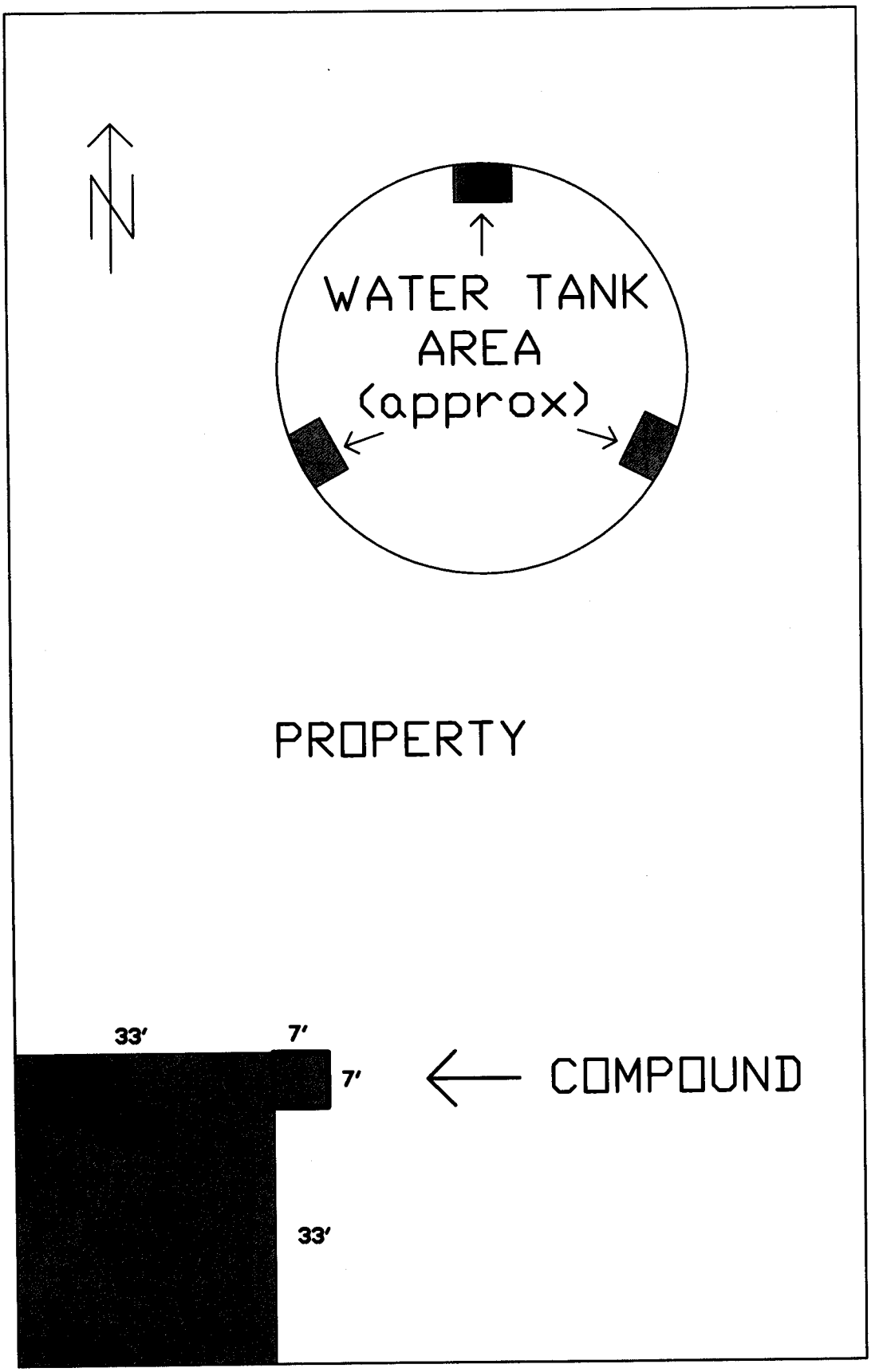


Exhibit 1 - Description of Lease Area

84-3121-85 (1710)
A-3-17 Public Works

20060714002416
PACIFIC NW TIT MEMO 37.00
PAGE001 OF 006
07/14/2006 15:57
KING COUNTY, WA

Return Address:
Auburn City Clerk
City of Auburn
25 West Main St.
Auburn, WA 98001

RECORDER'S COVER SHEET

Document Title(s) (or transactions contained therein):

6/37

Memorandum of Lease

Reference Number(s) of Documents assigned or released: PNWT-W4295-12
☐Additional reference #'s on page _____ of document

Grantor(s)/Borrower(s) (Last name first, then first name and initials)

City of Auburn

Grantee/Assignee/Beneficiary: (Last name first)
1. Clearwire LLC

Legal Description (abbreviated: i.e. lot, block, plat or section, township, range)

South 175 feet of east 110 feet of the west 1,393 feet of SE ¼ of Section 31, Township 21 North, Range 5 East

☒ Additional legal is on page 5 of document.

Assessor's Property Tax Parcel/Account Number
3121059047

☐ Assessor Tax # not yet assigned

Said document(s) were filed for record by Pacific Northwest Title as accommodation only. It has not been examined as to proper execution or as to its affect upon title.

Return to:

Auburn City Clerk
25 West Main Street
Auburn, WA 98001

MEMORANDUM
OF
LEASE

THIS MEMORANDUM OF LEASE is by and between the City of Auburn, a municipal corporation under the existing laws of the State of Washington, having a mailing address of 25 West Main, Auburn, WA 98001 ("Landlord") and Clearwire LLC ("Tenant").

1. Landlord and Tenant entered into a certain Site Lease Agreement ("Lease") on the 1st day of May, 2006, for the purpose of installing, operating and maintaining a communications facility and other improvements. All of the foregoing are set forth in the Lease.

2. Landlord is leasing to Tenant a portion of the Property described in Exhibit 1 annexed hereto.

3. The initial term of the five (5) years commences on September 1, 2005. The Lease will automatically renew for five (5) separate consecutive periods of five (5) years each upon the same terms and conditions of the Lease, unless Tenant notifies Landlord in writing of Tenant's intention not to renew the Lease at least ninety (90) days prior to the expiration of the existing term. Unless earlier terminated, the Lease will expire on August 31, 2035.

4. This Memorandum of Lease is not intended to amend or modify, and shall not be deemed or construed as amending or modifying, any of the terms, conditions or provisions of the Lease, all of which are hereby ratified and affirmed. In the event of a conflict between the provisions of this Memorandum of Lease and the provisions of the Lease, the provisions of the Lease shall control.

5. The Lease shall be binding upon and inure to the benefit of the parties and their respective heirs, successors, and assigns, subject to the provisions of the Lease.

IN WITNESS WHEREOF, the parties have executed this Memorandum of Lease as of the day and year first above written.

LANDLORD: City of Auburn

By: _____
Peter B. Lewis
Its: Mayor
Date: MAY 1 2006

Taxpayer ID Number: 91-6001228

TENANT:

By: _____
Print Name: John Saw
Its: VP
Date: 5/12/06

(acknowledgements to follow on next page)

STATE OF WA)
) ss.
COUNTY OF KING)

I certify that I know or have satisfactory evidence that Peter B. Lewis is the person who appeared before me, and said person acknowledged that he signed this instrument, on oath stated that he was authorized to execute the instrument and acknowledged it as the Mayor, of City of Auburn, to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

Dated: May 1, 2006

Danielle E. Daskam
Notary Public
Print Name Danielle E Daskam
residing at Enumclaw
My commission expires 10-25-07

DANIELLE E. DASKAM NOTARY PUBLIC COMMISSION EXPIRES 10-25-07 STATE OF WASHINGTON

(Use this space for notary stamp/seal)

STATE OF Washington)
) ss.
COUNTY OF King)

I certify that I know or have satisfactory evidence that John Saw is the person who appeared before me, and said person acknowledged that he signed this instrument, on oath stated that he was authorized to execute the instrument and acknowledged it as the VP, of Oceanire, the limited liability company, to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

Dated: 5/12/06

Rachel Nessa Titus
Notary Public
Print Name Rachel Nessa Titus
residing at Seattle
My commission expires 9/19/09

RACHEL NESSA TITUS NOTARY PUBLIC COMMISSION EXPIRES 9-19-09 STATE OF WASHINGTON

(Use this space for notary stamp/seal)

EXHIBIT 1

1. **DESCRIPTION OF PROPERTY**

The Property is described and/or depicted as follows:

THE SOUTH 175.00 FEET OF THE EAST 110.00 FEET OF THE WEST 1,393.00 FEET OF THE SOUTHEAST QUARTER OF SECTION 31, TOWNSHIP 21 NORTH, RANGE 5 EAST, W.M., CITY OF AUBURN, RECORDS OF KING COUNTY, WASHINGTON

2. **DESCRIPTION OF LEASE AREA**

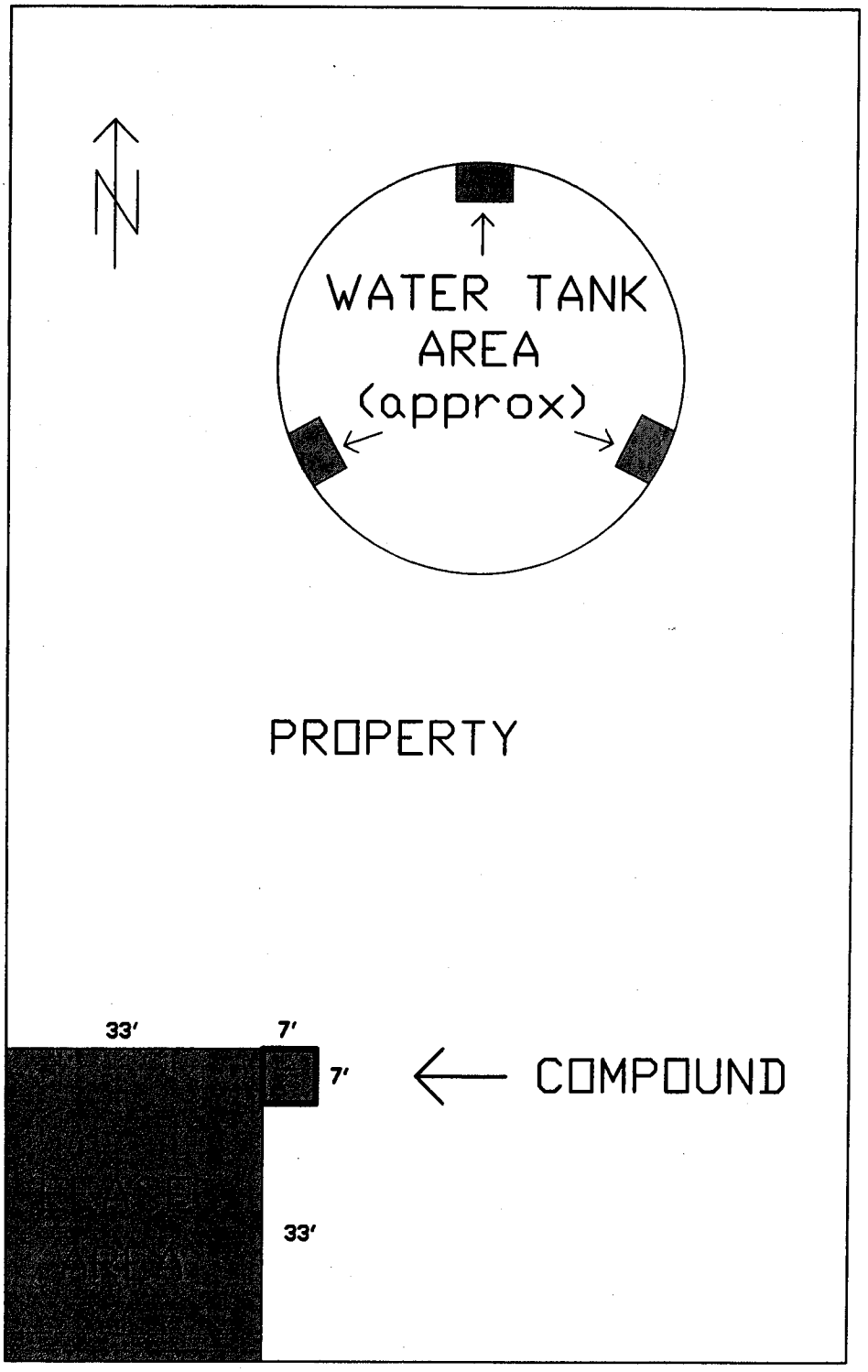


Exhibit 1 - Description of
Lease Area

RESOLUTION NO. 4039

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR AND CITY CLERK TO EXECUTE AN AGREEMENT BETWEEN THE CITY OF AUBURN AND THE WASHINGTON STATE DEPARTMENT OF ECOLOGY FOR COST REIMBURSEMENTS RELATING TO THE CITY'S WATER RIGHTS APPLICATION

WHEREAS, The City of Auburn has applied to the Department of Ecology for an additional water right for municipal water supply use; and

WHEREAS, the Department of Ecology will incur costs in processing the City's application, including fees paid to consultants to review certain aspects of the City's application; and

WHEREAS, the costs of processing such applications are born by the applicant; and

WHEREAS, it is in the public interest for the parties to enter into an agreement for the City to reimburse the Department of Ecology for its costs in processing the City's water rights application,

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN, KING COUNTY, WASHINGTON, HEREBY RESOLVES as follows:

Section 1. The Mayor of the City of Auburn and the Auburn City Clerk are hereby authorized to execute an Agreement between the City of Auburn and the Washington State Department of Ecology for cost reimbursements

relating to the city's water rights application, which agreement shall be in substantial conformity with the Agreement a copy of which is attached hereto, marked as Exhibit "A" and incorporated herein by this reference.

Section 2. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

Section 3. This resolution shall be in full force and affect upon passage and signatures hereon.

DATED and SIGNED this 5th day of June 2006.

CITY OF AUBURN

PETER B. LEWIS
Mayor

Attest:

Danielle E. Daskam
City Clerk

Approved as to Form:

Daniel B. Heid
City Attorney

Washington State Department of Ecology
Cost-Reimbursement Agreement (CRA)

Between the
Washington State Department of Ecology
and
City of Auburn

Water Right Application G1-28404;
CRA Project No.9R46

PART A
SPECIAL TERMS AND CONDITIONS AND SCOPE OF WORK

Current For: FY 2005-06

Contents:

		Page
I.	Applicant Information	1
II.	Ecology Information	2
III.	Performance Security	2
IV.	Scope Of Work – *Tasks, Budget Detail, Schedule*	2
V.	Effective Date	5
VI.	Entire Agreement And Signatures	5

I. Applicant Information

Project Manager/Primary Point of Contact

Name: Duane Huskey, Utility Engineer
Address: 25 West Main Street
City, State: Auburn, WA
Zip Code: 98001-4998
Telephone: 253-804-5062
E-mail: dhuskey@auburnwa.gov
Fax: 253-931-3053

Billing Address

Name: Same as Left
Address:
City, State:
Zip Code:
Telephone:
E-Mail:
Fax:

II. Ecology Information

Project Manager/Primary Point of Contact:

Name: Jim Roth
Address: PO Box 47615
City, State, Zip: Olympia, WA, 98504-7615
Telephone #: 360-407-7036
E-mail: JROT461@ECY.WA.GOV
Fax: 360-407-7153

III. Performance Security

Performance Security Option Selected, Dollar Amount, And, If Applicable, Holding Institution (Pursuant To Section II.B.6. Of Part B – General Terms And Conditions):

Performance Security Option of $10,000 in an interest bearing account.

IV. Scope Of Work - *Tasks, Budget Detail, Schedule*

The City of Auburn is applying for an additional water right for municipal water supply use. The City of Auburn has submitted one application for a new groundwater right, G1-28404, requesting 12,500 gallons per minute (gpm) of instantaneous use, with an annual requested quantity of 13,443 acre-feet per year.

Ecology's consultant, Geomatrix, will be tasked to complete the water-right processing Phase I work establishing senior water right applications that would be considered in the 'same source of supply' as the City's application, thus requiring processing in accordance with RCW 90.03.265. In conducting this determination, Geomatrix will define the source of water that the City of Auburn proposes using for municipal water supply and the universe of applications requiring processing based on the following considerations:

- Hydraulic continuity between points of withdrawal;
- Sharing of a common recharge (catchment) area;
- Sharing of a common flow regime; and
- Isolation from other sources by the presence of effective barriers to hydraulic flow.

Sources of information for the 'same source of supply' determination will include area topography, geologic structures, well log review, area water level measurements, aquifer characteristics, and other information such as available groundwater modeling studies (see Task 1 below).

Consistent with the provisions of Part B — General Terms and Conditions as well as the provisions of RCW 43.21A.690 and RCW 90.03.265, the following describes the specific tasks, budget detail, and schedule for the scope of work to be performed by Ecology and its consultant, Geomatrix, to be subsequently reimbursed by the City of Auburn pursuant to this CRA.

Accordingly, the Parties signatory to this Agreement agree:

Phase I
Reimbursable Tasks with Associated Budget Detail and Schedule

Task 1: Water Right Application Review and Data Gap Summary. This task will include:

- Review of hydrologic and hydrogeologic data from the files available through Ecology, the City of Auburn, the City's consultant, and other sources;
- Determination of senior applicants in the same source of water supply, preparation of a technical memorandum summarizing the same source determination, and assembly of a final list of senior applications requiring processing;
- Review of City of Auburn's and senior water right application files to identify intent, available supporting information, and potential data gaps;
- Review conceptual mitigation options proposed by the City of Auburn, and meet with applicant and Ecology to discuss comments. It is assumed that final mitigation plans will not be submitted by the applicant until Phase II processing;
- Initial contact with senior applicants, including confirming the applicants' intent to pursue the water rights in question, and preparation of letters requesting any additional supporting information, including mitigation proposals;
- Attendance at meetings and participation in conference calls with Ecology staff in Bellevue and with the City and its consultant in Auburn, as requested; and
- Preparation of a memorandum Phase I report summarizing data gaps and issues to be resolved prior to completing ROEs for the set of applications requiring processing.

Task 2: Preparation of Scope of Work, Schedule, and Budget for Phase II. This task will include:

- Development of a scope of work to complete processing and preparation of ROEs water right applications submitted by the City of Auburn, as well as senior applicants within the same source of water.
- Development of the estimated schedule and budget for completion of the scope of work for Phase II.

Consultant Phase I Costs-

Phase 1 – Information Review and Associated Tasks:
Estimated Number of Consultant Hours = 363 Hours

- Estimated Consultant Cost = $ 49,843.00
- Estimated Phase I Completion Date = 12 Weeks From Effective Date
-

Ecology Direct and Backfill Cost–

- Estimated Number of Ecology Hours to be Billed to Applicant for Direct Work on Project = 50 Hours
- Estimated Ecology Costs to be Billed to Applicant for Direct Work on Project = $ 2,750
- Estimated Backfill Dollars Available for Backfill Consultant Cost = $4,000 (50 hours x $135/hr average consultant rate = [$6,750- $2,750 (Ecology direct cost)] = $4,000.

Phase 1 Informational Task, Budget, and Schedule Summary

Tasks	Budget	Schedule
A. Phase I	$ 49,843	12 weeks from Ecology Signature of Geomatrix Work Assignment
B. Ecology Direct Costs	$ 2,750	
C. Ecology Backfill Costs	$ 4,000	
TOTAL	$ 56,593	

Notes:

1. Total Budget Phase I $ 56,593
2. Cost Reimbursement End Date = June 30, 2007
3. Informational task, budget, and schedule summary presented here is for informational purposes only. Ecology tracks and manages task, budget, and schedule.
4. A formal written and signed amendment to this CRA is required to extend the total project budget amount or final completion date stated herein.

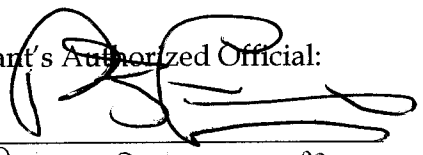
V. Effective Date

The effective date of this CRA, as well as any formal written and signed amendment, is the date of signature by the Washington State Department of Ecology.

VI. Entire Agreement And Signatures

The Parties hereto have agreed to the tasks, budget detail, and schedule described herein Part A. This entire agreement, consisting of Part A — Special Terms and Conditions and Scope of Work, Part B — General Terms and Conditions, and any formal written and signed amendment, can only be modified by a subsequent formal written and signed amendment as described in Section II.E.3. of Part B — General Terms and Conditions.

Applicant's Authorized Official:

By: 
Title: Peter B Lewis, Mayor
Date: June 5, 2006
Address: 25 W. Main St.
City, State, Zip: Auburn WA 98001
Telephone #: 253-931-3041
E-mail: plewis@auburnwa.gov
Fax: 253-288-3132

Ecology's Authorized Official:

By: Kenneth Slattery
Title: Program Manager
Date: 6/16/06
Address: P.O. Box 47600
City, State, Zip: Olympia, WA. 98504
Telephone #: 360-407-6600
E-mail:
Fax: 360-407-7153

RESOLUTION NO. 3920

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR TO EXECUTE AN INTERLOCAL AGREEMENT ESTABLISHING WATER SERVICE BOUNDARIES BETWEEN THE CITY OF KENT, KING COUNTY WATER DISTRICT NO. 111, AND THE CITY OF AUBURN

WHEREAS, pursuant to RCW 35.A.11.040, Auburn has the legal authority to exercise its powers and perform any of its functions as set forth in RCW 39.34; and

WHEREAS, pursuant to Chapter 39.34 RCW, the Interlocal Cooperation Act, Auburn has the legal authority to cooperate with other localities and utilities on the basis of mutual advantage and the efficient provision of municipal services; and

WHEREAS, pursuant to Chapter 39.34 RCW, the Interlocal Cooperation Act, Kent has the legal authority to cooperate with other localities and utilities on the basis of mutual advantage and the efficient provision of municipal services; and

WHEREAS, pursuant to Chapter 39.34 RCW, the Interlocal Cooperation Act, WD #111 has the legal authority to cooperate with other localities and utilities on the basis of mutual advantage and the efficient provision of municipal services; and

WHEREAS, the parties recognize the responsibility of public water utilities to provide efficient and reliable service to their customers at reasonable cost; and

WHEREAS, Kent owns, and desires to be the water service provider for a property currently within the corporate limits of Kent, and within the service areas of Auburn and WD #111; and

WHEREAS, pursuant to Chapter 70.116 RCW, Public Water System Coordination Act, the Parties determined and agreed upon the water service areas between the Parties as set forth in the South King County Coordinated Water System Plan ("Plan") and the Parties now desire to modify their water service area boundaries as agreed in this Agreement.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, HEREBY RESOLVES as follows:

Section 1. The Mayor of the City of Auburn is herewith authorized to execute a Water Service Boundary Agreement between the City of Kent, King County Water District No. 111, and the City of Auburn in substantial conformity with the agreement attached hereto, marked as Exhibit "A" and incorporated herein by this reference.

Section 2. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

Section 3. This resolution shall be in full force and effect upon passage and signatures hereon.

DATED this 5th day of September, 2006.

CITY OF AUBURN

PETER B. LEWIS
MAYOR

ATTEST:

Danielle E. Daskam,
City Clerk

APPROVED AS TO FORM:

Daniel B. Heid,
City Attorney

Return Address:
Auburn City Clerk
City of Auburn
25 West Main St.
Auburn, WA 98001

RECORDER'S COVER SHEET

Document Title(s) (or transactions contained therein):

Interlocal Agreement (Resolution No. 3920)

Reference Number(s) of Documents assigned or released:
☐Additional reference #'s on page _____ of document PNWT-W5083-12

10/4

Grantor(s)/Borrower(s) (Last name first, then first name and initials)
Auburn, City of

Grantee/Assignee/Beneficiary: (Last name first)
1. Kent, City of
2. King County Water District No. 111

Legal Description (abbreviated: i.e. lot, block, plat or section, township, range)

PER RCW 39.34

☐ Additional legal is on page of document.

Assessor's Property Tax Parcel/Account Number
N/A

☐ Assessor Tax # not yet assigned

Said document(s) were filed for record by Pacific Northwest Title as accommodation only. It has not been examined as to proper execution or as to its effect upon title.

EXHIBIT "A"

CITY OF KENT, KING COUNTY WATER DISTRICT NO. 111 and CITY OF AUBURN INTERLOCAL AGREEMENT ESTABLISHING WATER SERVICE BOUNDARIES

THIS AGREEMENT ("Agreement"), made and entered into this 5th day of September, 2006, by and between the **City of Kent**, a Washington municipal corporation ("Kent"), **King County Water District No. 111**, a Washington municipal corporation ("WD #111"), and the **CITY OF AUBURN**, a Washington municipal corporation, ("Auburn"), all being duly organized and existing under and by virtue of the laws of the State of Washington (individually a "Party" and collectively the "Parties).

WITNESSETH:

WHEREAS, pursuant to RCW 35.A.11.040, Auburn has the legal authority to exercise its powers and perform any of its functions as set forth in RCW 39.34; and

WHEREAS, pursuant to Chapter 39.34 RCW, the Interlocal Cooperation Act, Auburn has the legal authority to cooperate with other localities and utilities on the basis of mutual advantage and the efficient provision of municipal services; and

WHEREAS, pursuant to Chapter 39.34 RCW, the Interlocal Cooperation Act, Kent has the legal authority to cooperate with other localities and utilities on the basis of mutual advantage and the efficient provision of municipal services; and

WHEREAS, pursuant to Chapter 39.34 RCW, the Interlocal Cooperation Act, WD #111 has the legal authority to cooperate with other localities and utilities on the basis of mutual advantage and the efficient provision of municipal services; and

WHEREAS, the parties recognize the responsibility of public water utilities to provide efficient and reliable service to their customers at reasonable cost; and

WHEREAS, Kent owns, and desires to be the water service provider for a property currently within the corporate limits of Kent, and within the service areas of Auburn and WD #111; and

WHEREAS, pursuant to Chapter 70.116 RCW, Public Water System Coordination Act, the Parties determined and agreed upon the water service areas between the Parties as set forth in the South King County Coordinated Water System

Plan ("Plan") and the Parties now desire to modify their water service area boundaries as agreed in this Agreement.

NOW, THEREFORE, in consideration of the terms and conditions set forth herein, the Parties agree as follows:

1. Water Service Area. WD #111 and Auburn agree to relinquish to Kent the water service area depicted on the map attached hereto as Attachment 1 and legally described in Attachment 2, which are by this reference incorporated herein. The Parties agree that the South King County Coordinated Water System Plan and the water service area boundaries as set forth in the Plan shall be modified to be in accordance with the Parties' water service area boundaries as set forth in Attachment 1.

2. Management, Regulation and Control of Water System. Kent, WD #111 and Auburn shall have the sole responsibility and authority to construct, maintain, manage, conduct and operate their water systems within their designated water service areas as depicted in Attachment 1, together with any additions, extensions and betterments thereto.

3. Future Annexations. The Parties agree that Kent shall provide water service to the area depicted in Attachment 1 without regard to the present corporate boundaries of the Parties and without regard to future corporate boundaries as they may be periodically altered through annexation.

4. Kent Comprehensive Water Planning. The terms of this Agreement will be included as an amendment to Kent's Comprehensive Water System Plan. Kent will submit to Auburn and WD #111 its Comprehensive Water System Plans and amendments thereto.

5. WD #111 Comprehensive Water Planning. The terms of this Agreement will be included as an amendment to WD #111's Comprehensive Water Plan. WD #111 will submit to Kent and Auburn its Comprehensive Water System Plans and amendments thereto.

6. Auburn Comprehensive Water Planning. The terms of this Agreement will be included as an amendment to Auburn's Comprehensive Water Plan. Auburn will submit to Kent and WD #111 its Comprehensive Water System Plans and amendments thereto.

7. Reliance. Each Party hereto acknowledges that the terms hereof will be relied upon by the other in its comprehensive planning to meet the needs of the service area designated herein.

8. Liability. Except as set forth in Section 12 regarding default, failure to perform or negligent conduct, the Parties agree that this Agreement shall not be a source of liability between the Parties for any failure or interruption of service in the service area of any Party as designated in this Agreement.

9. Government Notifications. Auburn will give notice of the adoption of this Agreement to Metropolitan/King County, to the Washington State Department of Health, to the South King County Regional Water Association, to the Water Utility Coordinating Committee, and to any other agency with jurisdiction over, or interest in, the terms hereof, and the Parties shall cooperate and assist each other in all reasonable manner in procuring any necessary approvals hereof by those agencies.

10. Boundary Review Board. In the event that implementation of the terms herein result in permanent water service to areas that will be outside the respective service boundaries of Kent, WD #111 or Auburn, the Parties will, at the time of such service, jointly file a notice of intention with the King County Boundary Review Board in accordance with Chapter 36.93.090 RCW and Chapter 57.08.047 RCW.

11. Alteration, Amendment or Modification. Kent, WD #111 and Auburn hereby reserve the right to alter, amend or modify the terms and conditions of this Agreement only upon written agreement of the Parties to such alteration, amendment or modification.

12. Indemnification and Hold Harmless. Each Party hereto agrees to protect, defend, and indemnify the other Parties, their officers, officials, employees and agents from any and all cost, claims, judgments and/or awards of damages, arising out of or in any way resulting from the indemnifying Party's, its employees, subcontractors or agents default, failure of performance, or negligent conduct associated with this agreement. Each Party agrees that its obligations under this provision extend to any claim, demand, and/or cause of action brought by or on behalf of any of its employees, or agents. The foregoing indemnity is specifically and expressly intended to constitute a waiver of each Party's immunity under Washington's Industrial Insurance Act, RCW Title 51, as respects the other Parties only, and only to the extent necessary to provide each Party with a full and complete indemnity of claims made by the other Party's employees. The Parties acknowledge that these provisions were specifically negotiated and agreed upon by them.

13. Integration. This Agreement constitutes the entire agreement of the Parties regarding the subject matter hereof, and there are no other representations or oral agreements other than those listed herein, which vary the terms of this Agreement. Future agreements may occur between the Parties to transfer additional or future service areas by mutual agreement.

14. Obligation Intact. Nothing herein shall be construed to alter the rights, responsibilities, liabilities, or obligations of Kent, WD #111 or Auburn regarding provision of water service, except as specifically set forth herein.

15. Duration. This Agreement shall take effect on the last day approved by all of the Parties and shall remain in effect until modified by written agreement of the Parties.

16. Recording. Pursuant to RCW 39.34.040, following the approval and execution of this Agreement by the Parties, this Agreement shall be filed with the King County Auditor.

CITY OF KENT

Approved by Motion No. _____ of the City of Kent, Kent, Washington, at its regular meeting held on the 1st day of August, 2006.

By:

Suzette Cooke, Mayor
City of Kent

Approved as to form:

Kristin M. Lamson, Asst., City Attorney
City of Kent

KING COUNTY WATER DISTRICT NO. 111

Approved by Resolution No. _____ of the King County Water District No. 111, Kent, Washington, at its regular meeting held on the 8th day of June, 2006.

By:

Patrick Hanis, President
King County Water District No. 111

Approved as to form:

John W. Milne, General Counsel
King County Water District No. 111

CITY OF AUBURN

Approved by Resolution No. 3920 of the City of Auburn, Washington, at its regular meeting held on the 5th day of September, 2006.

By:

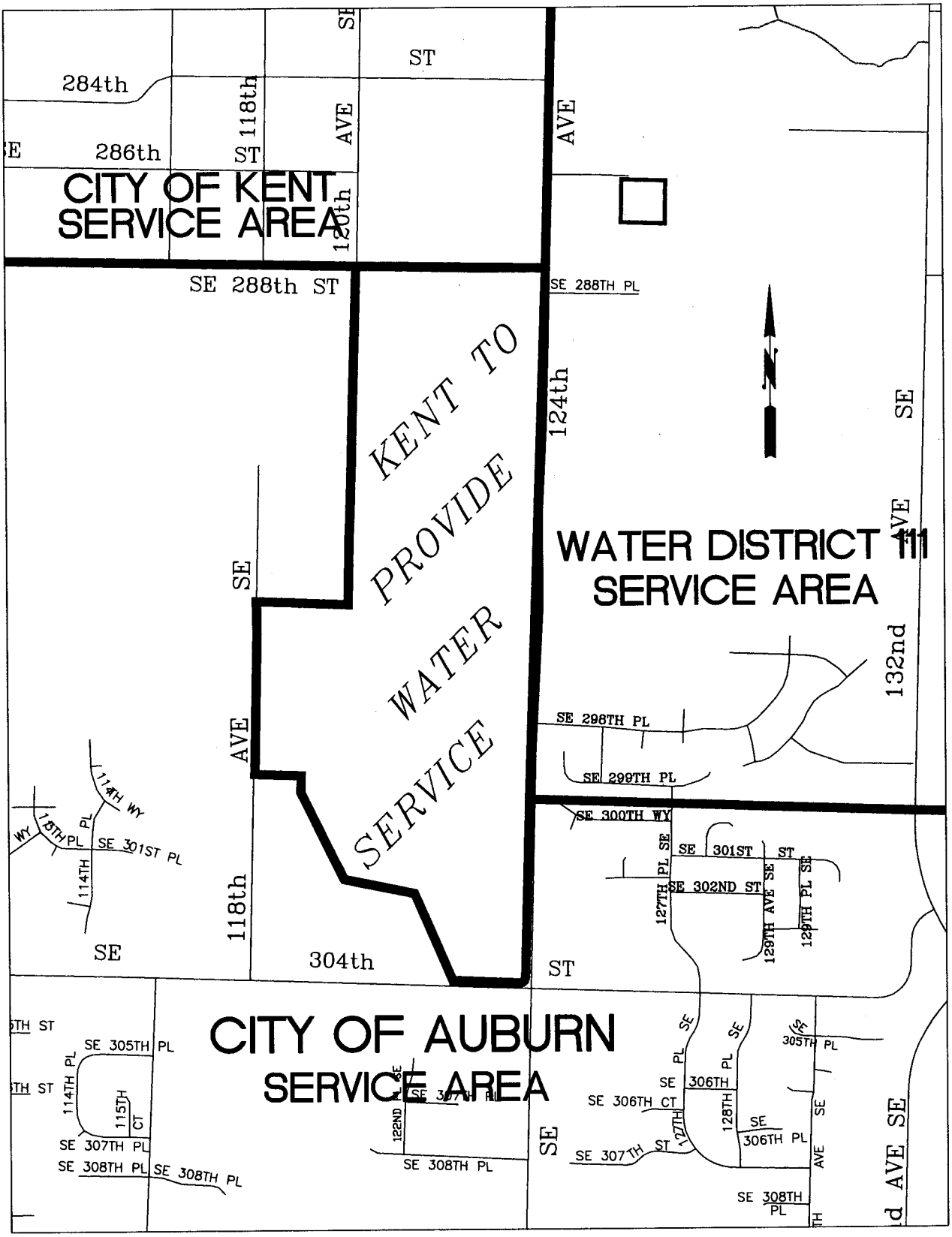
Peter B. Lewis, Mayor
City of Auburn

Attest:

Danielle Daskam, City Clerk

Approved as to form:

Daniel B. Heid, City Attorney



CITY OF KENT
KING COUNTY WATER DISTRICT NO. 111
AND CITY OF AUBURN
INTERLOCAL AGREEMENT ESTABLISHING
WATER SERVICE BOUNDARIES
ATTACHMENT 1

Attachment 2

Legal Description

THAT PORTION OF THE NORTHWEST QUARTER AND THE SOUTHWEST QUARTER OF SECTION 4, TOWNSHIP 21 NORTH, RANGE 5 EAST, W.M. IN KING COUNTY WASHINGTON, DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF GOVERNMENT LOT 3 IN SAID SECTION 4;

THENCE WEST ALONG THE NORTH LINE OF SAID GOVERNMENT LOT 3 A DISTANCE OF 30 FEET TO THE WEST MARGIN OF 124TH AVENUE SOUTHEAST AND THE TRUE POINT OF BEGINNING;

THENCE SOUTH ALONG SAID WEST MARGIN TO THE NORTHERLY MARGIN OF SOUTHEAST 304TH STREET;

THENCE WESTERLY ALONG SAID NORTHERLY MARGIN OF SE 304TH STREET TO THE SOUTHEAST CORNER OF THE PLAT OF CRYSTAL MEADOWS AS RECORDED IN VOLUME 194 OF PLATS AT PAGES 66 AND 67, RECORDS OF KING COUNTY;

THENCE NORTHWESTERLY ALONG THE NORTHEASTERLY EDGE OF SAID PLAT TO THE MOST NORTHERLY CORNER OF LOT 10 OF SAID PLAT;

THENCE WESTERLY ALONG THE NORTH EDGE OF SAID PLAT TO THE NORTHWEST CORNER OF LOT 15 OF SAID PLAT;

THENCE SOUTHERLY ALONG THE WEST LINE OF SAID LOT 15 TO A POINT 50 FEET NORTH OF THE SOUTHEAST CORNER OF TRACT 11 OF THE PLAT OF THE SOUND TRUSTEE COMPANY'S THIRD ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 13 OF PLATS AT PAGE 100, RECORDS OF KING COUNTY, WASHINGTON;

THENCE NORTHWESTERLY TO A POINT ON THE NORTH LINE OF THE SOUTH HALF OF SAID TRACT 11, SAID POINT LYING 135 FEET WEST OF THE EAST LINE OF SAID TRACT 11;

THENCE CONTINUING NORTHWESTERLY TO A POINT ON THE NORTH LINE OF SAID TRACT 11, SAID POINT LYING 313.36 FEET WEST OF THE NORTHEAST CORNER OF SAID TRACT 11;

THENCE WESTERLY ALONG THE LINE COMMON TO TRACTS 10 AND 11 OF SAID PLAT OF THE SOUND TRUSTEE COMPANY'S THIRD ADDITION TO THE SOUTHWEST CORNER OF THE EAST HALF OF THE SOUTH 120 FEET OF SAID TRACT 10;

THENCE NORTHERLY ALONG THE WEST LINE OF THE EAST HALF OF THE SOUTH 120 FEET OF SAID TRACT 10 TO THE NORTHWEST CORNER OF THE EAST HALF OF THE SOUTH 120 FEET OF SAID TRACT 10;

THENCE WEST ALONG THE NORTH LINE OF THE SOUTH 120 FEET OF SAID TRACT 10 TO THE WEST LINE OF SAID TRACT 10;

THENCE NORTH ALONG SAID WEST LINE OF SAID TRACT 10 AND THE WEST LINE OF TRACT 9 OF SAID PLAT OF THE SOUND TRUSTEE COMPANY'S THIRD ADDITION TO THE NORTHWEST CORNER OF SAID TRACT 9;

THENCE EAST ALONG THE NORTH LINE OF SAID TRACT 9 TO THE NORTHEAST CORNER OF SAID TRACT 9 AND THE WEST LINE OF THE SOUTHEAST QUARTER OF THE NORTHWEST QUARTER OF SAID SECTION 4;

THENCE NORTH ALONG LAST SAID WEST LINE AND THE WEST LINE OF GOVERNMENT LOT 3 OF SAID SECTION 4 TO THE NORTHWEST CORNER OF SAID GOVERNMENT LOT 3;

THENCE EAST ALONG THE NORTH LINE OF SAID GOVERNMENT LOT 3 TO THE TRUE POINT OF BEGINNING.

RESOLUTION NO. 4563

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR TO SIGN THE 2010 LAKE TAPPS AREA WATER RESOURCES AGREEMENT

WHEREAS, Cascade Water Alliance ("Cascade") has entered into an agreement with Puget Sound Energy "PSE" to purchase PSE's interest in Lake Tapps, and associated equipment related to PSE's former power generation operations at Lake Tapps; and

WHEREAS, Cascade has applied to the Washington State Department of Ecology ("Ecology") for a permit to utilize Lake Tapps as a municipal water supply, although said permit has not yet been granted. This application will convert the water right from its current hydropower production purpose, which is a non-consumptive use that keeps water in the basin, to a recreation and municipal water supply purpose, which is a consumptive use that will result in water being taken out of the basin. The cities of Auburn, Bonney Lake, Buckley, and Sumner ("Four Cities") believe that this conversion and removal of water from the watershed of origin, without addressing the needs of communities in the watershed, is inconsistent with the goals and intent of state laws including laws relating to growth management, watershed planning, water resource management and environmental policy; and the Cities intend for this Agreement to, at least partially, address the Cities' concerns about removal of substantial amounts of water from the basin; and

WHEREAS, each of the Four Cities is located in close proximity to Lake Tapps, and Bonney Lake borders on the Lake; and,

WHEREAS, Lake Tapps is an important resource for the Four Cities and the East Pierce County region, for both recreation and municipal water supply purposes; and

WHEREAS, each of the Four Cities is located in close proximity to the White River, and three of the cities (Auburn, Buckley and Sumner) border on the River; and

WHEREAS, the White River is an important resource for the Four Cities and the watershed for fisheries, recreation and municipal water supply purposes; and

WHEREAS, the Four Cities each have a duty and responsibility to provide water to serve their growing communities, and face significant challenges securing future water supplies in a basin that is closed to new withdrawals; and

WHEREAS, Cascade also has purchased significant amounts of water from, and paid system development charges to, Tacoma Public Utilities ("TPU") for municipal water; and

WHEREAS, the Four Cities each have a present need for additional water, but Cascade's ownership of the Lake Tapps water right and its operation and utilization of the Lake as a municipal water supply may impair the Four Cities' ability to secure future water supplies for their citizens; and

WHEREAS, ensuring that the Four Cities can meet the future water demands of their growing communities is in the public interest; and

WHEREAS, in recognition of the need to maintain Lake Tapps as a recreation resource, Cascade has entered into a Definitive Agreement with the

Lake Tapps Community Council ("LTCC") that obligates Cascade to maintain water levels in the Lake at "normal full pool" during the summer months; and

WHEREAS, the Four Cities seek to mitigate the possible adverse effects of Cascade's operation of Lake Tapps on the Four Cities while cooperating with Cascade's efforts to develop Lake Tapps as a water supply source.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN, HEREBY RESOLVES as follows:

Section 1. The Mayor of the City of Auburn and the Auburn City Clerk are hereby authorized to execute the 2010 Lake Tapps Area Water Resources Agreement which agreement shall be in substantial conformity with the Agreement a copy of which is attached hereto, marked as Exhibit "A" and incorporated herein by this reference.

Section 2. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

Section 3. This resolution shall be in full force and effect upon passage and

Dated and Signed this 19th day of January, 2010.

CITY OF AUBURN

for PETER B. LEWIS
MAYOR

ATTEST:

Danielle E. Daskam, City Clerk

APPROVED AS TO FORM:

Daniel B. ~~Heid~~, City Attorney

Return Address:
Auburn City Clerk
City of Auburn
25 West Main St.
Auburn, WA 98001

RECORDER'S COVER SHEET

Document Title(s) (or transactions contained therein): 13\74

Interlocal Agreement

Reference Number(s) of Documents assigned or released:
☐Additional reference #'s on page _____ of document

Grantor(s)/Borrower(s) (Last name first, then first name and initials)
Cascade Water Alliance
Pkwy W4022-4

Grantee/Assignee/Beneficiary: (Last name first)

1. Auburn, City of
2. Bonney Lake, City of
3. Buckley, City of
4. Sumner, City of

Legal Description (abbreviated: i.e. lot, block, plat or section, township, range)

PER RCW 39.34

☐ Additional legal is on page of document.

Assessor's Property Tax Parcel/Account Number
N/A

☐ Assessor Tax # not yet assigned

Said document(s) were filed for record by Pacific Northwest Title as an accommodation only. It does not insure the validity or sufficiency thereof.

2010 LAKE TAPPS AREA WATER RESOURCES AGREEMENT AMONG THE CITIES OF AUBURN, BONNEY LAKE, BUCKLEY AND SUMNER, AND CASCADE WATER ALLIANCE

THIS LAKE TAPPS AREA WATER RESOURCES AGREEMENT ("Agreement") made and entered into on the 5th day of February, 2010, by and among the CITY OF AUBURN, ("Auburn"), the CITY OF BONNEY LAKE, ("Bonney Lake") the CITY OF BUCKLEY, ("Buckley") the CITY OF SUMNER, ("Sumner") (all municipal corporations of the State of Washington, collectively, the "Four Cities") and the CASCADE WATER ALLIANCE, a Washington non-profit corporation ("Cascade"). The Four Cities and Cascade together are sometimes collectively referred to as the "Parties."

DEFINITIONS:

"**Water Right**" shall mean the water right applications submitted to the Department of Ecology ("Ecology") S2-29920, R2-29935, and S2-29934 in their current form or as may be modified and as approved by Ecology .

"**Cascade's Tacoma Wholesale Agreement**" means *the Agreement For The Sale of Wholesale Water Between The City of Tacoma, Department of Public Utilities, Water Division and Cascade Water Alliance*, dated October 13, 2005. The terms "**Capacity Reservation Fee**," "**Peaking Factor,**" and "**System Development Charges**" are used in this Agreement as defined in Cascade's Tacoma Wholesale Agreement.

"**City**" means one of the Four Cities individually.

"**Other Agreements**" means the *Agreement Regarding Reservoir Management Between PSE and the Lake Tapps Community*, dated March 31, 2004; *the White River Management Agreement Between the Puyallup Tribe of Indians, the Muckleshoot Indian Tribe, and Cascade Water Alliance*, dated August 6, 2008; the *Lake Tapps Water Rights Settlement Agreement,* dated August 6, 2008; the *Natural Resources Enhancement Agreement with the Puyallup Tribe of Indians,* dated August 6, 2008; and the *2009 Agreement Regarding Lake Tapps between Cascade Water Alliance and the Lake Tapps Community*, dated May 13, 2009.

TERMS OF AGREEMENT

In consideration of their mutual covenants, conditions and promises, **THE PARTIES HERETO AGREE** as follows:

EFFECTIVE DATE AND TERM: This Agreement shall take effect when executed by the Parties and shall remain in full force and effect for fifty (50) years, unless terminated (in whole or in part) earlier in accordance with Sections 4 and 10. Provided, that any actions taken to enforce this Agreement before it expires, any conditions contained in permits issued pursuant to or implementing the terms of this Agreement, and any contracts to purchase water shall survive this Agreement. The Term of this Agreement may be extended by written agreement of the Parties.

CASCADE'S RESPONSIBILITIES:

1. **Lake Tapps Municipal Advisory Group.** Cascade agrees to the establishment of the Lake Tapps Municipal Advisory Group as follows:

   a. The Lake Tapps Municipal Advisory Group shall consist of the elected Mayors of each of the Four Cities and three (3) members of the Cascade Board of Directors (the Cascade Board). If any of the Four Cities becomes a Member of Cascade, the Mayor of that City will not be considered a member of the Lake Tapps Municipal Advisory Group unless appointed as a representative of the Cascade Board.

   b. The Lake Tapps Municipal Advisory Group will be a non-voting entity with the purpose of: (1) advising the Four Cities of proposed or pending Cascade decisions or actions related to the management of Lake Tapps that may affect the Four Cities; (2) advising Cascade of any issue that the Four Cities may have related to Cascade's management of Lake Tapps; (3) seeking cooperative resolution of any issues raised by Cascade or the Four Cities; and (4) any other matters related to the implementation of provisions of this Agreement.

   c. The Lake Tapps Municipal Advisory Group will meet at least twice annually, with such meetings to be generally held in early/mid October and early/mid April, or as otherwise agreed by the members. Meetings may include staff of Cascade and the Four Cities as determined by the group. At the regular meeting of the Cascade Board immediately following a meeting of the Lake Tapps Municipal Advisory Group, a representative of the group will report on the issues discussed and present any recommendations for cooperative resolution of any issues discussed.

2. **Remedies for Negative Impact on Water Supply**. In accordance with the terms of this Agreement, if Cascade's Lake Tapps water supply operations result in a negative impact to the water supplies of one of the Four Cities that is not a Cascade member, the City claiming a negative impact must notify Cascade of their claim and give Cascade at least sixty days to resolve the claimed impact. If Cascade fails to resolve the claimed negative impact or disputes that the negative impact exists, the City claiming the negative impact may pursue existing legal remedies in accordance with state and federal law. If a court

determines that a negative impact has occurred, Cascade shall implement a remedy acceptable to the claiming City or, if the affected City or Cities and Cascade can not agree on a remedy, the court shall establish the terms for the remedy.

3. **Water Supply Assistance.** Cascade agrees to assist the Four Cities in their efforts to meet their respective projected 50-year water needs by implementing one or more of the following measures:

   a. **Tacoma Wholesale Water.** Through December 31, 2026, Cascade shall make available the following water supply that may be purchased by the Four Cities either individually or jointly: up to six (6) million gallons per day (MGD) under section 6.2 of Cascade's Tacoma Wholesale Agreement (hereinafter referred to as "Cascade's Guaranteed Reserve Capacity") and up to four (4) MGD under section 6.1 of Cascade's Tacoma Wholesale Agreement (hereinafter referred to as "Cascade's Permanent Capacity") under the following conditions:

      1) For water supply from Cascade's Guaranteed Reserve Capacity to be available throughout the year, the City agrees to pay to Cascade an amount equal to the Capacity Reservation Fee (CRF) paid to Tacoma multiplied by the amount to be purchased in MGD ($1,570,074.00 per MGD). It is understood that this Guaranteed Reserve Capacity water includes a peaking factor of 1.33 for the months of June through September and the City agrees to pay this fee.

      2) For water supply from Cascade's Guaranteed Reserve Capacity to be available only during the peak season (June through September), the City agrees to pay to Cascade an amount equal to a pro-rated portion of the Capacity Reservation Fee paid to Tacoma multiplied by the amount to be purchased in MGD (1/3 of the CRF or $523,358.00 per MGD). It is understood that this Guaranteed Reserve Capacity water includes a peaking factor of 1.33 for the months of June through September and the City agrees to pay this fee.

      3) For water supply from Cascade's Permanent Capacity to be available either during peak period only or throughout the year, the City agrees to pay to Cascade an amount equal to the System Development Charge (SDC) paid by Cascade to Tacoma multiplied by the amount to be purchased in MGD ($4,121,000 per MGD) prorated by the number of months the water will be used each year. (For example, if a City purchases 1 MGD only from June through September, it would pay 1/3 of the SDC, or $1,373,667 per MGD.) It is understood that this Permanent Capacity water includes a peaking factor of 1.33 for the months of June through September and the City agrees to pay this fee.

4) Each City that purchases water under this Section 3 of this Agreement will designate a delivery point and either pay Tacoma directly or reimburse Cascade for costs incurred to install necessary service taps, meters or vaults. Any infrastructure beyond the designated delivery point that may be required to deliver the purchased water to retail customers will be solely the responsibility of the City.

5) Each City that purchases water under this Section 3 of this Agreement will provide Cascade with the necessary delivery scheduling information required under Cascade's Tacoma Wholesale Agreement, and will reimburse Cascade for all wholesale charges from Tacoma associated with deliveries at the City's delivery point, in accordance with the provisions of Section 9.1 of Cascade's Tacoma Wholesale Agreement, except for Cascade's obligation to pay the Minimum Monthly Bill.

6) At any time prior to December 31, 2026, any of the Four Cities that have entered into wholesale water purchase agreements with Cascade under this Section 3 of this Agreement may ask Cascade to request that Tacoma make permanent the amount of water being purchased from Cascade under this Section 3 in accordance with section 15.1 of Cascade's Tacoma Wholesale Agreement. If approved by Tacoma, the requesting City agrees to pay to Cascade any amounts due from Cascade to Tacoma pursuant to section 15.1.2 of Cascade's Tacoma Wholesale Agreement for the duration of Cascade's obligation to Tacoma.

7) Cascade shall not terminate, relinquish or amend Cascade's Tacoma Wholesale Agreement in any way that adversely impacts the Four Cities' ability to purchase water as set forth in this Agreement without the prior express written consent of the Four Cities.

b. **Regional Reserved Water.** Through December 31, 2030, Cascade will provide Lake Tapps Region Reserved Water ("Regional Reserved Water") to assist the Four Cities to secure or apply for alternative water supplies or water rights under the following conditions:

1) Cascade will include Regional Reserved Water, consistent with this Agreement, in its State Environmental Policy Act (SEPA) Draft Environmental Impact Statement (DEIS) regarding the Lake Tapps Water Rights and Supply Project.

2) Subject to the SEPA DEIS process, Cascade will request approval by Ecology of the Lake Tapps municipal water right application as follows:

(a) Regional Reserved Water in an amount of seven (7) cubic feet per second (cfs) annual average (Qa) and ten (10) cfs maximum instantaneous (Qi) would be reserved for the use by any or all of the Four Cities to mitigate impacts on the White River of new water rights or changes to existing water rights.

(b) Regional Reserved Water would not be diverted into Lake Tapps, but instead be allowed to flow down the White River for potential use by any of the Four Cities.

3) If such Regional Reserved Water is approved by the Department of Ecology as provide in this Agreement, use of such Regional Reserved Water may be included as part of a water right application submitted individually by any of the Four Cities. Ecology approval of water rights utilizing Regional Reserved Water must be secured by the City on or before December 31, 2030. Beneficial use of such Regional Reserved Water will take place consistent with approved development schedules included in those water right approvals. Any Regional Reserved Water not authorized for use in a water right approved by December 31, 2030, shall revert to Cascade.

4) Cascade shall have no other obligation or involvement in any water right applications submitted by the Four Cities utilizing the Regional Reserved Water. Any concerns Cascade may have regarding a City's application shall be raised pursuant to the dispute resolution provisions of Section 18 of this Agreement, prior to pursuing any legal action, including administrative appeals.

5) Within 90 days of any of the Four Cities receiving final approval of new or changed water rights incorporating use of Regional Reserved Water, that City shall pay Cascade a one-time Regional Water Charge equal to $743,950.00 per cfs. If the water right includes seasonal limitations on use of Regional Reserved Water, the Regional Water Charge shall be pro-rated to reflect the seasonal availability of such water.

c. **Water from Tailrace.** Subject to availability and to supporting findings in a report of examination for one of the Four Cities' new or changed water right applications, Cascade would provide water by releasing water from the Lake Tapps Project tailrace to the White River, on terms to be negotiated by Cascade and the requesting City.

d. **Support.** In order to support the efforts made by any of the Four Cities to acquire new water rights or transfer existing water rights, and upon request by any of the Four Cities, Cascade shall provide technical support, in the form of access to existing modeling and any other technical documentation available to Cascade. Upon request of the Four

Cities and so long as consistent with Other Agreements and approvals related to the Lake Tapps Project, Cascade shall also provide letters or other documentation in support of actions taken by the Four Cities to secure new water rights or transfers of water rights, including but not limited to letters of support in establishing a finding of overriding considerations of the public interest by the Department of Ecology pursuant to RCW 90.54.020(3)(a).

4. Termination. Cascade's obligations under Sections 1 through 3 of this Agreement are in force and effect as to each City only so long as that City fulfills its obligations under this Agreement and has not appealed the Water Right.

5. Local Franchise and Permit Requirements. When operating in any of the Four Cities' municipal boundaries, Cascade will comply with all of that City's franchise and permitting requirements.

CITIES' RESPONSIBILITIES:

6. Purchase of Tacoma Wholesale Water. The Four Cities, collectively or individually, at each City's sole discretion, agree to buy water under Cascade's Tacoma Wholesale Agreement at the rates, including connection and wholesale charges as set forth in this Agreement. The Four Cities shall be responsible for dividing the purchased capacity among themselves, and shall negotiate wheeling or other applicable agreements either with Cascade or directly with Tacoma Water. Except as expressly provided otherwise in this Agreement, the Four Cities agree to be bound by the terms of the Cascade's Tacoma Wholesale Agreement.

7. Dismissal of Litigation. Within fifteen (15) business days after filing and/or recording of this Agreement, Auburn will withdraw and dismiss its pending lawsuit, with prejudice, against Cascade (King County Case Number 05-2-35788-6).

8. Four Cities Support of the Water Right. So long as the EISs are issued by Cascade and the Water Right is approved by Ecology consistent with this Agreement, the Four Cities will support the EISs and the Water Right.

9. Municipal Advisory Group. The Four Cities, represented by their duly elected Mayors, will participate in the Lake Tapps Municipal Advisory Group as described in this Agreement.

10. Amending Legislation. Within thirty (30) days of issuance of the Water Right consistent with this Agreement, the Four Cities will support legislation amending RCW 39.34.215 by deleting subsections (4) (c) and (5).

11. Termination. The Four Cities' obligations under Sections 6 through 10 of this Agreement

are in force and effect only so long as Cascade fulfills its obligations under this Agreement and the ROEs issued by Ecology for the Water Right are consistent with this Agreement regarding the Regional Reserved Water.

GENERAL

12. Indemnification. Each Party shall indemnify and hold the other Parties and their agents, employees, and/or officers, harmless from and shall process and defend at its own expense any and all claims, demands, suits, at law or equity, actions, penalties, losses, damages, or costs, of whatsoever kind or nature, brought against that Party arising out of, in connection with, or incident to the execution of this Agreement and/or the Indemnifying Party's performance or failure to perform any aspect of this Agreement; provided, that nothing herein shall require an Indemnifying Party to hold harmless or defend any other Party, its agents, employees and/or officers from any claims arising from the sole negligence of that other Party, its agents, employees, and/or officers. No liability shall attach to any Party by reason of entering into this Agreement except as expressly provided herein.

13. Compliance with regulations and laws. The parties shall comply with all applicable rules and regulations pertaining to them in connection with the matters covered herein.

14. Assignment. No Party shall assign this Agreement or any interest, obligation or duty therein without the express written consent of all other parties.

15. Attorneys' Fees. If any party shall be required to bring any action to enforce any provision of this Agreement, or shall be required to defend any action brought by the other party with respect to this Agreement, and in the further event that one party shall substantially prevail in such action, the losing party shall, in addition to all other payments required therein, pay all of the prevailing party's reasonable costs in connection with such action, including such sums as the court or courts may adjudge reasonable as attorney's fees in the trial court and in any appellate courts.

16. Notices. All notices and payments hereunder may be delivered or mailed. If mailed, they shall be sent to the following respective addresses:

City of Auburn
25 West Main
Auburn, WA 98001-4998
Attn: Public Works Director
Phone:(253) 931-3000
Fax: (253) 931-3053

City of Bonney Lake
19306 Bonney Lake Blvd.
Bonney Lake, WA 98391
Attn: Public Works Director
Phone: (253) 862-8602
Fax: (253) 862-8538

City of Buckley
933 Main St
PO Box 1960
Buckley, WA 98321
Attn: City Administrator
Phone: (360) 829-1921
Fax: (360) 829-2659

City of Sumner
1104 Maple St.
Sumner, WA 98390
Attn: Public Works Director
Phone: (253) 863-8300
Fax: (253) 299-5509

Cascade Water Alliance
11400 SE 8th Street, Suite 440
Bellevue, Washington 98004
Attn: Chief Executive Officer
Phone: (425) 453-0930
Fax: (425) 425-453-0953

General Counsel, Cascade Water Alliance
GordonDerr, LLP
2025 First Avenue South, Suite 500
Seattle, Washington 98128-3140
Phone: (206) 382-9540
Fax: (206) 625-0675

or to such other respective addresses as any party hereto may hereafter from time to time designate in writing. All notices and payments mailed by regular post (including first class) shall be deemed to have been given on the second business day following the date of mailing, if properly mailed and addressed. Notices and payments sent by certified or registered mail shall be deemed to have been given on the next business day following the date of mailing, if properly mailed and addressed. For all types of mail, the postmark affixed by the United States Postal Service shall be conclusive evidence of the date of mailing.

17. Enforceability: The Parties intend this Agreement to be certain and enforceable, as well as a mechanism for ongoing collaboration as to any issues that may arise in connection with implementation of the Agreement. Except as necessary for compliance with and enforcement of this Agreement, the parties do not intend this Agreement to modify their respective rights or authorities.

18. Dispute Resolution. In the event that any dispute arises between Cascade and the Four Cities, the aggrieved Party shall give a notice of the dispute to the other Party as provided in Section 16. Cascade and the Four Cities shall, within five (5) days of such notice, each nominate a senior officer of its management to meet at a mutually agreed location, to attempt to resolve such dispute. The Parties shall each designate a representative(s) to confer on the best and most cost effective way to resolve the dispute. By mutual agreement, they may choose direct negotiations or mediation. If there is no agreement between the Parties on how to proceed within thirty (30) days, either Party may pursue legal action; provided however, no Party shall be precluded from filing an appeal or action to prevent the expiration of a time period for filing or any statute of limitations.

19. Non-Waiver. No delay or failure by a Party to exercise any of its rights, powers or remedies under this Agreement following any breach by another Party shall be construed to be a waiver of any such breach, or any acquiescence therein, or of or in any similar breach thereafter occurring, nor shall any waiver of any single breach be deemed a waiver of any other breach theretofore or thereafter occurring.

20. Severability. In the event that any of the terms of this Agreement are in conflict with any rule of law or statutory provision or otherwise unenforceable, such terms will be deemed stricken from this Agreement, but such invalidity or unenforceability will not invalidate any of the other terms of this Agreement, and this Agreement will continue in force, unless the invalidity or unenforceability of any such provisions hereof does substantial violence to, or where the invalid or unenforceable provisions comprise an integral part of, or are otherwise inseparable from, the remainder of this Agreement.

21. No Third Party Beneficiary. This Agreement is for the sole and exclusive benefit of the Parties and is not intended to and shall not confer any rights or benefits on any third party not a signatory hereto.

22. Amendment. This Agreement only may be amended or supplemented in a writing signed by the Parties.

23. Survival of Claims. Any claim that a Party has asserted by raising it under the Dispute Resolution provisions of this Agreement prior to the termination of this Agreement and that may reasonably be interpreted or construed to survive the termination of this Agreement shall survive the termination of this Agreement.

24. Signature in Counterpart. This Agreement may be executed in any number of counterparts and all of those counterparts taken together shall constitute one and the same instrument.

25. Further Assurances. Each Party covenants and agrees to do all things necessary or advisable in order to confirm and better assure the intent and purposes of this Agreement.

26. Authority. Each party, by executing this Agreement warrants that it has duly approved this Agreement and has the power to enter into this Agreement and to enforce its terms.

27. Good Faith Commitment to Support Agreement. The Parties covenant and agree to act in good faith and to support the terms and validity of this Agreement. Cascade shall, during the term of this Agreement, support and defend the validity of the Agreement and shall not seek, either directly or indirectly, to invalidate the Agreement or undermine or modify its terms and conditions through administrative, legislative, judicial or other means.

28. Nondiscrimination. Each of the parties, for itself, its heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree that it will comply with pertinent statutes, Executive Orders and such rules as are promulgated to assure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or the presence of any sensory, mental or physical handicap be discriminated against or receive discriminatory treatment by reason thereof.

29. Applicable Law. This Agreement shall be deemed to be made and construed in accordance with the laws of the State of Washington jurisdiction and venue for any action arising out of this Agreement shall be in Pierce County, Washington.

30. Captions. The captions in this Agreement are for convenience only and do not in any way limit or amplify the provisions of this Agreement.

31. No Additional Entities Created. Unless otherwise specifically provided herein, no separate legal entity is created hereby, as each of the parties is contracting in its capacity as a municipal corporation of the State of Washington; or as a Washington non-profit Corporation. The identity of the parties hereto is as set forth hereinabove.

32. Integrated Agreement. This Agreement constitutes the entire agreement between the parties. There are no terms, obligations, covenants or conditions other than those contained herein. No modifications or amendments of this Agreement shall be valid or effective unless evidenced by an agreement in writing signed by all parties.

33. Filing. Copies of this Agreement shall be filed with the King County Auditor's Office; the Pierce County Auditor's Office; the Secretary of State of the State of Washington; and the respective Clerks of the parties hereto.

IN WITNESS WHEREOF the parties hereto have executed this Agreement as of the day and year first above written.

CITY OF AUBURN

2/5/10
Peter B. Lewis, Mayor Date

Attest:

2/5/10
Danielle Daskam, City Clerk Date

Approved as to Form:

2-1-2010
Daniel B. Heid, City Attorney Date

CITY OF BONNEY LAKE

2/5/10
Neil Johnson, Mayor Date

Attest:

2/5/10
Harwood T. Edvalson, CMC Date

Approved as to Form:

2-2-10
James Dionne, City Attorney Date

CITY OF BUCKLEY

2/5/10
Pat Johnson, Mayor Date

Attest:

2-10-10
Joanne Starr, Deputy City Clerk Date

Approved as to Form:

2/9/10
Kathleen Callison, Date
Law Office of Kathleen Callison, P.S.

CITY OF SUMNER

2/5/10
Dave Enslow, Mayor Date

Attest:

2/10/10
Terri Berry, CMC, City Clerk Date

Approved as to Form:

2/4/10
Brett Vinson, City Attorney Date

CASCADE WATER ALLIANCE

Chuck Clarke, CEO Date

CASCADE WATER ALLIANCE

2/5/10
Perese Richmond, Date
General Counsel

CITY OF
AUBURN
WASHINGTON

Peter B. Lewis, Mayo

25 West Main Street * Auburn WA 98001-4998 * www.auburnwa.gov * 253-931-300

STATE OF WASHINGTON)
)ss.
COUNTIES OF KING AND PIERCE)

I, Danielle Daskam, the duly appointed, qualified City Clerk of the City of Auburn, a Municipal Corporation and Code City, situate in the counties of King and Pierce, State of Washington, do hereby certify that the foregoing is a full, true and correct copy of the agreement entitled 2010 Lake Tapps Area Water Resources Agreement Among the Cities of Auburn, Bonney Lake, Buckley and Sumner and Cascade Water Alliance on file with the City Clerk of the City of Auburn.

I certify that said agreement was duly approved by the Council by Resolution No. 4563 on January 19, 2010 and the agreement signed by the Mayor of the said City of Auburn on the 5th day of February, 2010.

Witness my hand and the seal of the City of Auburn this 16th day of February, 2010.

Danielle Daskam, City Clerk
City of Auburn

February 5, 2010

Mr. Chuck Clarke
CEO, Cascade Water Alliance
11400 SE 8th Street, Suite 440
Bellevue, WA 98004

Dear Mr. Clarke,

The Cities of Auburn, Bonney Lake, Buckley, and Sumner have completed negotiations with Cascade Water Alliance on the 2010 Lake Tapps Area Water Resources Agreement (Agreement), whereby Cascade agreed to assist the cities in meeting their respective future water supply needs. As the four Mayors representing the Cities of Auburn, Bonney Lake, Buckley, and Sumner we have found it prudent to submit this letter to you on behalf of our cities detailing the projected timing and quantity of our respective water supply needs for the resources being made available to our cities by Cascade. The projected amounts needed and the times at which water will be needed are based on current planning data. We understand that the quantities listed below are subject to the following combined limits in the Agreement: (1) with respect to Regional Reserved Water for mitigation purposes, 7 cfs for average daily demand and 10 cfs for peak demand; and (2) with respect to Tacoma Wholesale Water, 6 million gallons per day (MGD) of Cascade's Guaranteed Reserve Capacity and four 4 MGD of Cascade's Permanent Capacity, plus a peaking factor of 1.33.

The Cities agree among themselves that the sources of supply provided by Cascade Water Alliance will be allocated as outlined below for each source provided, and that these allocations will be needed by approximately the years listed below. Any changes of allocation between the cities from the amounts reflected below will be subject to mutual written agreement of all four cities and a revised notice to Cascade.

City of Auburn Schedule and Allocation:

Mitigation Flows (Regional Reserved Water):

MGD ADD	MGD Peak	CFS Peak
1.3	2.5	3.88

Temporary Block Water (Guaranteed Reserve Capacity):
Auburn plans to take delivery of not to exceed 5 MGD of this water supply in three (3) increments by year-end 2018.

Permanent Block Water (Cascade's Permanent Capacity):
Auburn plans to take delivery of not to exceed 2MGD ADD, 3.32 MGD Peak of this water supply in two increments by year-end 2018.

City of Bonney Lake Schedule and Allocation:

Mitigation Flows (Regional Reserved Water):

MGD ADD	MGD Peak	CFS Peak
1.0	2.0	3.1

Temporary Block Water (Guaranteed Reserve Capacity):
Bonney Lake declines to purchase any temporary block water.

Permanent Block Water (Cascade's Permanent Capacity):
Bonney Lake plans to take delivery by year-end 2018 of not to exceed 1.54 MGD ADD, 2 MGD Peak of this supply for the months of June through September only.

City of Buckley Schedule and Allocation:

Mitigation Flows (Regional Reserved Water):

MGD ADD	MGD Peak	CFS Peak
0.71	1.3	2.0

Temporary Block Water (Guaranteed Reserve Capacity):
Buckley reserves the right to purchase up to one MGD of temporary block water.

Permanent Block Water (Cascade's Permanent Capacity):
Buckley would purchase permanent block water if Regional Reserved Water cannot be utilized.

City of Sumner Schedule and Allocation:

Mitigation Flows (Regional Reserved Water):

MGD ADD	MGD Peak	CFS Peak
0.42	0.65	1.0

Subject to permitting decisions to be made by Department of Ecology, Sumner may not need peak flows above the average of 0.42 MGD (0.65 cfs).

Temporary Block Water (Guaranteed Reserve Capacity):
Sumner would not purchase temporary block water.

Permanent Block Water (Cascade's Permanent Capacity):
Sumner would not purchase permanent block water.

CITY OF AUBURN

2/3/10

Peter B. Lewis, Mayor — Date

CITY OF BONNEY LAKE

2/5/10

Neil Johnson, Mayor — Date

CITY OF BUCKLEY

2/5/10

Pat Johnson, Mayor — Date

CITY OF SUMNER

2/5/10

Dave Enslow, Mayor — Date

RESOLUTION NO. 4596

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR AND CITY CLERK TO EXECUTE AN EMERGENCY WATER SYSTEM INTERTIE AGREEMENT BETWEEN THE CITY OF AUBURN AND THE CITY OF BONNEY LAKE

WHEREAS, pursuant to RCW 39.34, the Interlocal Cooperation Act, Auburn and Bonney Lake have legal authority to cooperate with other localities on the basis of mutual advantage and provision or services; and

WHEREAS, the Cities have previously entered into an Emergency Water System Intertie Agreement in order to increase fire protection and emergency water supply reliability for their customers; and

WHEREAS, the Cities are willing to continue to provide these necessary services to increase fire fighting and emergency supply reliability; and

WHEREAS, the Cities wish to enter into a new Intertie Agreement.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, HEREBY RESOLVES as follows:

Section 1. The Mayor and City Clerk of the City of Auburn are hereby authorized to execute an Emergency Water System Intertie Agreement with the City of Bonney Lake in substantially the same form as attached hereto as Exhibit "A," which is made a part hereof as though set forth in full herein.

Section 2. Implementation. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directives of this resolution.

Section 3. Effective Date. This Resolution shall take effect and be in full force upon passage and signatures hereon.

Dated and Signed this 3rd day of May, 2010.

CITY OF AUBURN

PETER B. LEWIS
MAYOR

ATTEST:

Danielle E. Daskam,
City Clerk

APPROVED AS TO FORM:

Daniel B. Heid,
City Attorney

EMERGENCY WATER SYSTEM INTERTIE AGREEMENT
Bonney Lake/Auburn

THIS AGREEMENT made and entered into by and between the City of Auburn, ("Auburn"), and, the City of Bonney Lake, ("Bonney Lake"), for the purposes of planning, designing, constructing, maintaining, and operating an emergency system intertie between the respective parties,

WITNESSETH:

WHEREAS, both Cities have water facilities in the vicinity, and

WHEREAS, both Cities can increase fire protection and emergency water supply reliability for their customers, and

WHEREAS, the Cities are willing to provide the necessary services to increase fire fighting and emergency supply reliability upon the terms and conditions set forth herein,

NOW, THEREFORE, IT IS MUTUALLY AGREED as follows:

1. The emergency water system intertie is designed to be operated manually as a two way emergency supply between the Auburn and Bonney Lake Systems. The facility is located in Evergreen Way SE at the Water Service Area Boundaries between the two cities. The primary purpose of the intertie is to provide water during an emergency. For purposes of this agreement, an emergency shall be defined as resulting from a water shortage, a major water line break, fire demand, contamination to the water supply system, mechanical equipment failure, electrical equipment failure or Puget Sound Energy facility failure, or any other agreed upon emergency within the water supply system. The maximum duration of an emergency is seven (7) days.

   However, in certain situations such as prolonged equipment repair, the intertie may need to be open for longer than seven (7) days. The party requesting the extended use of the intertie shall notify the other party of this need forty eight (48) hours before the end of the emergency period, and shall provide the other party a written estimate of how long it intends to take water as soon as practicable.

   Tacoma Intertie Operation: At times, in order to meet its own water supply demands as well as Auburn's, Bonney Lake may need to activate its emergency intertie agreement with Tacoma Public Utilities ("TPU"). Auburn agrees that while the TPU Intertie is open that water flowing

through the Auburn/Bonney Lake intertie shall be assumed to be TPU water.

Auburn shall be held to the same conditions as Bonney Lake in its Wholesale Water Agreement with TPU. Water supplied to Bonney Lake by TPU during peak demand periods requires a matching amount of use during the last quarter of the year in order to qualify for wholesale consumption rates versus higher rates used during peak demand periods.

Auburn shall purchase water during the last quarter of the year from Bonney Lake and TPU until this consumption formula is satisfied. For purposes of satisfying the consumption formula, the water supplied to Auburn during the last quarter of the year is not to be used solely for peak demand periods; rather it is to be used for non-recurring maintenance and repair purposes, preferably not during peak demand periods.

2. Auburn will own and maintain the piping, interior equipment, meter and interior appurtenances, and all piping up to the Bonney Lake side of the vault for the metering station.

3. Bonney Lake will own and maintain the exterior appurtenances and all piping on Bonney Lake's side of the vault.

4. Each City will each have unlimited access to the vault via a dual padlock or ownership of keys to the vault.

5. Each City will operate its respective normally-locked valve inside of the vault. Auburn will solely unlock and operate the locked valve on Auburn's side of the meter and Bonney Lake will solely unlock and operate the locked valve on Bonney Lake's side of the meter.

6. The procedure for operating the intertie in the event of such emergency shall be as follows:

   A. Each City shall determine that an emergency as defined in this Agreement has occurred which warrants the need to request that the intertie be activated.

   B. The Public Works Director or designee of the requesting party shall provide a verbal request to the other City's Public Works Director or designee. Upon agreement that an emergency exists which shall allow for the intertie to be opened, the intertie will be activated as soon as reasonably possible. Both Cities' personnel shall be present at the vault to open the valves to activate the facility.

C. The City requesting the activation shall provide a written confirmation of the request not less than 24 hours after the verbal request, or on the first day of normal business after the verbal request.

7. The intertie shall remain activated until the City requesting activation determines that the need for activation of the emergency intertie has ceased and shall request in writing to close the intertie.

8. In case of emergency or whenever the public health, safety, or the equitable distribution of water so demands, the City supplying the water may change, reduce or limit the time for or temporarily discontinue the supply of water without notice; water service may be temporarily interrupted, limited for purposes of making repairs, extensions or doing other necessary work. The City supplying the water shall not be responsible for any damage resulting from interruption, change or failure of the water supply, and the City receiving the water (City requesting activation) shall save and hold harmless the City supplying the water from any loss, damages or suits to or by customers of the City receiving the water resulting from interruption, change or failure of water supply provided by this Agreement, except damages arising out of the City supplying the water's negligence. Prior to a planned interruption or limiting of service, the City supplying the water will notify the City receiving the water of such not less than three days prior to the service disruption. The City supplying the water agrees to use best efforts and reasonable diligence to notify the City receiving the water as soon after it becomes aware of the need for service disruption and further will, to the extent practical, limit the service disruption to daylight hours.

9. Auburn and Bonney Lake staff shall read the meter upon activation and upon deactivation of the intertie. The city supplying the water shall verify the information and shall then calculate and invoice the other city for the water used during the request. The invoice shall be calculated by the total water used during the event.

10. The rate paid for water shall be determined by one of three scenarios under which water is taken through the intertie. The scenarios are described as follows:

A. Emergency Water. This is short term water taken over a period not to exceed seven (7) days. This rate relies on locally produced water and does not include TPU intertie water. The rate for this scenario shall be at the lowest current Auburn or Bonney Lake Residential Rate for service outside City boundaries depending on which city is supplying the water. This shall be complete payment for the water, labor, and administration of activating the Intertie.

B. Prolonged Equipment Repair Water. This water is taken over a period exceeding seven (7) days as needed to complete lengthy repairs. The rate for this scenario shall be at the Auburn or Bonney Lake Residential Rate actually charged for service outside City boundaries depending on which city is selling the water plus 10%. This shall be complete payment for the water, labor, and administration of activating the intertie.

C. TPU Intertie Water. If Bonney Lake needs to open the TPU intertie to meet system demands while Auburn is taking water from Bonney Lake then all water flowing to Auburn as measured by the Auburn/Bonney Lake intertie meter shall be considered TPU water. The rate for TPU water shall be the wholesale rate set forth in Tacoma Municipal Code 12.10.400, as currently adopted by the Tacoma Public Utility (TPU) Board and Tacoma City Council. In this scenario only the TPU rate with an additive wheeling fee shall apply regardless of the time the intertie is activated. When the TPU Intertie is opened or closed to support Auburn, Bonney Lake shall notify Auburn that same day.

Auburn understands that Bonney Lake will incur additional costs when they activate the TPU intertie. The costs include but are not limited to increased system operation costs i.e. pumping treatment and sampling; and administrative costs such as meter reads, and Tacoma and Auburn accounting and billing. Since these costs are not easily separated from normal water system operation costs, Bonney Lake and Auburn agree that these costs be compensated using a "Wheeling" fee. The Wheeling fee shall be calculated as percentage of the total cost of the water taken through the Auburn/Bonney Lake intertie meter. The Wheeling fee rate shall be 15% of the total cost of TPU water taken by Auburn.

Not later than 30 days after the Bonney Lake/TPU intertie is deactivated, Bonney Lake will submit a reconciliation bill for the quantity of water supplied to Auburn during the period the Bonney Lake/Auburn intertie is activated. In addition, Bonney Lake reserves the right to request monthly reimbursement if the intertie remains open for a prolonged period.

11. Each City is responsible for associated staff, administration and legal costs associated with the implementation of the agreement.

12. To the extent allowed by law, each party shall defend, indemnify, and hold harmless the other party, its elected officials, employees and agents from and against any and all suits, claims, actions, losses, costs, expenses of litigation, attorney's fees, penalties and damages of whatsoever kind or

nature arising out of or in connection with or incident to an act or omission of the indemnifying party, its employees, agents, and contractors in the performance of the indemnifying party's obligations under the Agreement and this Amendment. This indemnification provision shall include, but is not limited to, all claims against each party by an employee or former employee of the indemnifying party or its contractors and, as to such claims, each party expressly waives all immunity and limitation of liability under Title 51 RCW.

13. This Agreement shall remain in force until terminated by either party hereto upon 60-days written notice to the other party. .

14. This Agreement contains the entire agreement of the parties with respect to the subject matter of this Agreement, and supersedes all prior negotiations, agreements and understandings with respect thereto. This Agreement may only be amended by a written document duly executed by all parties.

IN WITNESS WHEREOF, we have hereunto set our hands and seals.

CITY OF AUBURN
King County, Washington

By: _____ 4/28/10
Peter B Lewis, Mayor Date

CITY OF BONNEY LAKE
Pierce County, Washington

By: _____ 4/28/10
Neil Johnson, Jr., Mayor Date

Attest:

_____ 4/28/10
Danielle Daskam, City Clerk Date

Attest:

_____ 4/28/10
Harwood T. Edvalson, City Clerk Date

Approved as to form:

By: _____ 4/1/10
Daniel B. Heid, City Attorney Date

Approved as to form:

By: _____ 5/4/10
James J. Dionne, City Attorney Date

Department of Energy
Bonneville Power Administration
28401 Covington Way SE
Kent, WA 98042

LAND USE AGREEMENT

June 16, 2010

In reply refer to:	TERR/Covington
Case No.	20100419
Tract No.:	3C-T-10-A-73
Line:	Tacoma-Covington No. 3
Line:	Tacoma-Grand Coulee No. 1 (oper as Tacoma-Covington No. 4)
ADNO:	8242
Location:	btwn towers 10/4 and 10/5

Applicant:
City of Auburn
Public Works Dept
25 West Main St
Auburn, WA 98001

Landowner:
Stobie & Trussler
3240 B Street
Auburn, WA 98001

Bonneville Power Administration (BPA) hereby agrees to the City of Auburn's use of BPA's easement area for construction/installation, use, and maintenance of a Tacoma waterline - B Street NW Intertie Project CP1011. The vaults and pumping facilities are approved in the proposed location.

The location of the City of Auburn's use is partially within the NE1/4 SE1/4 of Section 1, Township 21N, Range 4E, Willamette Meridian, King County, State of Washington, as shown on the attached segment of BPA Drawing No. 106910, marked as Exhibit A.

This Agreement is revocable at will by BPA and does not modify, change or otherwise alter the rights BPA acquired by Deed. BPA may terminate this agreement upon 30 days written notice.

CITY OF AUBURN AGREES THAT FOLLOWING ITEMS ARE MANDATORY.

1. **A copy of this permit shall be physically located at the project during construction activities.**
2. Inform BPA once the construction of the approved use is complete.
3. Construction equipment shall maintain a minimum distance of 20 feet between the equipment and transmission line conductors at all times. Do not measure this with measuring tape, pole, or other physical means.
4. To ensure the safety of workers and the uninterrupted operation of the BPA transmission facilities, the City of Auburn shall employ a BPA approved safety watcher during any construction activities occurring under the conductors (wires) when operating any equipment that has the potential to reach or come within 20 feet of the conductors (wires). Please contact this office for a current list of BPA approved Safety Watchers.

5. It has been determined that the 17'x 8' vault is HS-20 rated and the surface will be at grade. The lid however is not HS-20 rated and therefore requires placement of bollards and the approval of BPA Transmission Line Maintenance to drive around this portion of the right-of-way.
6. The pipeline shall be buried with a minimum cover of 36 inches.
7. All uses of the right-of-way shall meet local/state/federal/national codes.
8. Mark the location of underground water lines with permanent signs , and maintain such signs, where they enter and leave BPA's right-of-way, and at any angle points with the right-of-way. BPA will not be responsible for damage to facilities not visibly marked.
9. No grade changes to facilitate construction or disposal of overburden shall be allowed. Any damage to BPA property resulting from the proposed right-of-way or access road use shall be repaired at the applicant's expense.
10. Access to BPA transmission line system by BPA and/or its contractors shall not be obstructed at any time.
11. No storage of flammable materials or refueling of vehicles or equipment within the easement area.
12. No refueling of vehicles or equipment is allowed on the right-of-way.
13. Restore BPA's right-of-way to its original condition, or better following construction.

No changes or additions to the use of the right-of-way is allowed without BPA's review and written approval. Any other uses and utilities on the right-of-way must be applied for separately.

The subject use of this easement area has been determined not to be a hazard to, or an interference with, BPA's present use of this easement for electric transmission line purposes. Accordingly, there is no present objection to such use. However, if such use should, at any time, become a hazard to the presently installed electrical facilities of BPA, or any facilities added or constructed in the future, or if such use should interfere with the inspection, maintenance, or repair of the same, or with the access along such easement, the City of Auburn will be required to stop the use or remove such hazard or interference from the right-of-way at no expense to BPA.

The City of Auburn agrees to assume risk of loss, damage, or injury which may result from the use of the easement area, except for such loss, damage, or injury for which BPA may be responsible under the provisions of the Federal Tort Claims Act, 62 Stat. 982, as amended. It is understood that any damage to BPA's property caused by or resulting from use of the easement area may be repaired by BPA, and the actual cost of such repair shall be charged against and be paid by the City of Auburn.

The following items are advisory in nature, but should be given due consideration.

- Nuisance shocks may occur within the right-of-way. Grounding metal objects helps to reduce the level of shock. It is suggested that road building / construction equipment be grounded with a drag chain.
- Construction/installation, use, and maintenance of the waterline intertie shall be at no cost to BPA.
- BPA shall not be liable for damage to City of Auburn's or Stobie & Trussler's property, facilities, or injury to persons that might occur during maintenance, reconstruction, or future construction of BPA facilities as a result of the City of Auburn's facilities being within the right-of-way.
- BPA seeks help maintaining the integrity of the electrical transmission system. Please report any Vandalism or Theft to the BPA Crime Witness program at 1-800-437-2744. Cash rewards of up to

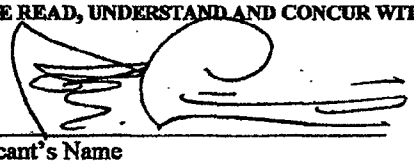
- $ 25,000 will be paid should information lead to the arrest and conviction of persons committing a crime.

Official communication should be directed to, Bonneville Power Administration, Real Estate Field Services-TERR, 28401 Covington Way SE, Kent, WA or by telephoning 1-800-836-6619 with questions or concerns.

Please note that BPA is not the owner of this property. If the City of Auburn is not the owner, permission to use this property must also be obtained from the owner(s). There may also be other uses of the property that might be located within the same area as this project. This agreement is subject to those other rights.

This Land Use Agreement becomes effective upon the signature of all parties. This agreement is entered into with the express understanding that it is not assignable or transferable to other parties without the prior written consent of BPA.

I HAVE READ, UNDERSTAND AND CONCUR WITH THE TERMS OF THIS AGREEMENT:



Applicant's Name
City of Auburn
Peter B. Lewis, Mayor

6/30/10
Date

I HAVE READ, UNDERSTAND AND CONCUR WITH THE TERMS OF THIS AGREEMENT:

Owner's Name
Stobie & Trussler

8-5-10
Date

THIS AGREEMENT IS HEREBY AUTHORIZED
Dated this 17 day of Aug, 2010.

Michelle E. Doiron
Realty Specialist for

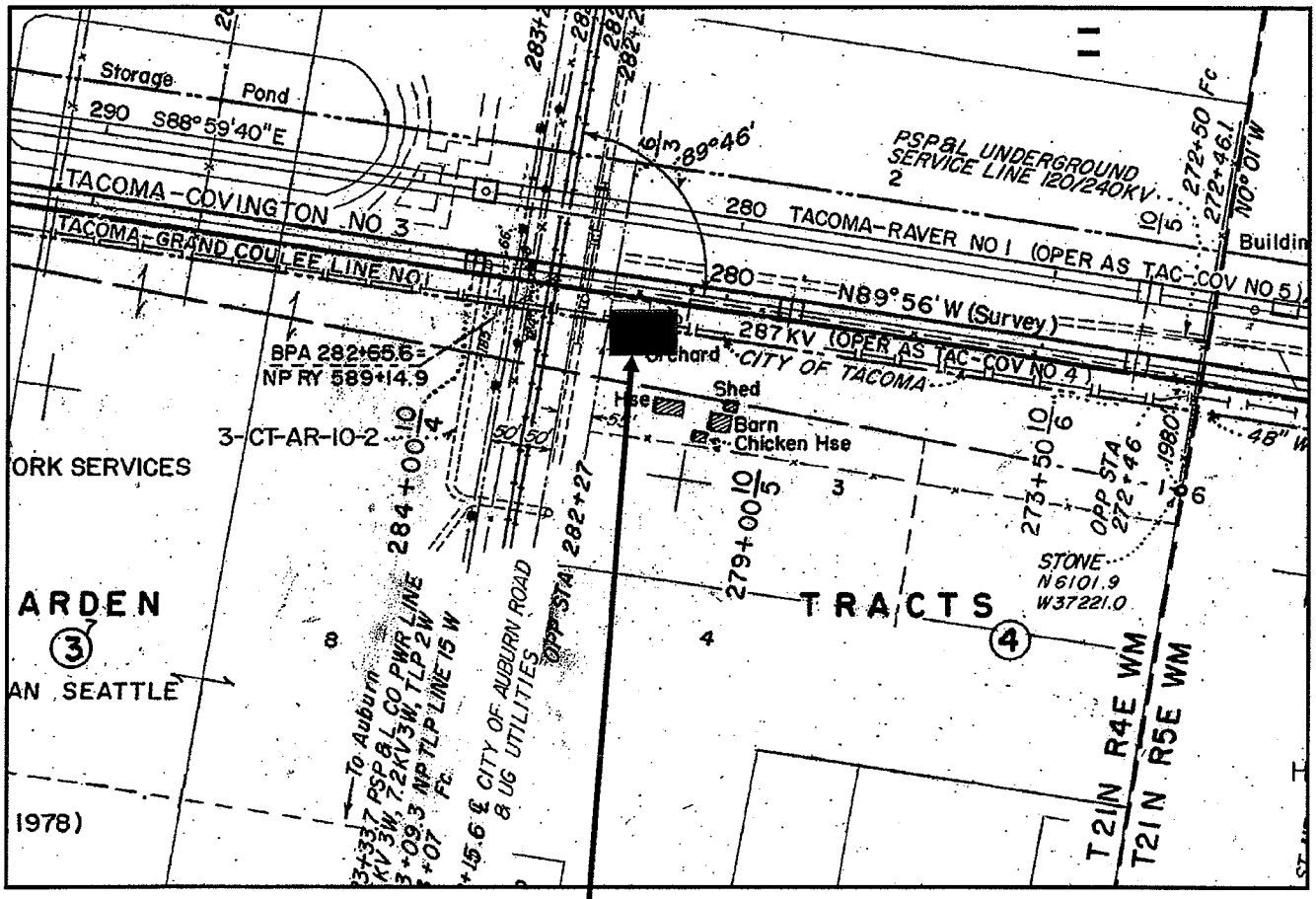
Tract Nos.: 3C-T-10-A-73
Case No. 20100419

Bcc:
M. Wolcott – TER-3
N. Meisner – TERR-3
K. Ross – TFCF – Covington

Official File – TR/3 (Case No. 20100419)

SEC 01 T21N R4E WM
KING COUNTY, WASHINGTON

"B" Street



tower 10/4 tower 10/5

APPROXIMATE LOCATION OF
Waterline connection to Tacoma PUD

UNITED STATES DEPARTMENT OF THE INTERIOR
BONNEVILLE POWER ADMINISTRATION
HEADQUARTERS, PORTLAND, OREGON

TACOMA-COVINGTON NO 3
230 KV TRANSMISSION LINE
SHORT MILE 10 FROM TACOMA (5200')

RIGHT OF WAY		DESIGN			
Drawn NTA		Drawn		Approved Dates	For Chief of Design
Traced EN	Engineer	Traced	Engineer	DATE 10-27-60	SHEET OF
Checked HAK	Unit Head	Checked	Unit Head	Ser. 106910	Dwg. 171-11-D

EXHIBIT A
CASE 20100419
Tract ID: 3C-T-10-A-73
Lines: Tacoma-Covington #3;
Tacoma-Grand Coulee #1 (Tac-Cov #4)

City of Auburn
Waterline connection

RESOLUTION NO. 4649

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR AND THE CITY CLERK TO EXECUTE AN EMERGENCY WATER SYSTEM INTERTIE AGREEMENT BETWEEN THE CITY OF AUBURN AND THE LAKEHAVEN UTILITY DISTRICT

WHEREAS, pursuant to RCW 39.34, the Interlocal Cooperation Act, Auburn and Lakehaven have legal authority to cooperate with other localities on the basis of mutual advantage and provision or services; and

WHEREAS, the parties wish to enter into an Emergency Water System Intertie Agreement in order to increase fire protection and emergency water supply reliability for their customers;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN, HEREBY RESOLVES as follows:

Section 1. That the Mayor and City Clerk are hereby authorized to execute an Emergency Water System Intertie Agreement with the Lakehaven Utility District in substantially the same form as attached hereto as Exhibit "A," which is made a part hereof as though set forth in full herein.

Section 2. That the Mayor is authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

Section 3. That this Resolution shall take effect and be in full force upon passage and signatures hereon.

Dated and Signed this 18th day of October, 2009.

CITY OF AUBURN

PETER B. LEWIS
MAYOR

ATTEST:

Danielle E. Daskam, City Clerk

APPROVED AS TO FORM:

Daniel B. Heid, City Attorney

EMERGENCY WATER AGREEMENT
Lakehaven/Auburn Intertie No. 2

THIS AGREEMENT made and entered into by and between the City of Auburn, hereinafter referred to as City, and Lakehaven Utility District, hereinafter referred to as "District".

WITNESSETH:

WHEREAS, the City has water facilities in the vicinity of a water main of the District, and

WHEREAS, the City can increase water system reliability in emergencies for its customers if water is available from the District, and

WHEREAS, the District is willing to provide to the City water service necessary to increase the water system's reliability upon the terms and conditions set forth herein,

NOW, THEREFORE, IT IS MUTUALLY AGREED as follows:

1. The District hereby grants to the City the right to connect a water meter and flow control valve, and appurtenances to the end of the 6-inch water main located in a vault near the intersection of Knickerbocker Road and Abby Drive in King County, Washington.

2. The meter and flow control valve described in Paragraph No. 1 is installed to increase the reliability of the City water system to meet demand during emergencies.

3. For purposes of this agreement, "emergency " shall mean a water shortage, a major water line break, fire demand, contamination to the water supply system, mechanical equipment failure, electrical equipment failure or Puget Sound Energy facility failure, or any other event agreed upon between the Parties..

4. The procedure for operating the intertie in the event of such an emergency shall be as follows:

   a. The City and District shall each determine that an emergency has occurred that warrants the need to request that the intertie be activated.

   b. The Public Works Director or designee of the City shall provide a verbal request to the District General Manager or designee stating the requested time of commencement, and estimated duration and quantity of water to be so used. Upon verbal agreement by the District that an emergency exists, the intertie will be

activated as soon as reasonably possible. District and City personnel shall be present at the vault to activate the facility.

c. The City shall provide a written confirmation of the request not less than 24 hours after the verbal request, or on the first day of normal business after the verbal request.

d. Subject to condition in paragraph 10, the intertie shall remain activated until the City determines that the need for activation of the emergency intertie has ceased. The Public Works Director or designee of the City shall provide a verbal request to the District General Manager or designee that the intertie be closed. The City shall provide written confirmation within 24 hours after the verbal request, or on the first day of normal business after the verbal request.

e. This emergency intertie facility is limited to a maximum flow-rate of 800-GPM (gallons-per-minute).

5. The City and District staff shall read the meter upon activation and deactivation of the intertie. The District shall then calculate and invoice the City for the water used during the request. The invoice shall be calculated based on the total water used during the event.

6. The City shall comply with all District resolutions and rules relating to connection to the District's water system, unless modified by this agreement.

7. The City shall pay to the District the same connection fee, rates and charges and monthly service charges, except for capital facilities charge, as are established from time to time by District resolution and as are applicable to the use of a six (6)-inch meter. The current monthly service charge for a six (6)-inch meter is $287.04 per month. The current rate for water use is $ 1.24/ccf for winter usage (November - June) and $ 2.56/ccf for summer usage (July - October) and these rates shall be in effect until such time as the District amends its rate resolution or until a meter of different size is utilized.

8. This Agreement shall not authorize or permit the City to take water from the connection described herein beyond what is described in Paragraph No. 4.

9. All costs of the meter and flow control installation including, but not limited to, time and materials expended on improvements pursuant to this Agreement, shall be fully reimbursed by the City. Any materials provided shall become the property of the District upon completion of installation.

10. (a.) In case of emergency or whenever the public health, safety, or the equitable distribution of water so demands, the District may change, reduce or limit the delivery rate or time, or temporarily discontinue the emergency water connection to the City

without notice; (b.) Water service may be temporarily interrupted, limited for purposes of making repairs, extensions or doing other necessary work; and (c.) The District shall not be responsible for any damage resulting from interruption, change or failure of the emergency water connection, and the City shall save and hold harmless the District from any loss, damages or suits to or by customers of the City resulting from interruption, change or failure of water supply provided by this Agreement, except damages arising out of the District's negligence. Prior to a planned interruption or limiting of service, the District will notify the City of such not less than three days prior to the service disruption. The District agrees to use best efforts and reasonable diligence to notify City as soon after it becomes aware of the need for service disruption.

11. To the extent allowed by law, each party shall defend, indemnify, and hold harmless the other party, its elected officials, employees and agents from and against any and all suits, claims, actions, losses, costs, expenses of litigation, attorney's fees, penalties and damages of whatsoever kind or nature arising out of or in connection with or incident to an act or omission of the indemnifying party, its employees, agents, and contractors in the performance of the indemnifying party's obligations under the Agreement. This indemnification provision shall include, but is not limited to, all claims against each party by an employee or former employee of the indemnifying party or its contractors and, as to such claims, each party expressly waives all immunity and limitation of liability under Title 51 RCW.

12. In the event of non-performance of any provision herein by the City, District may shut off water supplied pursuant to this Agreement.

13. This Agreement may be terminated by either party hereto upon 60-days written notice to the other party.

IN WITNESS WHEREOF, we have hereunto set our hands and seals.

CITY OF AUBURN
King County, Washington

By: _____
Mayor Date

LAKEHAVEN UTILITY DISTRICT
King County, Washington

By: _____ 11/15/10
General Manager Date

Approved as to form:

By: _____ 10/18/10
City Attorney Date

Approved as to form:

By: _____ 11/12/2010
General Counsel Date

RESOLUTION NO. 4648

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR AND THE CITY CLERK TO EXECUTE AN EMERGENCY WATER SYSTEM INTERTIE AGREEMENT BETWEEN THE CITY OF AUBURN AND THE CITY OF TACOMA

WHEREAS, pursuant to RCW 39.34, the Interlocal Cooperation Act, Auburn and Tacoma have legal authority to cooperate with other localities on the basis of mutual advantage and provision or services; and

WHEREAS, the Cities wish to enter into an Emergency Water System Intertie Agreement in order to increase fire protection and emergency water supply reliability for their customers;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN, HEREBY RESOLVES as follows:

Section 1. That the Mayor and City Clerk are hereby authorized to execute an Emergency Water System Intertie Agreement with the City of Tacoma in substantially the same form as attached hereto as Exhibit "A," which is made a part hereof as though set forth in full herein.

Section 2. That the Mayor is authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

Section 3. That this Resolution shall take effect and be in full force upon passage and signatures hereon.

Dated and Signed this 18th day of October, 2009.

CITY OF AUBURN

PETER B. LEWIS
MAYOR

ATTEST:

Danielle E. Daskam, City Clerk

APPROVED AS TO FORM:

for Daniel B. Heid, City Attorney

EMERGENCY INTERTIE AGREEMENT

BETWEEN

CITY OF TACOMA AND CITY OF AUBURN

This emergency intertie agreement ("Agreement") is made by and between the City of Tacoma, Department of Public Utilities, Water Division d/b/a Tacoma Water, a municipal corporation (hereafter "Tacoma"), and the City of Auburn, a municipal corporation (hereafter "Auburn"). Tacoma and Auburn collectively shall be referred to as the "Parties" or either Tacoma or Auburn may be referred to as "Party" when appropriate.

A. RECITALS:

WHEREAS, Auburn and Tacoma are responsible for operating and maintaining their public water systems in accordance with federal, state and local laws and regulations, and

WHEREAS, the Parties recognize the responsibility of public water utilities to provide for the highest quality of water and reliability of service to their customers at reasonable cost, and

WHEREAS, the Parties further recognize that water resources are finite and vulnerable, and the prudent use and management of these resources requires cooperation among water utilities, and

WHEREAS, Auburn has requested that an intertie be established with Tacoma, to be available in case of emergency need, and Auburn does have water system facilities nearby that can be interconnected so as to be mutually beneficial to both utilities during periods of system emergency, and

WHEREAS, the Parties recognize that Auburn intends to use this intertie for wholesale service in the future,

NOW THEREFORE, it is agreed that Auburn and Tacoma may provide for interties of water mains and the terms and conditions contained herein shall apply.

B. DEFINITIONS:

The definition of certain terms, as used later in this Agreement, are as follows:

INTERTIE: A physical connection between water mains of the two Parties to this Agreement, at specifically identified points, where water may be transferred from the supplies of one system to the transmission or distribution facilities of the other.

SURPLUS PRODUCTION CAPACITY: Volumetric rate of available water supply, from the sources of the supplying water system, which can be transferred through an

intertie after all service requirements to the customers of the supplying system have been met.

ISOLATION VALVE: A positive shut off valve which shall be installed at the point in each water system which is used to accept or deliver water through the intertie. Each connected system has sole responsibility for providing and operating their isolation valve.

INTERTIE CAPACITY: The flow capacity for water to be delivered through an intertie as agreed upon by the Parties to this Agreement. Intertie facilities shall be designed so as to be capable of conveying no less than the agreed upon flow.

EMERGENCY: Defined as resulting from a water shortage, a major water line break, fire demand, contamination of the water supply system, mechanical equipment failure, electrical equipment failure, or any other agreed upon emergency affecting the water supply system.

C. CONDITIONS

1. GENERAL: The intertie described in exhibits A and B attached to this document shall be governed by the terms of this agreement. No future interties shall be permissible without a subsequent and separate written agreement between the Parties, which agreement may supplement this agreement. Neither Party shall be obligated to agree to or execute any such agreement or permit the other Party to construct additional connections.

2. PURPOSE: The intertie described in exhibits A and B attached to this document shall be utilized only in emergency situations unless converted by mutual Agreement to a regular wholesale service. Tacoma will first determine that surplus production capacity is available before providing water for an emergency situation.

3. CAPITAL COSTS: The cost of construction of the proposed intertie, to include all facilities and equipment necessary to deliver water, installation of the meter and vault and connection to Tacoma Water's Pipeline 5 (STA 765+05) at "B" Street NW shall be the responsibility of Auburn. As used in this paragraph, "cost of construction" shall include, but not be limited to, all actual costs of labor, materials, permitting, equipment, engineering, legal, publication, SEPA compliance, and any costs customarily incurred in such projects. The meter and vault will be designed, constructed and owned by Tacoma. Auburn has deposited $ 61,700.00 with Tacoma to cover the estimated costs. If Tacoma determines that the initial deposit is not sufficient to pay for all costs of construction, Auburn shall deposit such additional amounts with Tacoma as Tacoma requires to complete design and construction of the project. If the cost of construction is less than the deposit, Tacoma shall refund the remaining balance.

4. MAINTENANCE COSTS: Each utility shall be responsible for operating and maintaining their facilities including isolation and flow control valves as applicable (see Exhibit A). Vault and meter maintenance costs shall be the responsibility of Tacoma.

Should Tacoma ever need Auburn to relocate their infrastructure to accommodate a Tacoma Water project, Auburn will do so at their own cost.

5. OPERATING PROTOCOL: The Party requesting water shall submit a written request to the supplying Party and the supplying Party must give written permission prior to the transference of any water to the requesting Party. Should a situation arise necessitating the supply of water immediately a verbal request shall initially be sufficient followed by a written request. Verbal authorization, however, must be obtained from the supplying Party before obtaining any water. Each Party shall designate, in writing, a person or persons who have authority to evaluate such a verbal request and determine whether such a request should be granted.

6. NOTICE: All notices, requests, demands and other communications hereunder shall be in writing and shall be deemed given if personally delivered or mailed, certified mail, return receipt requested, or sent by overnight carrier to the following addresses:

If to Tacoma:
Ms. Linda McCrea
Water Superintendent
PO Box 11007
Tacoma, WA 98411
Phone: (253) 502-8245
Fax: (253) 502-8694

If to City of Auburn:
Mr. Dan Repp
Utilities Engineer
1 East Main Street
Auburn, WA 98001
Phone: (253) 804-5062
Fax: (253) 931-3053

7. COMMODITY COST: Tacoma will supply Auburn with water at the wholesale water service rate as identified in TMC Section 12.10.400, City of Tacoma Water Rates and Regulations. Invoices will include a monthly ready to serve charge based on meter size and consumption charges based on water used. Consumption charges will be at the constant use rate for the first 30 days of use. If use exceeds 30 days the Superintendent will have the discretion to reclassify the consumption charge to the summer season peaking rate. These water rates are periodically adjusted and shall be applicable as set forth in the rate schedule as adopted by the Public Utility Board and Tacoma City Council.

8. CONVERSION OF SERVICE: Establishment of an emergency intertie and providing emergency water shall not be considered a commitment of water availability for future retail or wholesale service. Conversion of an emergency intertie to retail or wholesale service will require an assessment of water availability, a decision to serve by the appropriate body, payment of a system development charge, and a commitment to comply with applicable rate and service policies.

9. INDEMNITY: Neither Party shall be liable for failure to deliver water to the other Party at any time. If water is provided, it shall be provided only from surplus production and/or storage capacity of the supplying utility as determined at the time of intertie operation. Each Party understands and acknowledges that the other Party makes no warranties or

assurances as to water availability, pressure or volume at any given time relating to the intertie.

10. TERMINATION OF SERVICE: Termination of this intertie agreement by either Party shall be preceded by not less than one (12) calendar months written notice to the other Party.

Dated this 18th day of October, 2010.

CITY OF TACOMA

By: Linda McCrea
Linda McCrea, Water Superintendent

CITY OF AUBURN

By: _____
Mayor

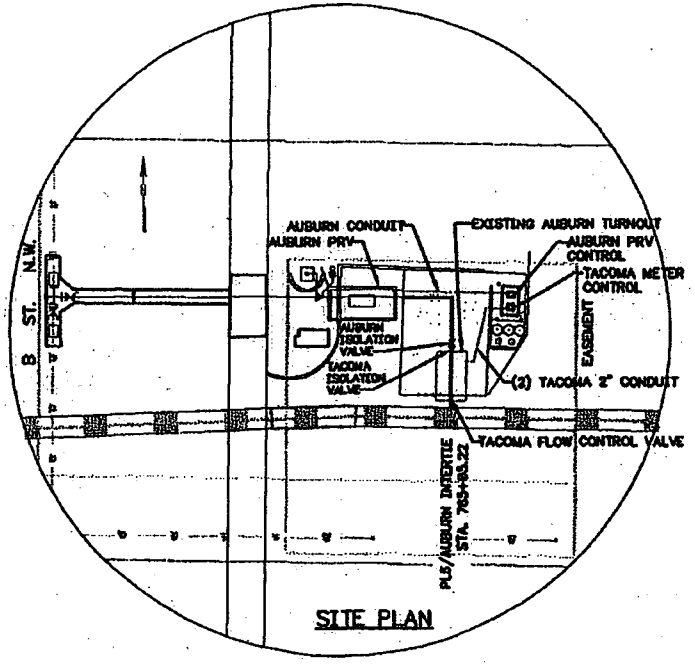
Approved as to form and legality

By: William Fosbre
Chief Assistant City Attorney

Approved as to form and legality

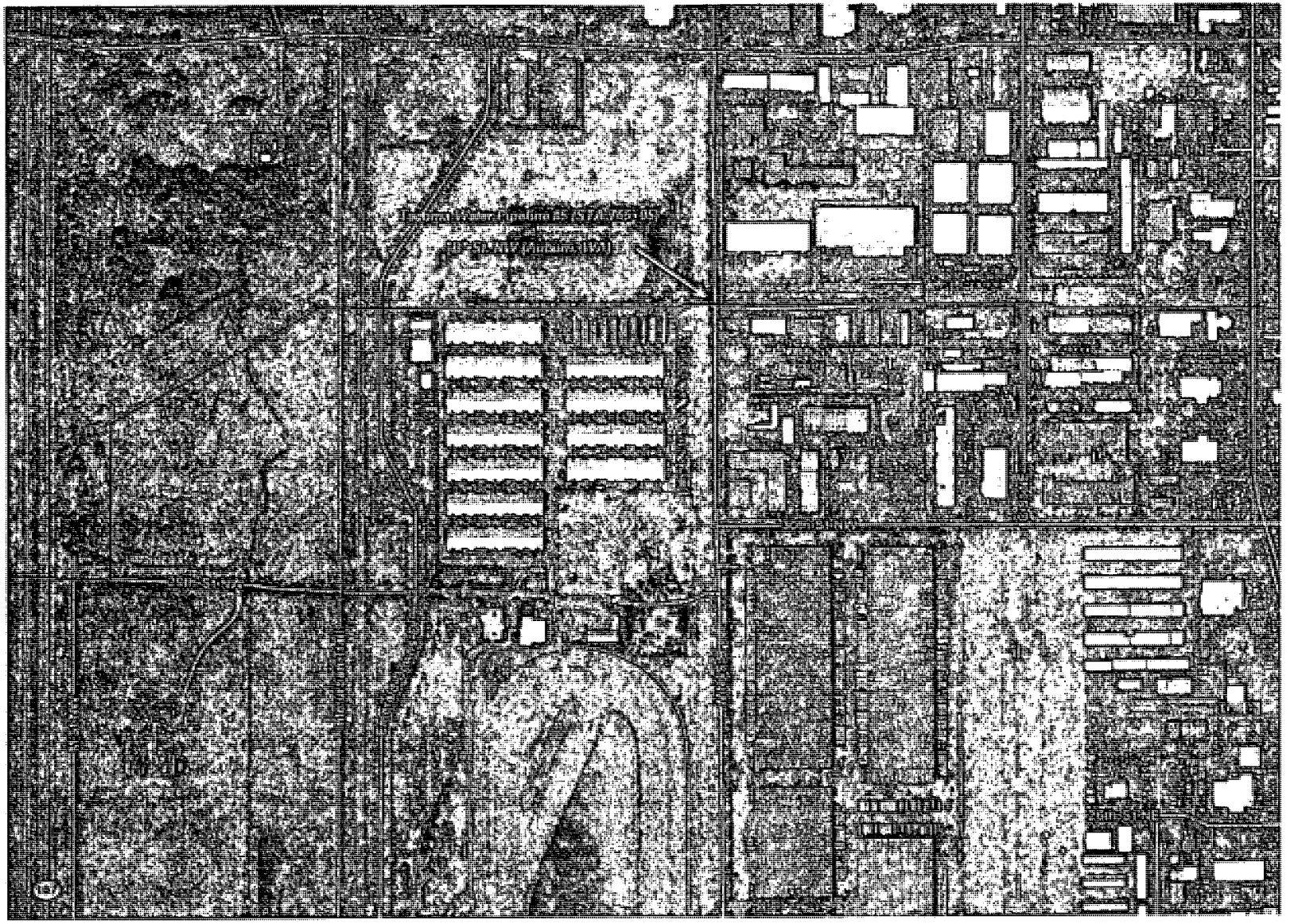
By: _____
Attorney

EXHIBIT A
EMERGENCY INTERTIE CONNECTION SPECIFICATIONS



Intertie Location	Connection	Meter	Elevation (ft.)		Operating Pressure (psi)		Flow Capacity (gpm)
	Size	Size	Tacoma	Auburn	Tacoma	Auburn	To/From Utility
Tacoma Water Pipeline 5 (STA 765+05) At "B" St. NW (Auburn, WA)	12"	6"	44.21	45.24	309	80	2,200

EXHIBIT B
GENERAL LOCATION MAP



RESOLUTION NO. 4660

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR AND CITY CLERK TO EXECUTE AN INTERIM WATER SALES AGREEMENT BETWEEN THE CITY OF AUBURN AND KING COUNTY WATER DISTRICT NO. 111

WHEREAS, the City adopted Resolution No 2721 executing an Interlocal Agreement No. 2 for the Lea Hill Intertie Project between the Covington Water District, King County Water District No. 111 and the City of Auburn; and

WHEREAS, to avoid unpredictable water sales and to create a predictable and reliable cost for wholesale water to be sold by the City to the Covington and King County Water District, on June 17, 2002, the City adopted Resolution No. 3482, which authorized the execution of an Interim Water Sales Agreement between the parties; and

WHEREAS, on February 22, 2005, the prior Interim Water Sales Agreement was superseded and replaced with a new agreement per Resolution No. 3817; and

WHEREAS, Covington has opted out of the original agreement; and

WHEREAS, The City and the King County Water District No. 111 wish to continue their prior arrangement;

WHEREAS, in keeping with the original intent of the parties to create a predictable and reliable cost for wholesale water, it is appropriate for the City to

enter into a new Interim Water Sales Agreement with King County Water District No. 111 which would supersede and replace the prior agreement.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN, KING COUNTY, WASHINGTON, HEREBY RESOLVES as follows:

Section 1. The Mayor of the City of Auburn and the Auburn City Clerk are hereby authorized to execute an Interim Water Sales Agreement between the City of Auburn and King County Water District No. 111, in substantial conformity with the Agreement attached hereto, marked as Exhibit "A" and incorporated herein by this reference.

Section 2. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

Section 3. This resolution shall be in full force and effect upon passage and signatures hereon.

Dated and Signed this 6th day of December, 2010.

CITY OF AUBURN

PETER B. LEWIS, MAYOR

ATTEST:

Danielle E. Daskam, City Clerk

APPROVED AS TO FORM:

Daniel B. Heid, City Attorney

INTERIM WATER SALES AGREEMENT
between
KING COUNTY WATER DISTRICT NO. 111
and the
CITY of AUBURN

This Agreement ("Agreement") is made and entered into this 6th day of December, 2010 by and between King County Water District No. 111, a Municipal Corporation ("District") and the City of Auburn, a Municipal Corporation ("Auburn") (individually a "Party" and collectively the "Parties").

Recitals:

A. The Parties are also parties to "Interlocal Agreement 2 for the Lea Hill Intertie Project between King County Water District #111, and the City of Auburn" ("IA2").

B. The Parties desire to avoid unpredictable water sales and create a predictable and reliable cost for wholesale water to be sold by Auburn to the District.

C. By guaranteeing a minimum purchase of water for a given period of time, the cost of water, which to a significant extent is based on peaking factors, can be minimized for all of Auburn's customers.

D. This Agreement is intended to establish a rate for a fixed block of water for the mutual benefit of the Parties.

E. It is in the interest of the District to have a predictable supply of water available, and in Auburn's interest to have a predictable and consistent source of revenue from the sale of such water.

F. The Parties are authorized to enter into this Agreement under the authority of their respective enabling legislation and under the authority of Chapter 39.34 RCW, the Interlocal Cooperation Act.

G. The Parties intend that the take or pay water provided for in this Agreement is a portion of and not in addition to the 2.5 MGD allocated to the District as addressed in IA2.

Now, therefore, in consideration of the mutual covenants and promises contained herein, and for other good and valuable consideration, the adequacy of which is hereby acknowledged, the Parties hereby agree as follows:

1) **TAKE OR PAY:** The District agrees to purchase a minimum block of water as identified in this Agreement from Auburn on a "take or pay" basis. For purposes of this Agreement, a "Block" shall mean either an average of 0.75 MGD of water between the time period of October 1 and May 31, or an average of 1.0 MGD of water between the time period of June 1 and September 30. "Take or pay" shall mean that, in the absence of an emergency as set forth in Section 7 of this Agreement, the District shall pay for the Block of

water whether or not the water is actually taken by the District, subject to the provisions of Section 2 herein.

2) **CHARGES FOR WATER:** On a monthly basis, the District will pay, as shown on Exhibit 1 attached hereto and incorporated herein by this reference, the Base Charge, plus the Block Rate. In addition to the Base Charge and the Block Rate, any water taken in excess of the Block amount ("Excess Water") during any month shall be billed at the appropriate overage rate shown in Exhibit 1; provided, that: 1) any water taken during an emergency, as defined in Paragraph 7, shall be billed at the Block Rate, and 2) if Auburn is unable to deliver up to the Block quantity of water requested by the District, then Auburn shall only bill the District for the amount of water actually delivered at the Block Rate. Auburn shall send a monthly bill to WD 111 for all water purchased by the District.

3) **QUANTITY AVAILABLE / DELIVERED:** The Block quantity shall be calculated as the amount of water to be delivered at an average rate of either 0.75 MGD or 1.0 MGD (depending on the season) measured over a rolling 3 day period, with total quantities delivered within any single day being within 10%, plus or minus, of the Block quantity in effect at the time as measured at the Auburn Intertie Pump Station meter ("Master Meter"). For the Block quantity, the District will be

served on the same basis and with the same reliability as service is provided to Auburn's retail customers, and any curtailment, restrictions or limitations on delivery shall be on same basis as curtailment, restrictions or limitations on delivery to Auburn's retail customers.

4) **ANNUAL RECONCILIATION:** The Master Meter is located at the Lea Hill Intertie Pump Station to measure the flow of water. The Master Meter will be read in January of each year to adjust for differences between the Master Meter and the water calculated to have been sold under this Agreement. If there is a difference between the Master Meter and the calculated quantities, Auburn will either charge or credit the District's account at the Block Rate.

5) **ANNUAL REVIEW AND ADJUSTMENT:** The initial Block of either 0.75 MGD or 1.0 MGD (depending on the season) shall remain in effect through December 31, 2015. Each year, the Block may be adjusted by mutual agreement. By September 1 of each year the District shall notify Auburn of its intent to continue without change or request an increase or decrease in writing of the Block quantity desired. Auburn will review its ability to approve the change and may approve any requested change in the Block quantity up to but not to exceed 1.5 MGD which would become effective January 1 of the year following the request. If Auburn determines it cannot approve the

request it will communicate this information to the District before October 1, and continue to provide the same amount as during the current year. In the event that neither Party communicates its intent to adjust the Block under this provision, the Block shall be deemed to continue unchanged.

6) **TERM:** This Agreement shall remain in full force and effect from the first day of the month following the execution of this Agreement through December 31, 2015. The Agreement shall automatically be renewed for an additional year at the conclusion of the term of this Agreement or any extension thereof unless either Party provides the other with notice of an intent not to extend this Agreement, which notice shall be received by the other Party not less than one year prior to the expiration of the term of this Agreement or any extension thereof. The termination of this Agreement shall not affect any rights or obligations under IA2.

7) **EMERGENCIES:** For purposes of this Agreement, an emergency shall be defined as a need for water resulting from a water shortage, a major water line break, fire demand, contamination to the water supply system, mechanical equipment failure, electrical equipment failure or Puget Sound Energy facility failure, or any other mutually agreed upon event within the water supply system. An emergency period shall be

for no more than five (5) working days without written request by the District and approval by Auburn in writing to extend the emergency period. The City may change, reduce or limit the time for or temporarily discontinue any water supplied for an emergency in excess of the Block quantity without notice. Prior to a planned interruption or limiting of emergency service, the City will notify the District of the interruption or limiting not less than three days prior to the service disruption. The City agrees to use best efforts and reasonable diligence to notify the District as soon after it becomes aware of the need for emergency service disruption and further will, to the extent practical, limit the service disruption to daylight hours.

8) **PRIOR AGREEMENT SUPERSEDED:** This Agreement supersedes and replaces the Interim Water Sales Agreement between Covington Water District, King County Water District No. 111 and the City of Auburn dated February 22, 2005.

In witness whereof the Parties have caused this Agreement to be executed by their duly authorized representatives on the 6th day of December, 2010.

CITY OF AUBURN

PETER B. LEWIS
MAYOR

ATTEST:

Danielle E. Daskam,
City Clerk

APPROVED AS TO FORM:

Daniel B. Heid,
City Attorney

KING COUNTY WATER DISTRICT NO. 111

WILLIAM C. HALL
GENERAL MANAGER

ATTEST:

APPROVED AS TO FORM:

District Attorney

Interim Water Sales Agreement
Between
King County Water District No. 111
And the
City of Auburn

Exhibit 1

Take or Pay Monthly Rates				
Year	Base Charge (per month)	Block and Winter Overage Rate (per ccf)	Summer Overage (per ccf)	
2010	$175.00	$0.91	Block rate + $0.25	
2011	$175.00	0.91 X CPI*	Block rate + $0.25	
2012	$175.00	2011 Rate X CPI*	Block rate + $0.25	
2013	$175.00	2012 Rate X CPI*	Block rate + $0.25	
2014	$175.00	2013 Rate X CPI*	Block rate + $0.25	
2015	$175.00	2014 Rate X CPI*	Block rate + $0.25	

* CPI means the Consumer Price Index – Urban for the Seattle – Tacoma – Bremerton area for the month of October of the prior year, divided by the October value of the year prior to that (see example below).

Example:

CPI for 2011 equals the October 2010 CPI value divided by the October 2009 CPI value.

RESOLUTION NO. 4725

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR AND CITY CLERK TO NEGOTIATE AND EXECUTE A PURCHASE AGREEMENT WITH COVINGTON WATER DISTRICT AND KING COUNTY WATER DISTRICT #111

WHEREAS, the Covington Water District and King County Water District #111 (the Districts) have surplus infrastructure in the form of a water main on 132nd Ave Southeast; and

WHEREAS, the City has a need for an additional water main on 132nd Ave SE as part of a programmed capital project; and

WHEREAS, the Districts are willing to sell the water main to the City; and

WHEREAS, purchase of the water main will avoid various environmental and traffic impacts and the risk associated with construction of a new main; and

WHEREAS, purchase of the water main will eliminate the additional burden on finite staff resources to design and construct a new water main.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, HEREBY RESOLVES as follows:

Section 1. That the Mayor is authorized to negotiate an Agreement with Covington Water District and King County Water District #111, and the Mayor and the City Clerk are authorized to execute such agreement as negotiated within budgetary and scoping parameters.

Section 2. That the Mayor is authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

Section 3. That this Resolution shall take effect and be in full force upon passage and signatures hereon.

Dated and Signed this 5th day of July, 2011.

CITY OF AUBURN

PETER B. LEWIS
MAYOR

ATTEST:

Danielle E. Daskam, City Clerk

APPROVED AS TO FORM:

Daniel B. Heid, City Attorney

PIPELINE TRANSFER AND ACQUISITION AGREEMENT

This Agreement ("Agreement") is by and between the City of Auburn, a Washington municipal corporation ("City"), Covington Water District, a Washington municipal corporation ("CWD"), and King County Water District No. 111, a Washington municipal corporation ("WD 111") (CWD and WD 111, collectively the "Districts") (the Districts and City, collectively the "Parties") for the purposes set forth below.

RECITALS

A. The City owns and operates a system of water supply within its corporate and water service area boundaries, and the Districts own and operate systems of water supply within their respective corporate and water service area boundaries.

B. The Parties previously entered into agreements providing for the construction of certain facilities to provide for the conveyance and sale by the City of wholesale water supply to the Districts. Specifically, the Parties entered into an agreement entitled "Interlocal Agreement No. 1" dated November 7, 1995 ("IA1") which provided for the construction of certain facilities to provide for the conveyance of wholesale water supply by the City to the Districts, the obligations to pay for such facilities, and the allocation of capacity rights among the Parties to such facilities; pursuant to IA1, a 16-inch waterline, among other facilities, was installed from SE 298th Street to SE 288th Street in 132nd Avenue SE and the Districts own such waterline and 95% of the capacity of such waterline in 132nd Avenue SE.

C. The Parties also entered into an agreement entitled "Interlocal Agreement No. 2" dated October 2, 1996 ("IA2") which also provided for the construction of certain additional facilities to provide for the conveyance of wholesale water supply by the City to the Districts, the obligations to pay for such facilities, and the allocation of capacity rights among the Parties to such facilities; and IA1 was terminated and superseded upon the completion of the construction of the water facilities described in IA2.

D. The City has been providing water supply to the Districts in accordance with the terms and conditions of IA2 through the water facilities constructed pursuant to IA1 and IA2. However, the City has proposed to the Districts that the City purchase a portion of the 16-inch waterline in 132nd Avenue SE owned by the Districts located between SE 299th Street north to the Regional Water Supply System pipeline managed by the City of Tacoma as depicted on **Exhibit A** attached hereto and incorporated herein by this reference (the "Pipeline").

E. The Districts have agreed to transfer ownership of the Pipeline and its capacity to the City, and the City has agreed to accept ownership of the Pipeline and its capacity according to the terms and conditions of this Agreement.

F. After title to the Pipeline is transferred to the City, the City shall have the responsibility to operate, maintain, repair and replace the Pipeline.

AGREEMENT

NOW, THEREFORE, in consideration of the following terms and conditions, the Parties agree as follows:

1. City Acquisition of Pipeline. The City shall acquire from the Districts exclusive title to the Pipeline, along with all appurtenances associated with the Pipeline as provided in this Agreement. The Pipeline consists of that portion of the 16-inch waterline in 132nd Avenue SE between SE 299th Street north to the Regional Water Supply System pipeline managed by the City of Tacoma of approximately one thousand two hundred thirty (1,230) lineal feet consisting of water pipeline, valves, fittings, and appurtenances as depicted on **Exhibit A**.

2. Transfer of Pipeline and Capacity. Districts shall convey the Pipeline and the Pipeline's capacity to the City as follows:

A. Districts shall transfer the Pipeline and its capacity to the City in consideration of the City's payment in the amount of Two Hundred Fifteen Thousand Two Hundred Fifty Dollars ($215,250.00) together with sales tax at the rate of 9.5% thereon to each District ($20,448.75).

B. In consideration of the Districts' transfer of the Pipeline and its capacity to the City, the City shall accept ownership of the Pipeline and operate, maintain, repair and replace the Pipeline and the City will continue to deliver water through the Pipeline to WD 111 in accordance with IA2 and any other agreements the Parties have or may have. The City shall provide WD 111 with water supply pursuant to IA2 and any other agreements the Parties have or may have at a point of delivery as depicted on Exhibit A such that WD 111 may continue to provide necessary supply to its customers served from the Pipeline.

3. Indemnification and Hold Harmless. The City shall indemnify, defend and hold harmless Districts, its elected and appointed officers, employees and agents from and against any and all claims, losses, damages, judgments or liability, including attorneys' fees, arising from injury or death to persons or damage to property occasioned by any act, omission or failure of City, its elected and appointed officers, agents or employees in the performance of this Agreement. This shall include, but is not limited to, any liabilities resulting from:

A. Construction of upgrades to the Pipeline undertaken by the City.

B. Leaks or breaks in the Pipeline after the execution of this Agreement.

C. Prior and future actions of City and its agents other than Districts.

4. Closing. The Parties shall not be obligated to close the City's acquisition of the Pipeline unless and until each Party has performed its covenants and obligations as follows.

A. Closing shall occur on or before the 21 day of September 2011 at the City's offices located at 25 West Main St., Auburn, Washington, or at such other time and place agreeable to the Parties.

B. At closing the Districts shall deliver to the City:

1. A Bill of Sale in the form attached hereto as **Exhibit B** and incorporated herein by this reference transferring to the City all of the Districts' right, title and interest in the Pipeline and its capacity and warranting that Districts have exclusive title to the Pipeline and its full capacity, excepting that portion owned by the City. Other than the above warranties, the Bill of Sale shall indicate that the sale is an "As Is, Where Is" sale, with no other warranties, express or implied.

2. "As Built" Pipeline documents in the possession of Districts.

C. At closing, the City shall deliver to the Districts:

1. Funds in the amount of Four Hundred Thirty Thousand Five Hundred Dollars ($430,500.00) in the form of payments of Two Hundred Fifteen Thousand Two Hundred Fifty Dollars ($215,250.00) to each District, together with sales tax at the rate of 9.5% thereon (totaling $40,897.50 or $20,448.75 to each District).

D. When the requirements of Sections 4(B) and 4(C) herein have been fulfilled, this transaction shall be closed without further instruction from the Parties.

E. To the extent that there are any taxes, special assessments or utility service fees relating to the Pipeline or its use that are the legal obligation of one Party but are attributable in part to a time period during which that Party did not have possession of the Pipeline, then the Parties will share in the obligation to pay such taxes, assessments or fees on the basis of a proration as of Closing. The City may record the Bill of Sale, assignments and other transfer documents as it desires and shall pay the cost thereof.

5. Transfer of Responsibility.

A. Effective 12:01 a.m. on the day immediately following Closing, the Districts relinquish responsibility for the Pipeline to the City, and the City assumes responsibility for the Pipeline on that date, including the obligation to operate, maintain, repair and replace the Pipeline.

B. Effective 12:01 a.m. on the day immediately following Closing, the City shall assume and be fully responsible for the Pipeline at the City's sole cost and expense. The Pipeline shall be operated by City to provide water supply to WD 111 and any other lawful purpose.

6. Severability. The invalidity or unenforceability of any provisions of this Agreement shall not affect the other provisions hereof, and this Agreement shall be construed in all respect as if such invalid or unenforceable provisions were omitted.

7. Amendment. No change, amendment or modification of any provisions of the Agreement shall be valid unless set forth in a written amendment to this Agreement signed by the Parties.

8. Authorization. By signing this Agreement, each Party certifies that it has the authority to bind its respective governing bodies to all of the terms and conditions of this Agreement.

9. Effective Date. This Agreement shall be effective upon the date of the last signature below.

City of Auburn, a Washington municipal corporation

By: _____
Its: MAYOR
Dated: 08/26/2014

Attest:
City Clerk
By: _____

Approved as to form:

By: _____
Auburn City Attorney

King County Water District No. 111, a Washington municipal corporation

By: William C. Hall
Its: General Manager
Dated: August 22, 2011

Approved as to form:

By: _____
District Attorney

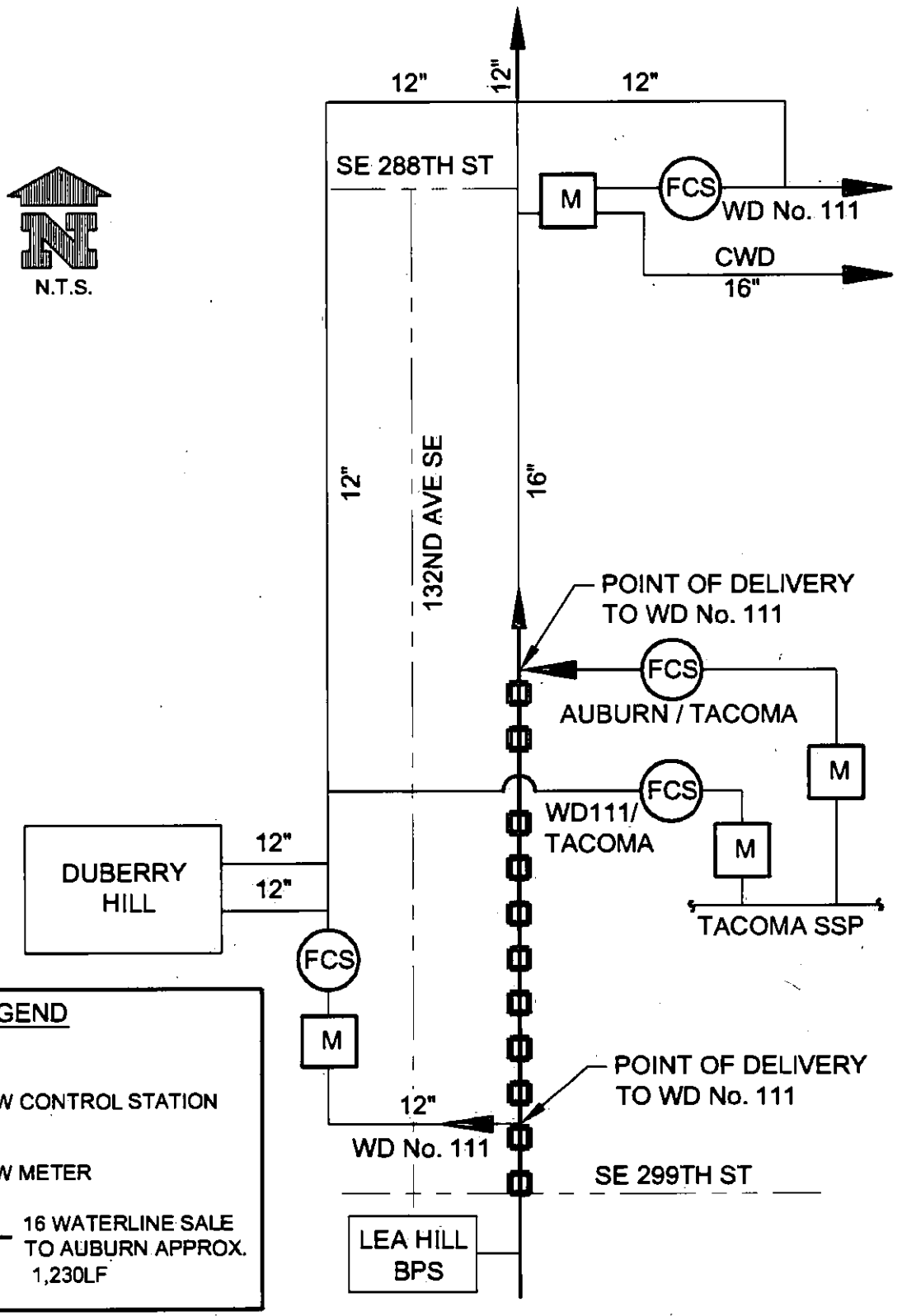
Covington Water District, a Washington municipal corporation

By: Jeanne Marsh
Its: General Manager
Dated: Aug. 17, 2011

Approved as to form:

By: Eric Irwindt
District Attorney

Exhibit "A"



PLOTTING DATE: 7/18/2011 11:35 AM USER: Mirochnik, Izabella FILE NAME: F:\0034\00007\99\132ND TRANSMISSION MAIN SALE.dwg

ROTH HILL

Roth Hill, LLC
11130 NE 33rd Place,
Suite 200
Bellevue, WA 98004
Tel. 425.869.9448

132ND AVENUE 16" TRANSMISSION MAIN
PIPELINE TRANSFER AND AGREEMENT ACQUISITION
EXHIBIT "A"

PLOTTING DATE	DRAWN	CHECKED	APPROVED	DISTRICT
18-July-11	IMM	GH		
PLOTTING SCALE	FILE NAME			DATE APPROVED
NTS	132nd Transmission Main Sale.dwg			

Water District #111, KING COUNTY

Exhibit "B"

BILL OF SALE

WATER PIPELINE

Covington Water District, a Washington municipal corporation, and King County Water District No. 111, a Washington municipal corporation (collectively the "Districts"), transfer and convey to the City of Auburn, a Washington municipal corporation ("City"), the following described personal property:

> a 16-inch waterline in 132nd Avenue SE between SE 299th Street north to the Regional Water Supply System pipeline managed by the City of Tacoma consisting of approximately one thousand two hundred thirty (1,230) lineal feet of water pipeline, valves, fittings, and appurtenances as depicted on **Exhibit A** attached hereto and incorporated herein by this reference (the "Pipeline").

This transfer and conveyance is made in consideration of the City's payment of Four Hundred Thirty Thousand Five Hundred Dollars ($430,500.00) in the form of payments of Two Hundred Fifteen Thousand Two Hundred Fifty Dollars ($215,250.00) to each District, together with sales tax at the rate of 9.5% thereon (totaling $40,897.50 or $20,448.75 to each District), and the City's agreement to own and operate the Pipeline as part of the City's water supply. Districts further transfer, convey and assign to the City any and all warranties related to the Pipeline, provided, the Districts make no representations or warranties regarding the existence or status of any warranties related to the Pipeline.

Districts warrants that they have exclusive title to the Pipeline and its full capacity, excepting that portion of the capacity presently owned by the City, and that the Pipeline was accepted for public use as facilities of the Districts. Other than the foregoing warranties, the transfer and conveyance of the Pipeline by the Districts to the City is "As Is", Where Is" with no other warranties, express or implied.

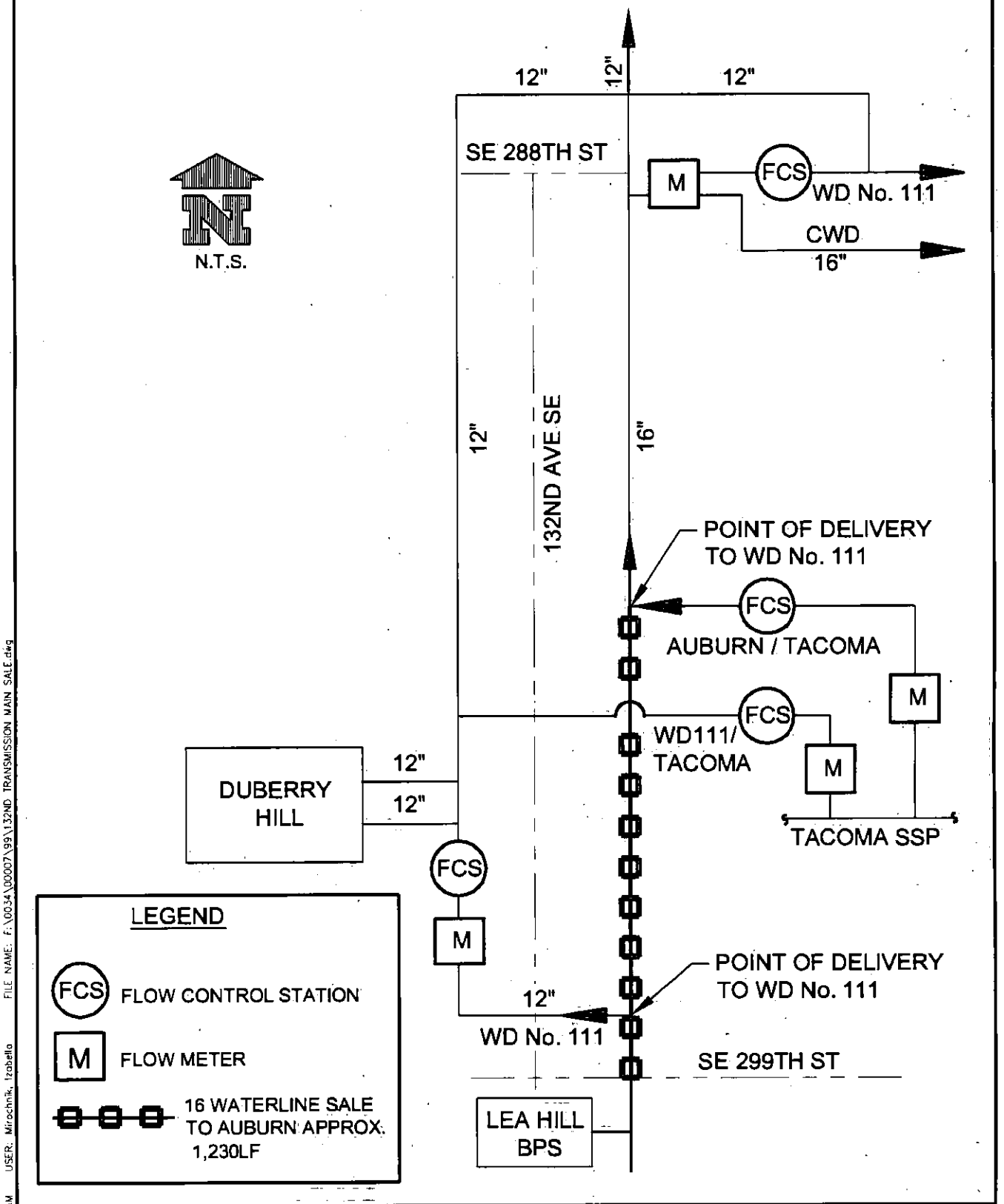
Dated this 22nd day of August, 2011.
King County Water District No. 111

By William C. Hall
Its: General Manager

Dated this 17 day of August, 2011.
Covington Water District

By Jeanne Marx
Its: General Manager

Exhibit "A"



PLOTTING DATE: 7/18/2011 11:35 AM USER: Mirochnik, Izabella FILE NAME: F:\0034\00007\99\132ND TRANSMISSION MAIN SALE.dwg

ROTHHILL

Roth Hill, LLC
11130 NE 33rd Place,
Suite 200
Bellevue, WA 98004
Tel. 425.869.9448

132ND AVENUE 16" TRANSMISSION MAIN
PIPELINE TRANSFER AND AGREEMENT ACQUISITION
EXHIBIT "A"

PLOTTING DATE	DRAWN	CHECKED	APPROVED	DISTRICT
18-July-11	IMM	GH		
PLOTTING SCALE	FILE NAME			DATE APPROVED
NTS	132nd Transmission Main Sale.dwg			

Water District #111, KING COUNTY

Department of Energy
Bonneville Power Administration
28401 Covington Way
Kent, WA 98042

February 7, 2012

In reply to: TERR/Covington
BPA Case No. 20120039

Tract No. 2C-T-2-A; 3C-T13-85
Line Name: Tacoma-Raver No. 1 & 2 (operated as same)
Tacoma-Covington No. 3 (operated as same)
Tacoma-Grand Coulee (operated as Tacoma-Covington No. 4)
ADNO 8246, 8247, 8242, 8244;
Structure 13/4 - 13/5

Ms. Leah Dunsdon
City of Auburn
25 West Main Street
Auburn, WA 98001-3058

LAND USE AGREEMENT

Bonneville Power Administration (BPA) hereby agrees to your use of BPA's easement area for construction/installation, use, and maintenance of a water system intertie - pressure reducing/flow control station/telemetry shelter and improved access road with gate.

The location of your use is partially within the NW1/4 SW1/4 of Section 3, Township 21 North, Range 5 East, Willamette Meridian, King County, State of Washington, as shown on the attached segment of BPA Drawing No. 150023, marked as Exhibit A and City of Auburn drawing marked as Exhibits B, C, D, E and F.

You shall not make any changes or additions to your use of the right-of-way without BPA's review and written approval. Any other uses and utilities on the right-of-way must be applied for separately.

Please note that BPA is not the owner of this property. If you are not the owner, you must obtain the owner's permission to use this property. There may also be other uses of the property that might be located within the same area as your project. This agreement is subject to those other rights.

This agreement is entered into with the express understanding that it is not assignable or transferable to other parties without the prior written consent of BPA. This agreement is

revocable at will by BPA and does not modify, change, or otherwise alter the rights BPA acquired by Deed. BPA may terminate this agreement upon 30 days written notice. The subject use of this easement area has been determined not to be a hazard to, or an interference with, BPA's present use of this easement for electric transmission line purposes. Accordingly, there is no present objection to such use. However, if BPA should determine at any time, that your use has become a hazard to the presently installed electrical facilities of BPA, or any facilities added or constructed in the future, or if such use should interfere with the inspection, maintenance, or repair of the same, or with the access along such easement, you will be required to stop your use or remove such hazard or interference from the right-of-way at no expense to BPA.

BY ACCEPTING THIS LAND USE AGREEMENT YOU ARE AGREEING TO THE FOLLOWING CONDITIONS

1. Because of other potential uses in the area of your project, BPA requires that you have a utility locate done prior to construction commencing.
2. Maintain a minimum distance of at least 15 feet between your facilities and the transmission line conductors (wires).
3. Maintain a minimum distance of at least 50 feet between your facilities and the transmission line structures.
4. Construction equipment shall maintain a minimum of 15 feet between the equipment and transmission line conductors at all times. Do not measure this with measuring tape, pole or by other physical means.
5. To ensure safety of workers and uninterrupted operation of transmission lines, applicant shall employ a BPA approved safety watcher during construction activities occurring under the conductors (wires) or lifting of equipment that may come in contact with the conductors (wires). **Please contact BPA for a current list of BPA approved Safety Watchers.**
6. Equipment, machinery, and vehicles traveling on BPA's right-of-way shall come no closer than 25 feet to any BPA structure or guy anchor ground attachment point.
7. No storage of flammable materials or refueling of vehicles or equipment on BPA property.
8. Overburden grade changes to existing ground elevations while excavating on right-of-way is prohibited.
9. All use of the right of way shall meet local/state/federal/national codes.
10. Design and build the water main intertie, pressure reducing station and access road constructed within the BPA's property to withstand HS-20 loading for BPA's heavy vehicles.
11. Bury and maintain the water main, drainage lines, and conduits to a depth of 36 inches or comply with applicable NESC, national, state, and/or local standards, which ever is greater.

12. All underground cables/wires shall be placed in conduit.
13. Mark the location of the underground water main and conduits with permanent signs and maintain such signs where they enter and leave BPA's right-of-way, and at any angle points within the right-of-way.
14. Access to BPA transmission line system by BPA and/or its contractors shall not be obstructed at any time.
15. BPA shall have the right to use the access road for access to its structures, both to and along its transmission lie right of way.
16. The access road will only be used by the utilities.
17. Replace gate with an adequate gate in the fence of not less than 16 feet in width for the passage of BPA vehicles. The approved location of the gate is as shown on attached exhibit B. Gates may be locked provided a BPA lock is also included in the locking mechanism.

IN ADDITION, THE FOLLOWING IS BROUGHT TO YOUR ATTENTION

You agree to assume risk of loss, damage, or injury which may result from your use of the easement area, except for such loss, damage, or injury for which BPA may be responsible under the provisions of the Federal Tort Claims Act, 62 Stat. 982, as amended. It is understood that any damage to BPA's property caused by or resulting from your use of the easement area may be repaired by BPA, and the actual cost of such repair shall be charged against and be paid by you.

Construction/installation, use, and maintenance of the water system intertie - pressure reducing/flow control station/telemetry shelter and improved access road with gate shall be at no cost to BPA.

Nuisance shocks are common on high voltage transmission right of way. Plan your uses taking this into consideration.

BPA seeks your help maintaining the integrity of the electrical transmission system. Please report any Vandalism or Theft to the BPA Crime Witness program at 1-800-437-2744. Cash rewards of up to $25,000 will be paid should information lead to the arrest and conviction of persons committing a crime.

BPA shall not be liable for damage to your property, facilities, or injury to persons that might occur during maintenance, reconstruction, or future construction of BPA facilities as a result of your facilities being within the right-of-way.

If you have any questions or concerns, please notify this BPA Realty Office. You may direct any communication to Bonneville Power Administration, Real Property Field Services (TERR/Covington) 28401 Covington Way, Kent, WA 98042, or by telephoning Timothy C. Wicks at 253-631-9154.

A copy of this agreement shall be physically located at the project during construction activities.

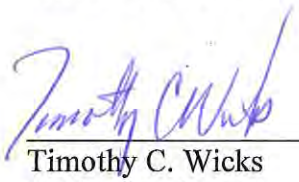
THIS LAND USE AGREEMENT BECOMES EFFECTIVE UPON THE SIGNATURE OF ALL PARTIES.

I HAVE READ, UNDERSTAND, AND CONCUR WITH THE TERMS OF THIS AGREEMENT:

Applicants Name

2/10/12
Date

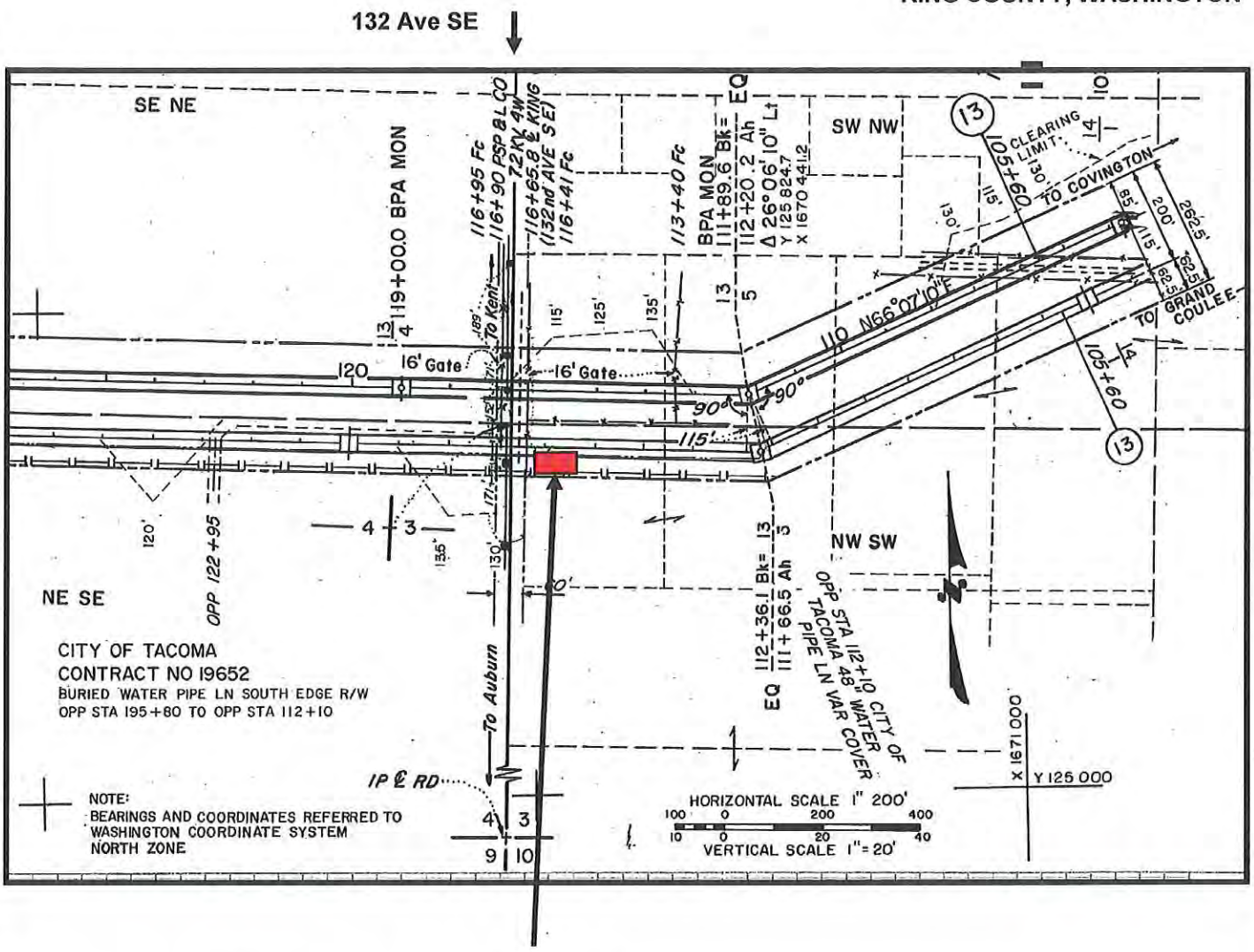
THIS AGREEMENT IS HEREBY AUTHORIZED BY BONNEVILLE POWER ADMINISTRATION:



Timothy C. Wicks
Realty Specialist

02/16/2012
Date

SEC 3 T21N R5E WM
KING COUNTY, WASHINGTON



APPROXIMATE LOCATION OF
pressure reducing/flow control station, telemetry shelter and improved access road with gate

UNITED STATES DEPARTMENT OF THE INTERIOR
BONNEVILLE POWER ADMINISTRATION
HEADQUARTERS, PORTLAND, OREGON

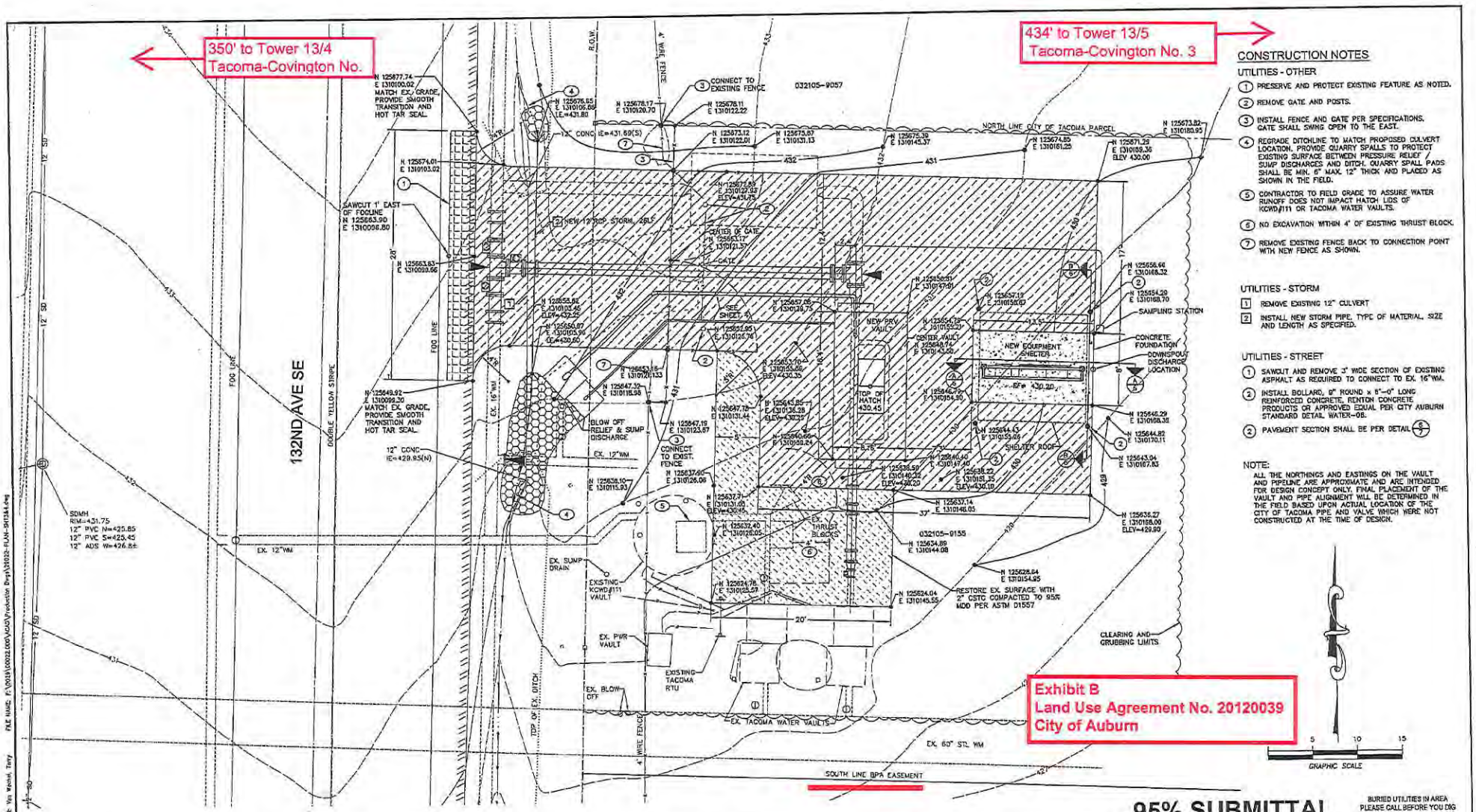
TACOMA-RAVER NO 1 & 2
TACOMA-COVINGTON SEC
500 KV. TRANSMISSION LINE
LONG MILE 13 OF 24 MILES FROM TACOMA (5296.2)

RIGHT OF WAY		DESIGN AB	
Design DLM		Design RG	
Drawn CLM	Engineer	Drawn DLM	Engineer
Checked EHN	Unit Head	Checked KHC	Unit Head

Approved: MW Bellatter for Chief, Branch of Transmission Design
Date: 1-7-70
R/W DATE 8-22-68 | DES DATE 6-21-69
150023 DTM-D | WO 145-25

EXHIBIT A
CASE 20120039
Tract ID: 2C-T-2-A-16; 3C-T-13-A-85
Lines: Tacoma-Raver #1&2; Tac-Cov #3; Tacoma-Grand Coulee (oper as Tac-Cov #4)

City of Auburn
Watermain system Intertie and pressure reducing station



No.	Date	Revision

DRAWN TO SCALE. SCALE MAY BE DISTORTED FROM REPRODUCTION

RECORD DRAWING CERTIFICATION

These drawings conform to the Contractor's construction records.

Drawn By: Date

Construction Inspection

	BY	DATE
Drawn	TVW	
Reviewed	LDS	
Approved	LDS	

SCALE: 1" = 10'H

ONE INCH AS DRAWN

File:

CITY OF AUBURN WASHINGTON
PUBLIC WORKS DEPARTMENT
25 West Main Street
Auburn, Washington

REVIEWED BY: DATE:

Project Manager

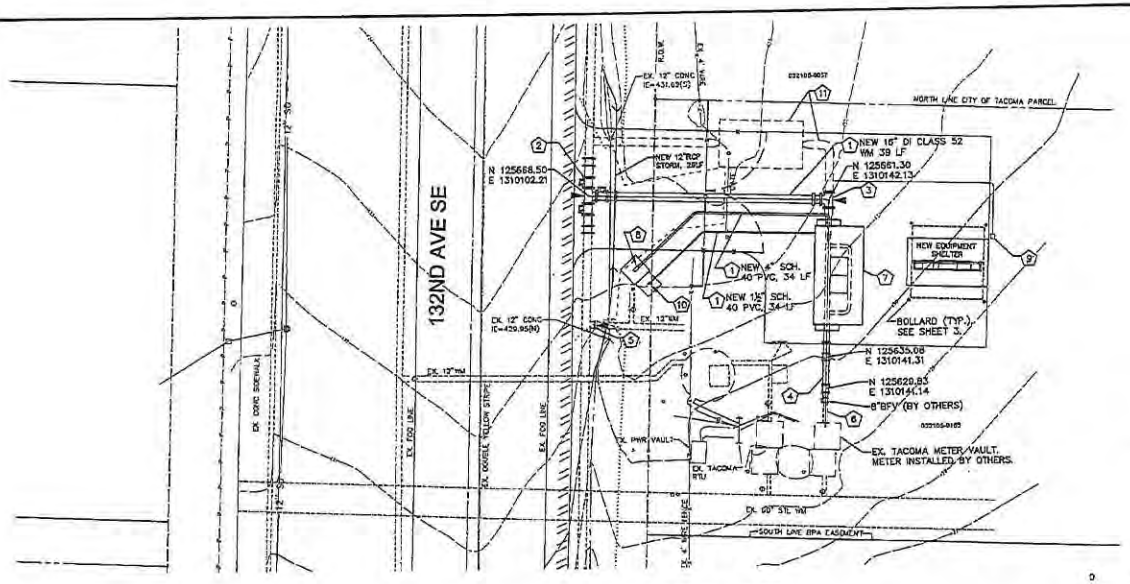
Construction Manager

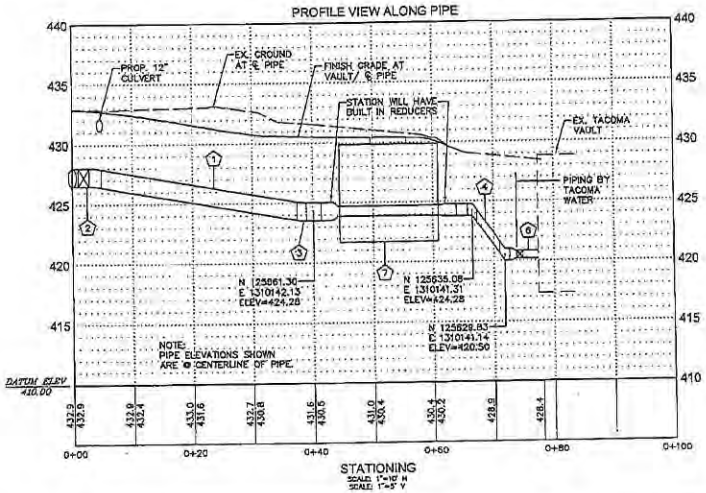
ROTHHILL
Roth Hill, LLC Tel 425.868.9440 www.rothhill.com
11130 NE 33rd Place, Suite 200 Bellevue, WA 98004

132ND AVE SE TACOMA PIPELINE 5 INTERTIE
SITE PLAN
STORM, PAVEMENT & RESTORATION

PROJECT NUMBER	CP1103
CONTRACT NUMBER	12-01
SHEET	3
OF	19

PLOTTING DATE: 11/21/2011 2:34 PM USER: Von Wachsl, Tony FILE NAME: F:\0018\c0022.000\VUGS\Production Dwgs\26022-PLAN-SHT334.dwg





CONSTRUCTION NOTES

UTILITIES - WATER

1. INSTALL NEW WATER PIPE, TYPE OF MATERIAL, SIZE AND LENGTH AS SPECIFIED.
2. CUT INTO EXISTING 16" DI WATER MAIN.
   INSTALL:
   1–16"x16" TEE (FLxFL)
   3–16" BUTTERFLY VALVES (FLxFL)
   1–16" 11¼° VERT. BEND (FLxRJ)
   2–16" FL. CPLG. ADAPT. (FLxMJ)
   3–16" SLEEVES (MJ)
   3–16" DI SPOOLS (LF AS REQ'D)
   CONCRETE BLOCKING PER CITY OF AUBURN STANDARD DETAIL WATER–01
3. 1–16"x16" TEE (FLxFL)
   1–16" 11¼° VERT. BEND (FLxRJ)
   1–16" BLIND FLANGE
   CONCRETE BLOCKING PER CITY OF AUBURN STANDARD DETAIL WATER–01
4. 1–12" DI FL. SPOOL (LF AS REQ'D)
   1–12" 45° VERT BEND (RJxRJ)
   1–12" DI SPOOL (LF AS REQ'D)
   1–12"45° VERT. BEND (FLxRJ)
   1–12"x8" REDUCER (FLxFL)
   CONCRETE BLOCKING PER CITY OF AUBURN STANDARD DETAIL WATER–01
5. ABANDON EXISTING 12"WM AND REMOVE EX. BO ASSY AND GATE VALVE.
   INSTALL :
   1–12"BLIND FL
   CONCRETE BLOCKING PER CITY OF AUBURN STANDARD DETAIL WATER–01
6. 8"WATER MAIN AND BFV (BY OTHERS)
7. INSTALL NEW PRV STATION . SEE FOUNDATION DETAIL (5)
   INSTALL INLET & OUTLET CONCRETE THRUST BLOCKING PER DETAIL (3)
8. INSTALL NEW 6" BLOW OFF RELIEF DISCHARGE, SEE DETAIL (1)
   N 125650.53
   E 1310110.01
9. INSTALL NEW SAMPLING STATION W / ¾" BALL VALVE, SEE DETAIL (4)
   N 125654.77
   E 1310169.36
10. INSTALL NEW 1½" SUMP DISCHARGE, SEE DETAIL (2)
    N 125647.96
    E 1310112.01
11. FUTURE VAULT AND MAIN ALIGNMENT. (NOT PART OF THIS CONTRACT)

NOTE:
ALL THE NORTHINGS AND EASTINGS ON THE VAULT AND PIPELINE ARE APPROXIMATE AND ARE INTENDED FOR DESIGN CONCEPT ONLY. FINAL PLACEMENT OF THE VAULT AND PIPE ALIGNMENT WILL BE DETERMINED IN THE FIELD BASED UPON ACTUAL LOCATION OF THE CITY OF TACOMA PIPE AND VALVE WHICH WERE NOT CONSTRUCTED AT THE TIME OF DESIGN.

Exhibit C
Land Use Agreement No. 20120039
City of Auburn

95% SUBMITTAL

BURIED UTILITIES IN AREA
PLEASE CALL BEFORE YOU DIG
811

No.	Date	Revision

DRAWN TO SCALE, SCALE MAY BE DISTORTED FROM REPRODUCTION

RECORD DRAWING CERTIFICATION

These drawings conform to the Contractor's construction records.

Drawn By: Date

Construction Inspection

	BY	DATE
Drawn	TYW	
Reviewed	LDS	
Approved	LDS	

SCALE: 1" = 10' H, 1" = 5' V
ONE INCH AS DRAWN
File:

JAMES D. STEPHENS — STATE OF WASHINGTON — 20270 — REGISTERED PROFESSIONAL ENGINEER

CITY OF AUBURN WASHINGTON
PUBLIC WORKS DEPARTMENT
25 West Main Street
Auburn, Washington

REVIEWED BY: DATE:
Project Manager
Construction Manager

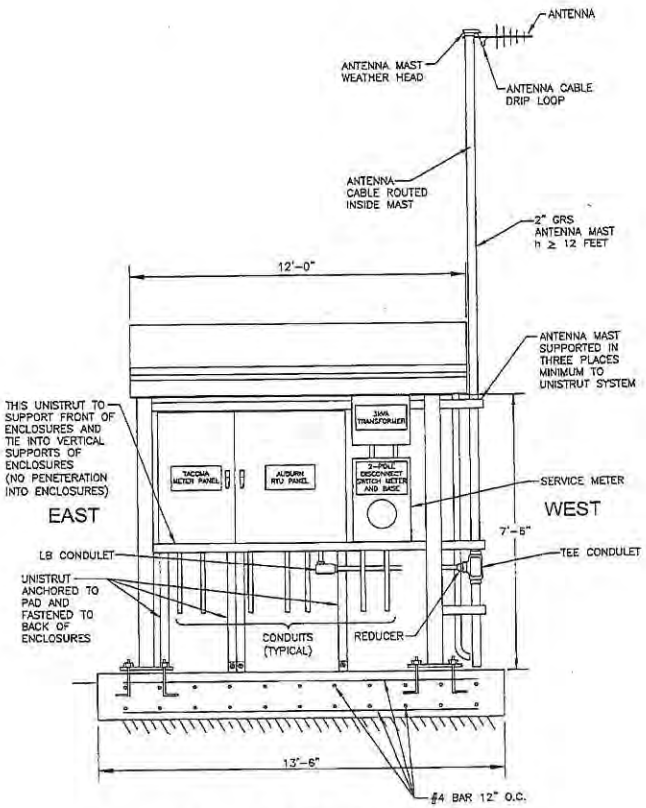
ROTHHILL
Roth Hill, LLC Tel 425.869.9448 www.rothhill.com
11130 NE 33rd Place, Suite 200 Bellevue, WA 98004

132ND AVE SE TACOMA PIPELINE 5 INTERTIE
WATER PLAN & PROFILE

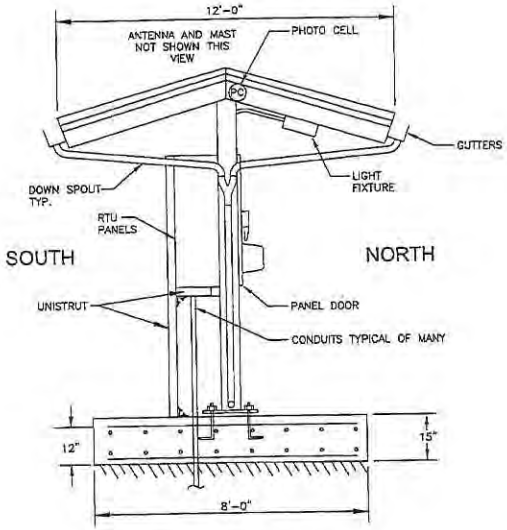
PROJECT NUMBER	CP1103
CONTRACT NUMBER	12-01
SHEET	4
OF	19

PLOTTING DATE: 11/21/2011 2:24 PM USER: Von Welch, Terry FILE NAME: F:\0025\0022.003\CAD\Production Dwg\V95022-PLAN-SHT04.dwg

SEE SPECIFICATION SECTION 8-26 FOR EQUIPMENT SHELTER INFORMATION.



NORTH ELEVATION SECTION (A/6)
NTS



EAST ELEVATION SECTION (B/6)
NTS

Exhibit D
Land Use Agreement No. 20120039
City of Auburn

95% SUBMITTAL

BURIED UTILITIES IN AREA PLEASE CALL BEFORE YOU DIG 811

No.	Date	Revision

DRAWN TO SCALE, SCALE MAY BE DISTORTED FROM REPRODUCTION

RECORD DRAWING CERTIFICATION

These drawings conform to the Contractor's construction records.

Drawn By: Date

Construction Inspector

	BY	DATE
Drawn	TVW	
Reviewed	LDS	
Approved	LDS	

SCALE: NOT TO SCALE

ONE INCH AS DRAWN

File:

CITY OF AUBURN WASHINGTON
PUBLIC WORKS DEPARTMENT
25 West Main Street
Auburn, Washington

REVIEWED BY: DATE:

Project Manager

Construction Manager

ROTH HILL
Roth Hill, LLC Tel 425.889.9468 www.rothhill.com
11100 NE 33rd Place, Suite 200 Bellevue, WA 98004

132ND AVE SE TACOMA PIPELINE 5 INTERTIE
EQUIPMENT SHELTER

PROJECT NUMBER	CP1103
CONTRACT NUMBER	12-01
SHEET	6
OF	19

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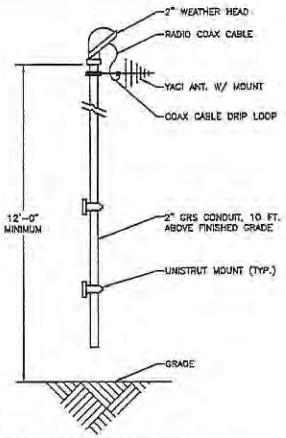
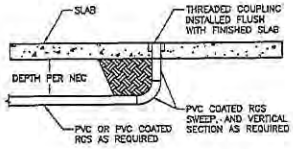


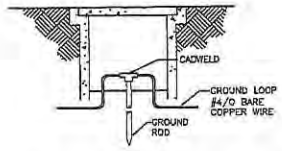
TYPICAL POLE MOUNTED ANTENNA DETAIL 1
SCALE: NONE

NOTES:

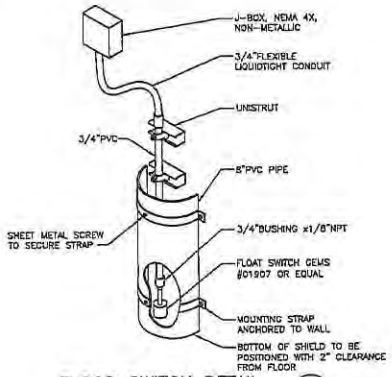
1. MAST SIZE AS REQUIRED TO PROVIDE 80 MPH WIND LOADING.
2. ALL MOUNTING HARDWARE AND BRACKETS SHALL BE GALVANIZED STEEL.



CONCRETE SLAB PENETRATION 2
SCALE: NONE



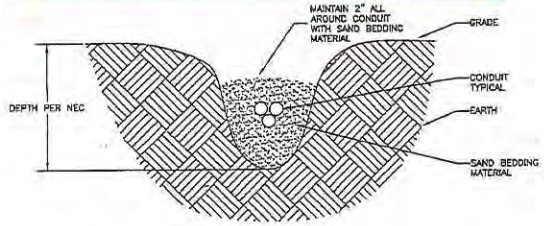
GROUND WELL DETAIL 3
SCALE: NONE



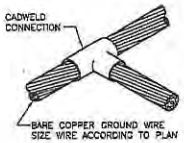
FLOOD SWITCH DETAIL 4
SCALE: NONE

Exhibit E
Land Use Agreement No. 20120039
City of Auburn

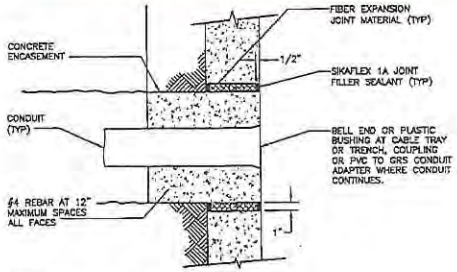
Per BPA
Minimum cover 24" or meet local/state/federal/ national codes whichever is greater.



CONDUIT INSTALLATION DETAIL 6
SCALE: NONE



CADWELD DETAIL 5
SCALE: NONE



NOTE:
PROVIDE CONDUIT IDENTIFICATION FOR ALL CONDUITS AT HANDHOLES AND MANHOLES.

CONCRETE ENCASED CONDUIT ENTRANCE DETAIL 7
SCALE: NONE

95% SUBMITTAL

No.	Date	Revision

DRAWN TO SCALE. SCALE MAY BE DISTORTED FROM REPRODUCTION

RECORD DRAWING CERTIFICATION

These drawings conform to the Contractor's construction records.

Drawn by: Date

Construction Inspection

	BY	DATE
Drawn	MEZ	8/1/11
Reviewed	AS	10/07/11
Approved		

File: CP1103-SHT12_S1.dwg

CITY OF AUBURN WASHINGTON
PUBLIC WORKS DEPARTMENT
25 West Main Street
Auburn, Washington

REVIEWED BY: (Leah Dundon) Project Manager — DATE: (X/XX/11)

Construction Manager

L2 Systems, LLC

132ND AVE S.E. TACOMA PIPELINE 5 INTERTIE
ELECTRICAL DETAILS

PROJECT NUMBER CP1103
CONTRACT NUMBER 12-01
SHEET 9 OF 19

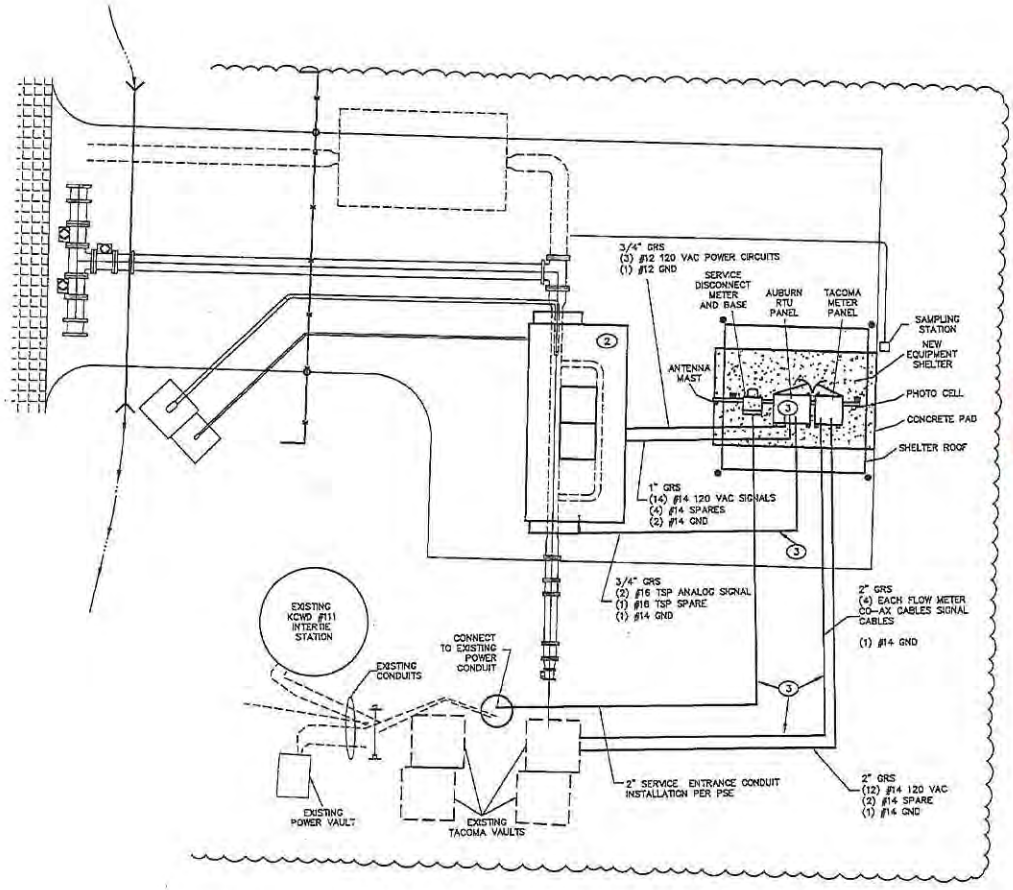
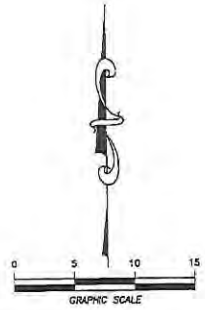


Exhibit F
Land Use Agreement No. 20120039

NOTES:
1). CONDUIT PATHS SHOWN MIGHT NOT BEE THE MOST EFFICIENT METHOD OF INSTALLATION
2). PRV VAULT ELECTRICAL DETAILS ARE SHOWN ON SHEET 11
3). ELECTRICAL PANEL INSTALLATION DETAILS AT THE NEW SHELTER ARE SHOWN ON SHEET 12



95% SUBMITTAL

No.	Date	Revision

DRAWN TO SCALE, SCALE MAY BE DISTORTED FROM REPRODUCTION

RECORD DRAWING CERTIFICATION

These drawings conform to the Contractor's construction records.

Drawn By: Date

Construction Inspection

	BY	DATE
Drawn	MEZ	8/1/11
Reviewed	AS	10/7/11
Approved		

SCALE AS NOTED

FILE: CP1103-SHT10_PLAN.dwg

LANCE D. STEVENS — STATE OF WASHINGTON — 45074 — PROFESSIONAL ENGINEER

CITY OF AUBURN WASHINGTON

PUBLIC WORKS DEPARTMENT
25 West Main Street
Auburn, Washington

REVIEWED BY: (Land Use Section) DATE: (X/X/2011)

Project Manager

Construction Manager

L2 Systems, LLC

132ND AVE SE TACOMA PIPELINE 5 INTERTIE
ELECTRICAL SITE PLAN

PROJECT NUMBER CP1103
CONTRACT NUMBER 12-01
SHEET 10 OF 19

PLOTTING DATE: 11/21/2011 2:57 PM USER: Van Wetzel, Terry FILE NAME: F:\2011\00022\001\CAD\Sht Dwgs\ASF PLANS\CP1103-SHT10_ELEC.dwg

TACOMA WATER

3628 South 35th Street
Tacoma, Washington 98409-3192

TACOMA PUBLIC UTILITIES

July 11, 2012

RECEIVED

JUL 12 2012

City of Auburn
Public Works Department

Mr. Dennis Dowdy
Public Works Director
25 West Main Street
Auburn, WA 98001-4998

RE: City of Auburn – Tacoma Water Wholesale Agreement

Dear Mr. Dowdy:

We are delighted to be transmitting your original copy of the fully executed Wholesale Water Agreement between our two agencies.

Also enclosed with this letter is an invoice for the System Development Charge outlined in the Section C.4 of the agreement. In accordance with your instructions, we have prepared a lump sum invoice.

I understand that the last details of each point of connection are being completed, and that supply is available currently at the B Street location, and will be soon at the 132nd Ave. location.

We look forward to a long-term relationship with the City as we work conjunctively on drinking water issues, and other matters of importance related to the Green River, and will include Auburn as we move forward with a broader initiative of communication and collaboration with all our Wholesale partners. If any question of quality or service arises, please feel free to contact me at (253) 502-8245 anytime or Chris McMeen at (253) 502-8210.

Sincerely,

Linda McCrea

Linda McCrea
Superintendent

cc: Chris McMeen, Tacoma Water

Enclosures: Wholesale Agreement
System Development Charge Invoice

RECEIVED
JUL 03 2012
WATER QUALITY
TACOMA PUBLIC UTILITIES

WHOLESALE WATER AGREEMENT
BETWEEN TACOMA WATER
AND
CITY OF AUBURN

This wholesale water agreement ("Agreement") is made by and between the City of Tacoma, Department of Public Utilities, Water Division d/b/a Tacoma Water, a municipal corporation (hereafter "Tacoma"), and the City of Auburn, a municipal corporation (hereafter "Auburn") pursuant to Tacoma Municipal Code 12.10.400 E. Tacoma and Auburn collectively shall be referred to as the "Parties" or either Tacoma or Auburn may be referred to as "Party" when appropriate.

A. RECITALS:

WHEREAS, Tacoma has evaluated its wholesale projections in its demand forecast and has determined that adequate water resources are available to serve those projected demands; and

WHEREAS, the Parties are responsible for operating and maintaining their respective water systems in accordance with federal, state and local laws and regulations; and

WHEREAS, the Parties further recognize that water resources are finite and valuable, and the prudent use and management of these resources requires cooperation among water utilities; and

WHEREAS, Auburn has requested and Tacoma has agreed to provide a wholesale water supply to Auburn, and Tacoma is able and willing to provide the requested quantity of water on the terms and conditions as herein provided, now therefore;

For and in consideration of the mutual covenants, conditions and payments to be made as set forth herein, the Parties hereto agree as follows:

B. DEFINITIONS:

The meaning of certain words or terms, when used in this Agreement, is as follows:

1. "Wholesale Service Connection" means a physical connection between water mains of the two Parties to this Agreement, at a specifically identified point or points, where water may be transferred from one Party's system to the transmission or distribution facilities of the other Party.

2. "Isolation Valve" means a positive shut off valve that shall be installed at the location in each water system that is used to accept or deliver water through the Wholesale Service Connection. Each Party has sole responsibility for operating their Isolation Valve.

3. "Wholesale Service Connection Capacity" means the maximum flow capacity for water to be delivered through a Wholesale Service Connection as agreed upon by the Parties to this Agreement. Wholesale service connection facilities shall be designed so as to be capable of conveying no less than the agreed upon Wholesale Service Connection Capacity.

4. "Tacoma Municipal Code (TMC") means the City of Tacoma's municipal code.

5. "Emergency" means an unforeseen event that causes damage or disrupts normal operations and requires immediate action to protect public health and safety including exclusively when water system repairs are necessary due to a water system failure or when there is a water supply shortfall.

6. "Wholesale Water Service" means water provided by Tacoma pursuant to TMC 12.10.400 E to community water systems that are in compliance with Washington State Department of Health regulations and who adopt a water conservation program substantially equivalent to Tacoma's program and agree to abide by Tacoma's Water Shortage Response Plan as a condition of service.

C. CONDITIONS:

The responsibilities of the parties to this contract are set forth below:

1. General. Tacoma agrees to furnish the Wholesale Service Connection Capacity to Auburn of a quality that will satisfy all requirements of the Federal Safe Drinking Water Act as amended, and shall be in accordance with the terms and conditions of this Agreement.

2. Wholesale Water Rates. Tacoma will supply Auburn with water at the Wholesale Water Service rate as identified in TMC Section 12.10.400, and the parties will be bound by the City of Tacoma Water Regulations-Rates as found in Chapter 12.10 TMC. Invoices will include a monthly ready to serve charge based on meter size and consumption charges based on water used. These water rates (and regulations) are periodically adjusted and shall be applicable as set forth in the rate schedule as adopted by the Public Utility Board and Tacoma City Council. The water supplied to Auburn must be used on a year-around basis where the average summer day use divided by the average winter day use results in a summer/winter ratio of 2.5 or less, as set forth in TMC 12.10.400.

3. Billing. Tacoma shall utilize regular meter reads secured from SCADA signals that Auburn shall deliver to the Tacoma Water Control Center to calculate a statement of charges for water service. In the event SCADA signals are unavailable, monthly manual reads will be used in lieu until such time that SCADA signals are restored. Tacoma shall strive to provide the statement of charges on a monthly basis, and payment shall be due to Tacoma pursuant to TMC 12.10.060. In accordance with TMC 12.01.030, no late charges shall be applied if payment of the balance due is received within 24 days of the date on the initial billing.

4. System Development Charge. Upon Auburn's payment of the full charge or the initial time installment payment to Tacoma for Tacoma's System Development Charge (SDC) of $5,196,600.00, Tacoma will commit and agrees to supply to Auburn Wholesale Water Service. Auburn agrees to pay the full balance of the SDC Charge within thirty (30) days of execution of this agreement. At its option, Auburn may pay at least 20 percent (20%) of the SDC amount within thirty (30) days of execution of this agreement, and then shall pay the SDC balance with interest over up to ten years as authorized by the Tacoma Municipal Code, as further set forth below.

   If paying in installments, Auburn agrees to pay the SDC balance in ten annual installments commencing on the first annual anniversary date of this agreement. In addition to the annual SDC installment, Auburn shall also pay interest, calculated on a monthly basis (the first day of every month) on the outstanding principal SDC balance amount at "prime" minus 2% interest rate, as reported by the Wall Street Journal ten days before the date that the monthly interest calculation is made. The interest amount paid by Auburn shall be paid to Tacoma along with the annual installment payment. Provided however, Auburn may prepay (without penalty) a portion or all of the outstanding SDC amount, in which case the accrued interest to date of such prepayment shall also be paid to Tacoma.

5. Water Rights. Tacoma certifies that it holds sufficient water rights to provide the quantities of Wholesale Water Service requirement by the Agreement to Auburn for the duration of the term of this Agreement as described in section 16.

6. Quantity of Wholesale Water Service. Tacoma will make available, and upon Auburn's request, supply Wholesale Water Service to Auburn in the quantity of up to 1,000,000 gallons per day (gpd) of water for average day use, up to 1,800,000 gpd for peak day use and up to 1,620,000 gpd for four-day peak use. Tacoma further agrees to supply at Auburn's Option to exercise no later than December 31, 2015, an additional quantity of 1,000,000 gallons per day (gpd) of water for average day use, 1,800,000 gpd for peak day use and 1,620,000 gpd for four-day peak use, under the same terms and SDC rates of this agreement.

7. Reliability . The Parties agree that Tacoma will supply Wholesale Water Service pursuant to this Agreement with the same degree of reliability and surety of supply as water provided by Tacoma to its existing customers and as allowed under TMC 12.10.150. In non-emergency situations Tacoma will provide 30 days notice to Auburn before temporarily requiring the changing, reducing, limiting or discontinuance of the use of water.

8. Additional Water. Auburn may purchase water for Emergency purposes in excess of the amount set forth in paragraph 6 above on a short term basis from Tacoma if in Tacoma's sole discretion sufficient surplus water is available. Auburn shall be entitled to purchase such water in accordance with the terms of this Agreement at the then current wholesale rate, and the applicable sections of Chapter 12, Tacoma Municipal Code.

9. Connections. The Wholesale Service Connections described in Exhibit "A" shall be governed by the terms of this Agreement. No future Wholesale Service Connections shall be permissible without a subsequent and separate written agreement between the Parties, which agreement may supplement this Agreement. Neither Party shall be obligated to agree to or execute any agreement or permit with the other Party to construct additional water Wholesale Service Connection(s).

10. Capital and Maintenance Costs. Auburn agrees that Tacoma Water owns the Isolation Valve directly off of the Tacoma Water system, piping from the Tacoma Water Isolation Valve to the meter, the meter vault and the meter, meter isolation valve, and certain telemetry equipment. Maintenance and operation costs for this equipment are Tacoma Water's responsibility. Any capital costs related to this equipment, including upgrades or replacement and renewal are Tacoma's responsibility. Tacoma agrees that Auburn owns the piping and other appurtenances, including certain telemetry components, downstream of the Tacoma Water Meter Vault. Maintenance and operation costs and any capital costs related to upgrades or replacements of this equipment are Auburn's responsibility. Exhibit "B" identifies the location of the two interties, and illustrates the responsible Party for physical infrastructure components (except telemetry components).

11. Transferability. The rights and obligations of this Agreement are transferable to heirs, successors and assignees of the Parties.

12. Resale. Wholesale water provided under this Agreement by Tacoma to Auburn may be resold by Auburn to another water purveyor.

13. Conservation. As a requirement of providing Wholesale Water Service to Auburn under this agreement and pursuant to Chapter 12.10 TMC Auburn shall implement a water conservation program substantially equivalent to Tacoma's program and shall abide by Tacoma's Water Shortage Response Plan ("Plan") as

provided under TMC 12.10.150. If requested Tacoma will invite Auburn to participate in the planning and implementation process for conservation programs as they are developed and will share available conservation resources where beneficial to both Parties. The Parties agree to meet every two years to review and evaluate operational experience with regards to water use and conservation.

14. Mutual Aid. Tacoma and Auburn agree to provide water service related mutual aid, to the extent possible, during times of extraordinary need and emergency operations experienced by either Party.

15. Indemnification. Neither Party shall be monetarily liable to the other Party or its respective customers for failure to supply and deliver water to the other at any time or for any reason. The Parties shall indemnify and hold each other harmless from any and all third party claims, lawsuits, or proceedings in arbitration resulting from any failure of either Party to supply and deliver water in accordance with the terms and conditions of this Agreement. However, each Party shall have the right to have this Agreement specifically enforced in equity.

16. Term. This Agreement shall remain in effect so long as Tacoma remains in the business of providing water, or its successors in interest to its water system remain in the business of providing water, and so long as Auburn meets the terms and conditions of this Agreement.

17. Dispute Resolution. In the event of a disagreement over any aspect of this Agreement, except as herein further provided, it is agreed that any dispute shall be submitted to binding arbitration pursuant to Chapter 7.04 RCW. The Parties shall agree upon who will arbitrate the dispute, and upon failure to reach agreement within a reasonable period of time, the presiding judge of the Pierce County Superior Court may be asked to appoint an arbitrator from one of the recognized dispute resolution services. The Party that substantially prevails in the arbitration proceeding shall be awarded its reasonable attorney fees and costs. If neither Party substantially prevails in the arbitration proceeding, the Parties shall each bear their respective costs and divide the mutual costs associated with the arbitration equally.

18. Notice. All notices, requests, demands and other communications hereunder shall be in writing and shall be deemed given if personally delivered or mailed, certified mail, return receipt requested, or sent by overnight carrier to the following addresses:

If to Tacoma:
Water Superintendent
PO Box 11007
Tacoma, WA 98411
Phone: (253) 502-8245

If to Auburn:
Public Works Director
1 East Main Street
Auburn, WA 98001
Phone: (253) 804-5062

Fax: (253) 502-8694 Fax: (253) 931-3053

Operational communication protocols shall be fully described in the jointly developed Operational Protocols required under item 22 below.

19. Invalidity. If any term of this Agreement is found to be void or invalid, such invalidity shall not affect the remaining terms of this Agreement, which shall continue in full force and effect. The parties shall agree that if any provisions are voided by a court or otherwise deemed not enforceable, the parties shall negotiate in good faith to develop replacement provisions that are as close as possible to the intent of the parties expressed in the invalid provisions.

20. Counterparts. This Agreement may be executed in any number of counterpart copies, each of which shall be deemed an original, but all of which together shall constitute a single instrument.

21. Authority to Bind. Each of the Parties to this Agreement certifies that the person signing this Agreement has authority to bind the respective governing bodies to all of the terms and conditions of the Agreement herein.

22. Operational Coordination. Water supply directly off the Tacoma Water transmission system affects flow, pressure, and treatment, and diurnal consistency of demand is critical. The two Parties agree to jointly develop and maintain Operating Protocols for items including the scheduling of water demand to assure consistent flow control and treatment, routine operational communication, emergency shutdown, emergency contacts, and other items the Parties determine appropriate.

23. This agreement replaces the EMERGENCY AGREEMENT BETWEEN CITY OF TACOMA AND CITY OF AUBURN dated October 18, 2010.

Dated this 16th day of July, 2012.

City of Tacoma:
Department of Public Utilities
Water Division

Linda A. McCrea
Water Superintendent

City of Auburn:
Mayor

Approved as to form & legality:

Approved as to form & legality:

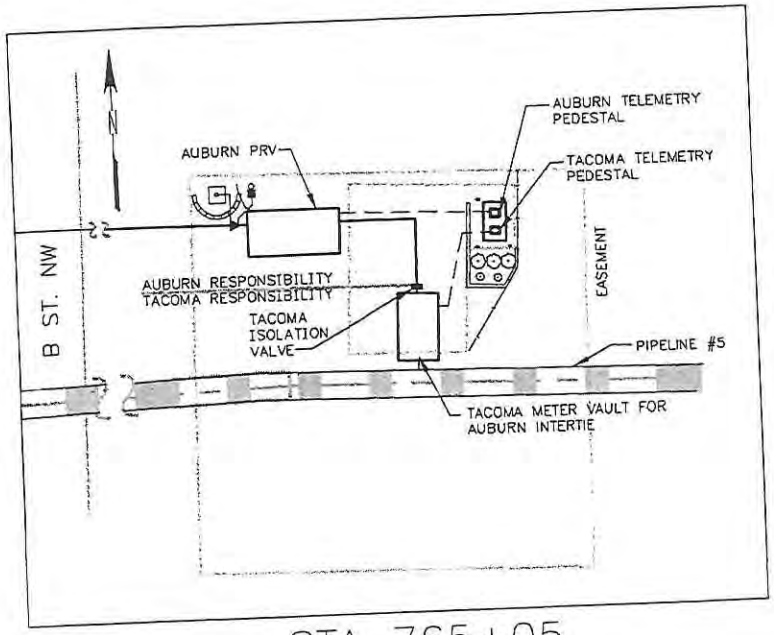
Approved
Acting Finance Director

EXHIBIT "A"

WHOLESALE SERVICE CONNECTIONS SPECIFICATIONS

Intertie Location	Connection	Meter	Static Elevation (ft)		Operating Pressure (psi)		Flow Capacity (gpm)	Flow Capacity **(mgd)**
	Size	Size	Tacoma	Auburn	Tacoma	Auburn	To/From Utility	To/From Utility
Tacoma Water Pipeline 5 at 3200 "B" St. NW Auburn, WA .(STA 765+05)	12"	6"	894 (NGVD29)	253 (NAVD88)	309	80	2,200	3.2
Tacoma Water Pipeline 5 at 29600 132nd Ave SE, Kent, WA (STA 933+00)	12"	8"	894 (NGVD29)	579 (NAVD88)	173	80	4,500 (PRV 2,200)	6.5 (PRV 3.2)

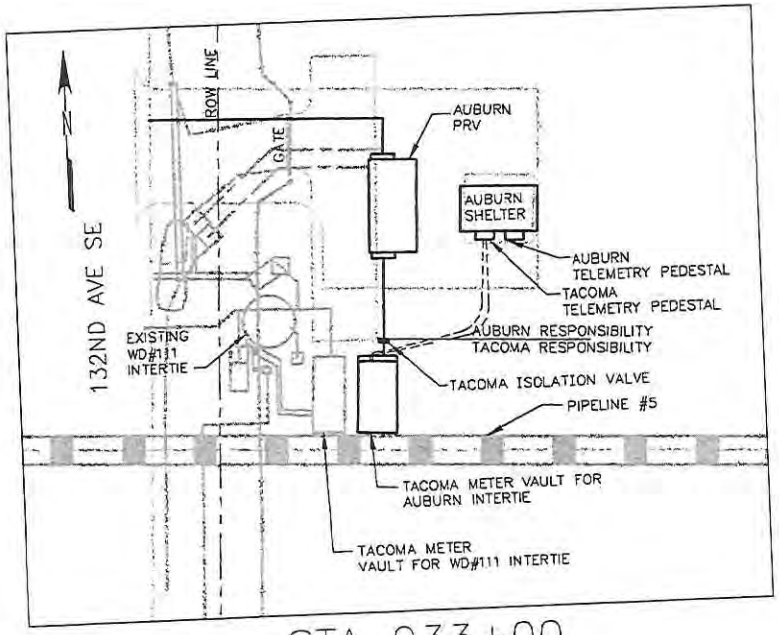
Note: For connection specific elevations remember the NGVD29 (Tacoma) Datum is 3.47 feet higher than the NAVD88 (Auburn) Datum.



STA 765+05

3200 B ST NW, AUBURN, WA

SCALE: N.T.S.



STA 933+00

29600 132nd AVE. SE, KENT, WA

SCALE: N.T.S.

EXHIBIT B

RESOLUTION NO. 4986

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR AND CITY CLERK TO EXECUTE AGREEMENTS BETWEEN THE CITY OF AUBURN AND CASCADE WATER ALLIANCE FOR THE PURCHASE AND SALE OF CREDITS RELATING TO PERMANENT AND RESERVE WHOLESALE WATER SUPPLY CAPACITY

WHEREAS, the City of Auburn has a duty and responsibility to provide water to its community; and

WHEREAS, in February 2010, the City of Auburn entered into the 2010 Lake Tapps Area Water Resources Agreement that provided, among other things, for Cascade Water Alliance (Cascade) to assist the City in meeting its projected 50-year water supply needs; and

WHEREAS, in February 2013, Cascade informed the City of the availability of a water supply opportunity; and

WHEREAS, the City confirmed its desire to purchase a System Development Charge Credit from Cascade for both 4 Million Gallon per Day ("MGD") Permanent, and 6 MGD Reserve Wholesale Water Supply.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, HEREBY RESOLVES as follows:

Section 1. That the Mayor and City Clerk are hereby authorized to execute Agreements between the City and Cascade Water Alliance for the Purchase and Sale of Credits Relating to Permanent and Reserve Wholesale Water Supply Capacity, which agreements shall be in substantial conformity with the agreements attached hereto as Exhibits A and B and incorporated herein by this reference.

Section 2. That the Mayor is authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

Section 3. That this Resolution shall take effect and be in full force upon passage and signatures hereon.

Dated and Signed this 3rd day of September, 2013.

CITY OF AUBURN

PETER B. LEWIS, MAYOR

ATTEST:

Danielle E. Daskam, City Clerk

APPROVED AS TO FORM:

Daniel B. Heid, City Attorney

AGREEMENT FOR THE PURCHASE AND SALE OF CREDITS RELATING TO PERMANENT WHOLESALE WATER SUPPLY CAPACITY

THIS AGREEMENT ("Agreement") is made and entered into as of this 10th day of September 2013 ("Effective Date"), by and between the City of Auburn, Washington ("Auburn"), and Cascade Water Alliance, a joint municipal utilities services authority organized under Chapter 39.106 RCW ("Cascade"). The City and Cascade are sometimes referred to collectively as the "Parties" and individually as a "Party."

RECITALS

WHEREAS, in 2005, in order to meet Cascade's immediate and long-term water supply needs, Cascade purchased from Tacoma a supply of water both permanently and for a finite period of years pursuant to an "Agreement for the Sale of Wholesale Water";

WHEREAS, on February 5, 2010, Cascade and the Cities of Bonney Lake, Buckley, Sumner and Auburn entered the 2010 Lake Tapps Area Water Resources Agreement (the "Four Cities Agreement") that provided, among other things, for Cascade to assist the four cities in meeting their projected 50-year water supply needs;

WHEREAS, on December 31, 2012, Cascade and Tacoma entered the Amended and Restated Agreement for the Sale of Wholesale Water (the "Amended and Restated Agreement") that provided, among other things, for Tacoma to make available to the four cities a water supply to be purchased directly from Tacoma as a wholesale customer and to recognize credit for the System Development Charges that Cascade had previously paid to Tacoma;

WHEREAS, Cascade and Tacoma sent a letter, dated February 11, 2013, to inform Auburn of the availability of the "substitute" water supply opportunity and related time limitations and procedures for acting on the opportunity ("Joint Letter");

WHEREAS, Auburn timely approved, signed, and delivered the Confirmation Notice, dated May 21, 2013, to confirm Auburn's election of the substitute supply opportunity and its desire to purchase a System Development Charge Credit from Cascade as to the 4 MGD Wholesale Water Supply ("Confirmation Notice"); and

WHEREAS, the Joint Letter and Confirmation Notice are set forth in Exhibit A hereto and are incorporated by reference in this Agreement;

NOW, THEREFORE, IN CONSIDERATION of the recitals stated above, which are incorporated herein, and the mutual covenants and conditions herein contained, the Parties agree as follows:

AGREEMENT

1. Definitions.

"4 MGD Wholesale Water Supply" means an average annual 4 MGD wholesale water supply from Tacoma, with a Peaking Factor of 1.33, and a maximum peak day of 5.32 MGD, all as provided in the Amended and Restated Agreement.

"Amended and Restated Agreement" means the "Amended and Restated Agreement for the Sale of Wholesale Water" by and among Cascade and the City of Tacoma, Department of Public Utilities, Water Division, dated December 31, 2012.

"Confirmation Notice" means the document, dated May 21, 2013, in which Auburn confirmed its election of the substitute supply opportunity in fulfillment of Cascade's obligation in the Four Cities Agreement to assist with Auburn's projected 50-year water supply needs (attached in Exhibit A).

"Four Cities Agreement" means the "2010 Lake Tapps Area Water Resources Agreement among the Cities of Auburn, Bonney Lake, Buckley and Sumner, and Cascade Water Alliance," dated February 5, 2010.

"MGD" means million gallons per day.

"Joint Letter" means the letter, dated February 11, 2013, from Cascade and Tacoma to Cities of Auburn, Bonney Lake, Buckley and Sumner that is attached hereto in Exhibit A.

"Notice of Confirmation of System Development Charge Credit" means a notice, given by Cascade to Tacoma at the request of Auburn, confirming the amount of the System Development Charge Credit (if any) to be applied to the System Development Charge otherwise due and payable by Auburn to Tacoma in connection with a wholesale water supply agreement.

"System Development Charge" or "SDC" means the system development charge imposed upon wholesale customers by Tacoma in its wholesale water regulations.

"System Development Charge Credit" means a credit to be applied in a wholesale water supply agreement against the System Development Charge otherwise due and payable by Auburn to Tacoma. The System Development Charge Credit is expressed in million gallons per day (MGD) units and in dollars.

"Tacoma" means the City of Tacoma, Department of Public Utilities, Water Division.

2. Term of Agreement.

This Agreement takes effect on the first date that both Parties have duly approved, signed, and delivered the Agreement to the other Party. The term of the Agreement will commence on the effective date and will end on December 31, 2029 or the date that Auburn has fully paid Cascade for the price of the System Development Charge Credit consistent with Sections 3 and 4 of this Agreement.

3. Purchase of 4 MGD System Development Charge Credit & Price.

Auburn agrees to purchase and Cascade agrees to sell a System Development Charge Credit regarding the 4 MGD Wholesale Water Supply in the quantity of 2.5 MGD annual supply capacity (3.32 MGD peak supply capacity).

In consideration for said System Development Charge Credit, Auburn will pay to Cascade a total price of $7,893,300.00 as of the date that this Agreement takes effect. The parties agree that Auburn will pay interest at an annual rate of 3.2% on the balance due beginning in 2017 and continuing until the balance is fully paid and this Agreement terminates.

Auburn will pay the total price by making an annual payment in 2017-2029 according to the annual payment schedule set forth in Section 4 below. This schedule incorporates interest at a rate of 3.2% on the balance due, beginning in 2017. Under this schedule the total of annual payments including interest is $10,105,806.00.

4. Annual Payment Schedule.

Auburn will make annual installment payments to Cascade to pay for the System Development Charge Credit as to the 4 MGD Wholesale Water according to the following payment schedule:

Payment Schedule

Year	Amount
2014	0
2015	0
2016	0
2017	$252,586
2018	$252,586
2019	$252,586
2020	$934,805

Year	Amount
2022	$934,805
2023	$934,805
2024	$934,805
2025	$934,805
2026	$934,805
2027	$934,805
2028	$934,805

2021	$934,805

2029	$934,805
Total	$10,105,806

Each year the annual payment shall due and payable by Auburn to Cascade on or before June 30 of the year in which such payment is due. If full payment of any annual payment is not received by Cascade on or before the date due, such payment shall be considered past due, and the unpaid amount shall accrue additional interest, from the date due until the date paid, at a rate per day equal to 0.03 percent per day. Upon not less than fifteen (15) days' advance notice to Cascade, the City may in any given year prepay without penalty any one or more of the next successive annual payments. Upon such notice, Cascade will provide Auburn documentation of the amount due for such payment, and adjustments to any remaining payment schedule, net of related interest incorporated into the above payment schedule.

5. Notice of Confirmation of System Development Charge Credit.

Within 30 days after this Agreement takes effect, Cascade will send to the Tacoma Water Superintendent a Notice of Confirmation of System Development Charge Credit regarding the 4 MGD Wholesale Water Supply in the quantity of 2.5 MGD annual supply capacity. Cascade will provide a copy of the Notice to Auburn when it is sent to Tacoma.

6. Wholesale Water Supply Purchase Negotiations with Tacoma.

In order to use the System Development Charge Credit and secure a wholesale water supply from Tacoma, Auburn acknowledges that it must make an offer, complete negotiations, and enter a wholesale water supply agreement with Tacoma consistent with the Joint Letter and Confirmation Notice set forth in Exhibit A and with the Amended and Restated Agreement. Auburn acknowledges and agrees that Cascade makes no representations or warranties as to the outcome of such negotiations, the Tacoma wholesale water supply that Auburn may (or may not) be able to purchase, or otherwise.

7. Effect on Four Cities Agreement.

The Parties agree that this Agreement constitutes full performance by Cascade of its obligations under Section 3(a) of the Four Cities Agreement. Accordingly, Section 3(a) of the Four Cities Agreement shall be of no further force or effect as between Cascade and Auburn. Other provisions of the Four Cities Agreement are unaffected by this Agreement and remain effective according to their terms.

8. Notices.

All notices and payments hereunder may be delivered or mailed. If mailed, they shall be sent to the following respective addresses:

Cascade Water Alliance:
520 112th Avenue NE, Suite 400
Bellevue, Washington 98004
Attn: Chief Executive Officer
Phone: (425) 453-0930
Fax: (425) 425-453-0953

City of Auburn:
Attn: Dennis Dowdy
25 W Main St
Auburn WA 98001
Phone: (253)931-3010
Fax: (253)931-3053

A Party may change its address from time to time by providing notice to the other Party. All notices and payments mailed by regular post (including first class) shall be deemed to have been given on the second business day following the date of mailing, if properly mailed and addressed. Notices and payments sent by certified or registered mail shall be deemed to have been given on the next business day following the date of mailing, if properly mailed and addressed. For all types of mail, the postmark affixed by the United States Postal Service shall be conclusive evidence of the date of mailing.

9. Dispute Resolution.

In the event that any dispute arises between Cascade and Auburn, the aggrieved Party shall give a notice of the dispute to the other Party. Cascade and Auburn shall, within five (5) days of such notice, each nominate a senior officer of its management to meet at a mutually agreed location, to attempt to resolve such dispute. The Parties shall each designate a representative(s) to confer on the best and most cost effective way to resolve the dispute. By mutual agreement, they may choose direct negotiations or mediation. If there is no agreement between the Parties on how to proceed within thirty (30) days, either Party may pursue legal action; provided, however, no Party shall be precluded from filing an appeal or action to prevent the expiration of a time period for filing or any statute of limitations.

If a Party fails to perform its obligations hereunder, then it shall be in default hereunder unless the defaulting Party cures an event of default, whether monetary or non-monetary, within thirty (30) days after receiving written notice from the other Party of such default.

Subject to the procedures set forth in Section 9 (Dispute Resolution), if a Party is in breach or default of its obligations arising under this Agreement, the other Party shall have and shall be entitled to exercise any and all remedies available to it at law or in equity (including the right to specifically enforce this Agreement), all of which remedies shall be cumulative.

11. Attorneys' Fees.

If any Party shall be required to bring any action to enforce any provision of this Agreement, or shall be required to defend any action brought by the other Party with respect to this Agreement, and in the further event that one Party shall substantially prevail in such action, the losing Party shall, in addition to all other payments required therein, pay all of the prevailing Party's reasonable costs in connection with such action, including such sums as the court or courts may adjudge reasonable as attorney's fees in the trial court and in any appellate courts.

12. No Assignment.

This Agreement is specific to the Parties and may not be assigned in whole or in part.

13. Non-Waiver.

No delay or failure by a Party to exercise any of its rights, powers or remedies under this Agreement following any breach by another Party shall be construed to be a waiver of any such breach, or any acquiescence therein, or of or in any similar breach thereafter occurring, nor shall any waiver of any single breach be deemed a waiver of any other breach theretofore or thereafter occurring.

14. No Third Party Beneficiary.

This Agreement is for the sole and exclusive benefit of the Parties and is not intended to and shall not confer any rights or benefits on any third party not a signatory hereto.

15. Integrated Agreement.

This Agreement constitutes the entire agreement between the Parties with respect to the subject matter hereof and supersedes all prior or contemporaneous understandings or agreements with respect thereto; provided, however, that this Agreement shall be interpreted or construed together with the Amended and Restated Agreement, the Joint Letter, and the Confirmation Notice. No modifications or amendments of this Agreement shall be valid or effective unless evidenced by an agreement in writing signed by the Parties.

16. Signature in Counterparts.

This Agreement may be executed in counterparts and all of those counterparts taken together shall constitute one and the same instrument.

17. Representations of the Parties.

Each Party represents and warrants that it has duly approved, executed, and delivered this Agreement and that it has all necessary authority to enter into this Agreement and to perform its terms and obligations. Each Party represents and warrants that the approval, execution, and delivery have been duly authorized by the appropriate board or council, and no other act or proceeding on the part of any Party is necessary to authorize entry into or performance of this Agreement.

IN WITNESS WHEREOF, the Parties have duly executed this Agreement as of the Effective Date.

City of Auburn:

By: _____

Title: MAYOR

Date: SEP 10 2013

ATTEST

_____
City Clerk

APPROVED AS TO FORM

_____
City Attorney

Cascade Water Alliance:

By: Chuck Clarke Chuck Clarke

Title: Chief Executive Officer

Date: 9/18/13

Exhibit A

[Joint Letter signed by Cascade and Tacoma, dated February 11, 2013, and the Confirmation Notice signed by Auburn, dated May 21, 2013.]

CASCADE
WATER ALLIANCE

WATER
TACOMA PUBLIC UTILITIES

February 11, 2013

The Honorable Pete Lewis
City of Auburn
25 West Main Street
Auburn, WA 98001

The Honorable Pat Johnson
City of Buckley
933 Main Street
Buckley, WA 98321

The Honorable Neil Johnson
City of Bonney Lake
19306 Bonney Lake Blvd.
Bonney Lake, WA 98391

The Honorable Dave Enslow
City of Sumner
1104 Maple Street
Sumner, WA 98390

Re: Cascade Water Alliance and Tacoma Water Substitute Wholesale Water Supply Availability – Time is of the Essence (*Sent by Email and US Mail*)

Dear Mayors:

As you may be aware, the Cascade Water Alliance and City of Tacoma have been in ongoing discussions about potential changes to the 2005 Water Supply Agreement. In late 2012 a new agreement was reached and signed which benefits not only Tacoma and Cascade but also the Four Cities of Auburn, Bonney Lake, Buckley and Sumner. This new agreement preserves the right of the four cities under the 2009 Cascade/Four Cities Agreement and allows a new time sensitive supply option to be jointly offered to the four cities from Cascade and Tacoma.

The Cascade Water Alliance (Cascade), in cooperation with Tacoma Water, is offering the availability of a substitute wholesale water supply ("Substitute Supply") and to provide this notice of a limited period of time for your Cities to take action on this unique opportunity. Cascade and Tacoma have entered into a Restated and Amended Agreement for the Sale of Wholesale Water, which replaces the 2005 agreement between the parties for purchase and sale of wholesale water. The 2005 agreement is included as one of the "water supply assistance" measures in the 2010 Lake Tapps Area Water Resources Agreement between Cascade and your cities (the "Four Cities Agreement").

In the Restated and Amended Agreement, Cascade has agreed to relinquish its right to take delivery of the Substitute Supply. This water is now available to the Cities to purchase directly from Tacoma as a wholesale customer. Cascade has, however, previously paid capacity charges for this wholesale water supply. If your City now desires to purchase the Substitute Supply directly from Tacoma and takes action described in this letter, Cascade is willing to sell your City a credit (reflecting the amounts that Cascade has previously paid to Tacoma) that can be

applied against System Development Charges that would otherwise be due to Tacoma ("SDC Credit"). The amount and availability of any SDC Credit will be determined by Cascade in accordance with the terms set forth in the Confirmation Notice that is attached to this letter. You must act promptly, however, in order to secure the opportunity to obtain an SDC Credit from Cascade.

This letter provides Cascade's formal notice of the limited window of time for your City to act, the Confirmation Notice that you must return to Cascade to apply for a SDC Credit, and general guidance as to how Cascade and Tacoma intend to cooperate to facilitate the implementation of the Restated and Amended Agreement.

Limited Time to Act

You must act within 120 days from the first meeting of Tacoma, Cascade and the Four Cities to confirm your interest in this opportunity by delivering a signed "Confirmation Notice" to Cascade in the form attached to this letter. This opportunity expires at the end of 120 days. During this 120-day period, the quantity allocation among and between the Four Cities as stated in the Four Cities letter to Cascade, dated February 5, 2010, shall be recognized by Cascade and shall determine the maximum allocation of the Substitute Supply (and the Residual Wholesale Water Supply) among the Cities (unless the Four Cities jointly agree to reallocation in accordance with the Four Cities Agreement). A City has until the expiration date to deliver an executed Confirmation Notice to Cascade. If you select this opportunity by acting within the 120 days, then you have until March 1, 2018 to purchase (or agree to purchase) an SDC Credit from Cascade. (In anticipation of the required steps with Tacoma described below, it is advisable for your City to complete the SDC purchase agreement with Cascade in advance of March 2018 to allow your City adequate time for the Tacoma steps.) If you select this opportunity by acting within the 120 days, then you will also have until March 1, 2018 to submit a Wholesale Water Agreement with Tacoma that is eligible for the SDC Credit.

If you do not confirm your selection by delivering a Confirmation Notice to Cascade by the deadline, then you decline the Substitute Supply opportunity stated in this letter. In that event, you will still be able to purchase wholesale water supply (if any water supply capacity remains available) from Tacoma on terms consistent with Section 3(a) of the Four Cities Agreement. However, you will not be eligible for an SDC Credit.

Next Steps with Cascade

If you deliver the Confirmation Notice within the 120-day deadline stated above and select this Substitute Supply opportunity, then you will need to complete the following steps with Cascade:

(a) Confirmation to Cascade that your City will proceed with the Substitute Supply opportunity stated herein, and that it fully substitutes for Section 3(a) of the Four Cities Agreement which will have no further force or effect.

(b) Agree with Cascade for payment terms to Cascade for the SDC credit.

(c) Upon completion of the items in (a) and (b) above, Cascade will send Notice of Confirmation of System Development Charge Credit to Tacoma.

Next Steps with Tacoma Water

If you deliver the Confirmation Notice to Cascade within the deadline stated above and select this opportunity, then you would also need to complete the following steps with Tacoma in order to submit a timely offer to purchase all or a portion of the Substitute Supply. The procedures and requirements that must be followed to submit such an offer are set forth in Section 6 and Section 7 of the Restated and Amended Agreement (attached for reference). It is important to read these procedures and requirements carefully as any offer you make must be in strict compliance with these procedures and requirements. These procedures and requirements are briefly summarized as follows:

(a) In order to obtain a SDC Credit, Tacoma must be in receipt of a Notice of Confirmation of System Development Charge Credit from Cascade.

(b) Prior to submitting your offer to purchase water from Tacoma, you must obtain Tacoma's written review and approval of the Wholesale Water Supply Agreement (including any proposed modifications thereof) pursuant to which such offer is to be made to Tacoma.

(c) Your offer to Tacoma must be submitted in the form of duplicate executed originals of the Wholesale Water Supply Agreement, in strict conformity with the form of the Wholesale Water Supply Agreement approved by Tacoma.

(d) No later than March 1, 2018, you must deliver your offer to Tacoma, Attention: Water Superintendent, Tacoma Water, 3628 South 35th Street, Tacoma, WA 98409, and obtain Tacoma's acknowledgment of the time and date of Tacoma's receipt of such offer.

Clarifications

While we are pleased to present this opportunity to your City, we want to avoid any confusion as to what this opportunity is and is not. For avoidance of doubt, this letter does not constitute a modification or waiver of any of the procedures or requirements set forth in the Restated and Amended Agreement. This letter does not constitute an offer by Tacoma to sell a wholesale water supply to any person or entity. Any such sale by Tacoma is subject to and contingent upon the negotiation, execution and delivery of a mutually acceptable Wholesale Water Supply Agreement.

Conclusion

Cascade and Tacoma are pleased to provide the availability of Substitute Supply, and look forward to receiving your offer to purchase, should you desire to do so, in accordance with the

guidelines set forth above. We will be contacting your office within the next week to schedule a meeting to present and discuss this opportunity

Sincerely,

Chuck Clarke
Chief Executive Officer
Cascade Water Alliance

Linda A. McCrea
Superintendent
Tacoma Water

Confirmation Notice

To Be Delivered to Cascade Water Alliance 120 days From the First Meeting of Tacoma, Cascade and The Four Cities

The City of _____ ("City") confirms receipt of the letter, dated _____, from Cascade Water Alliance ("Cascade") and Tacoma Water presenting the availability of a substitute wholesale water supply ("Substitute Supply"). The City understands that the Substitute Supply is an alternative to the provisions of Section 3(a) of the 2010 Lake Tapps Area Water Resources Agreement between Cascade and the Cities of Auburn, Bonney Lake, Buckley, and Sumner (the "Four Cities Agreement"). The City understands that the Substitute Supply requires the City to enter a wholesale water supply agreement with Tacoma Water to be negotiated and offered to Tacoma Water by March 1, 2018 as described in the above-referenced letter. The City understands that Cascade Water Alliance is offering to sell a System Development Charge Credit to the City on the terms and conditions stated on Exhibit 1 attached hereto, provided that by March 1, 2018 Cascade and the City need to enter an agreement to confirm the purchase and sale and Cascade's provision of a Notice of Confirmation of System Development Charge ("SDC") Credit to Tacoma Water.

Now, therefore, the City of _____ hereby confirms and agrees as follows:

(a) The City the elects the "Substitute Supply" opportunity described herein as an alternative that fully substitutes for section 3(a) of the Four Cities Agreement.

(b) The City provides this Confirmation Notice with respect to the following portion of the Substitute Supply:
4 MGD wholesale supply: _____
6 MGD wholesale supply: _____

(c) By selecting the "Substitute Supply" alternative, the City agrees that Cascade has fully performed and satisfied all obligations to the City under 3(a) of the Four Cities agreement.

(d) The City agrees that section 3(a) of the Four Cities Agreement shall be of no further force or effect as between Cascade and the City.

(e) The City and Cascade shall proceed with diligence to negotiate an agreement for purchase of an SDC Credit consistent with the terms outlined in Exhibit 1.

CONFIRMED, ACCEPTED AND AGREED TO BY THE CITY OF _____ on this _____ day of _____, 2013.

By _____

_____

[Name]

Mayor

CITY OF
AUBURN
WASHINGTON

Peter B. Lewis, Mayor
25 West Main Street * Auburn WA 98001-4998 * www.auburnwa.gov * 253-931-3000

May 21, 2013

Cascade Water Alliance
Attn: Chuck Clarke, Chief Executive Officer
520 112th Avenue NE, Suite 400
Bellevue, Washington 98004

Re: Confirmation Notice – City of Auburn's Response to Cascade's Offer of Substitute Supply

Dear Mr. Clarke,

On May 6th, 2013 the Auburn City Council approved Resolution 4951 authorizing the City of Auburn to begin negotiations with Cascade Water Alliance in response to your February 11, 2013 offer.

Enclosed please find a signed original of the City's confirmation notice

Our Public Works Director will be in touch with you soon to begin discussion of the city's desires to make use of the Substitute Supply.

Sincerely,

Pete Lewis
Mayor

Enclosures

cc: Dennis Dowdy, Director of Public Works

Received
MAY 23 2013

Confirmation Notice
To Be Delivered to Cascade Water Alliance 120 days From the First Meeting of Tacoma, Cascade and The Four Cities

The City of Auburn ("City") confirms receipt of the letter, dated February 11, 2013, from Cascade Water Alliance ("Cascade") and Tacoma Water presenting the availability of a substitute wholesale water supply ("Substitute Supply") The City understands that the Substitute Supply is an alternative to the provisions of Section 3(a) of the 2010 Lake Tapps Area Water Resources Agreement between Cascade and the Cities of Auburn, Bonney Lake, Buckley, and Sumner (the "Four Cities Agreement") The City understands that the Substitute Supply requires the City to enter a wholesale water supply agreement with Tacoma Water to be negotiated and offered to Tacoma Water by March 1, 2018 as described in the above-referenced letter. The City understands that Cascade Water Alliance is offering to sell a System Development Charge Credit to the City on the terms and conditions stated on Exhibit 1 attached hereto, provided that by March 1, 2018 Cascade and the City need to enter an agreement to confirm the purchase and sale and Cascade's provision of a Notice of Confirmation of System Development Charge ("SDC") Credit to Tacoma Water.

Now, there fore, the City of Auburn hereby confirms and agrees as follows:

(a) The City the elects the "Substitute Supply" opportunity described herein as an alternative that fully substitutes for section 3(a) of the Four Cities Agreement provided that the City can negotiate acceptable terms with Cascade to provide and finance the necessary water supply SDC credits.

(b) The City provides this Confirmation Notice with respect to the following portion of the Substitute Supply.
4 MGD wholesale supply: 4 MGD
6 MGD wholesale supply: Possible option of 3 MGD

(c) By selecting the "Substitute Supply" alternative, the City agrees that upon execution of a new Substitute Supply agreement with Cascade to provide SDC Credits for 4 MGD of supply, Cascade will have fully performed and satisfied all obligations to the City under 3(a) of the Four Cities agreement.

(d) The City agrees that section 3(a) of the Four Cities Agreement shall be of no further force or effect as between Cascade and the City when a new substitute supply agreement with Cascade is executed.

(e) The City and Cascade shall proceed with diligence to negotiate an agreement for purchase of an SDC Credit consistent with the terms outlined in Exhibit 1 (Attached).

CONFIRMED, ACCEPTED AND AGREED TO BY THE CITY OF AUBURN on this 21st day of May, 2013:

By _____
Pete Lewis, Mayor

Exhibit 1

TERMS FOR 4 CITIES SUBSTITUTE SUPPLY OFFER

I. This offer is structured to fulfill Cascade's obligations to make available Tacoma water as described in the existing "4 Cities Agreement ". Availability of the terms of this offer is contingent upon written acceptance of the substitution of this supply offer for the commitment defined in Section 3.a of that 4 Cities Agreement specifically:

a. Paragraph 3A, providing options for purchase of Cascade's contracted Tacoma supply capacity, is replaced by the substitute capacity offer defined in this proposal.

b. Paragraph 3A is confirmed in writing to be fully satisfied by acceptance of this substitute capacity offer.

c. Upon expiration of the substitute capacity offer on December 31, 2017, all Cascade obligations to make Tacoma water available are deemed fulfilled and terminated.

d The substitute capacity offer must be accepted and executed no later than 120 days from the first meeting of Tacoma, Cascade and the Four Cities and the offer is withdrawn after expiration date. [Actual commitment to purchase water under those terms, once accepted, can occur anytime through 2017 as further delineated in section II.c below]

II. **Substitute Capacity Offer**

a. The following capacity is made available:

i 9 3 mgd of average supply and a peak supply of 11.3 mgd. [This is the remaining available capacity of Cascade's purchases from Tacoma.]

ii Cascade offers all capacity as firm and permanent. Cascade will be responsible for any transactions needed to convert reserve capacity to permanent capacity.

iii All capacity will be offered as year-round capacity with the following structure: for each 1 mgd of year-round capacity, a peak season ratio of up to 1.33 will be available for purchase The peak annual ratio of 1.33.1.0 is based on the Tacoma capacity owned by Cascade, which originally totaled 10 mgd annual average and 13.3 mgd peak season. Cities may elect peak ratios ranging from 1.0 to 1.33, subject to total capacity limits defined in the attached table.

iv. Tacoma will provide wholesale service contingent on execution of a wholesale supply agreement defining terms for service and related charges. A sample agreement form is provided

b. The following price and financial terms are offered:

i. Capacity will be offered at a price of 75% of the SDC ($3.17 per gallon * 75% = $2 3775 per gallon) originally paid by Cascade. This charge will apply to annual capacity and to incremental peak season capacity

1. For example, for a purchase of 1 mgd annual / 1.3 mgd peak season, the cost will be 1 mgd * $2 3775 million + 0 3 mgd * $2 3775 million = $3,090,750. A purchase of 1 mgd annual with no peak season increment would cost $2,377,500.

ii. Payments for capacity purchase will be to Cascade; when the purchase involves conversion of reserve capacity, Cascade may opt to direct all or part of the payment to Tacoma.

iii For each purchase, the following financing terms are available

1. Full payment of purchase price upon execution of purchase; or
2. Payment of 20% of purchase price upon execution; remainder financed on a note over 5 years at 3 3% interest with level annual payments due upon each anniversary date. Purchaser would be free to pay off note at any time.

iv. Wholesale rates for service and delivery are as defined by agreement with Tacoma (see also below).

c. The following schedule applies to the substitute offer.

i. The substitute capacity offer must be accepted and executed no later than 120 days after the first meeting of Tacoma, Cascade and the Four Cities and the offer is withdrawn after expiration date. If not accepted during this period, then the existing terms of paragraph 3.a would remain in effect.

ii. During the period from execution of this substitute offer until December 31, 2015, each City may elect to purchase its related share of capacity at any time. Shares of capacity can also be re-assigned upon notice provided to Cascade by both parties of such intent.

iii. Beginning January 1, 2016 and extending through December 31, 2017, any City may offer to purchase any or all capacity remaining available on a first come, first serve basis. Cascade will notify the Cities of available capacity early in 2016.

iv. After December 31, 2017, no substitute supply capacity will be available.

v. Participants in this substitute capacity offer are free to transfer rights to purchase to other participants, but only to other participants, provided that Cascade receives clear and binding direction to this effect from both parties.

III ***Special Situation*** Bonney Lake previously acquired 2 mgd of peak season (June-September) capacity, with no right of service in the off-peak period. This is equivalent in quantity to 2.0 mgd peak and 0.7 mgd average annual. This leaves related off-peak capacity with no corresponding right of service in the peak period.

1 Bonney Lake is offered revision of this capacity right to 2 mgd peak together with 1 50 mgd annual capacity.

2 This offer to revise the capacity structure is made available for 90 days after the effective date of Bonney Lake's acceptance of the substitute capacity offer.

3 Purchase Price for this revision is the extension of existing payments by one year (to include 2019), a net cost addition of $391,222.

4 If Bonney Lake does not approve this extension prior to the expiration date, then other parties are free to acquire the related off-peak capacity as a part of a year-round capacity purchase at an incremental price of $391,222.

IV. Integration of Cascade and Tacoma obligations under this substitute capacity offer:

a. As defined in the revised agreement between Cascade and Tacoma, it is the intent of Cascade and Tacoma that any purchases under this offer are subject to execution of an agreement for wholesale service with Tacoma. Cascade would have no ongoing role in delivering wholesale water after execution of such agreement with Tacoma

b. Tacoma will commit to supply water purchased under this agreement, subject to execution of a wholesale water agreement acceptable to Tacoma and generally defined in a draft wholesale agreement.

i. Tacoma will work with the purchaser to establish a mutually acceptable delivery point or points, to be defined in the wholesale water agreement

ii No SDCs will be due to Tacoma for water capacity purchased under this agreement.

iii. The purchaser will be subject to Tacoma wholesale rates.

Substitute Offer of Available Tacoma Supply Capacity					
	Total	**Auburn**	**Bonney Lake**	**Buckley**	**Sumner**
Capacity Availability Previously Requested by the 4 Cities	9.2 mgd average / 13.33 mgd peak	7.0 mgd average / 10 0 mgd peak	1.5 mgd average / 2.0 mgd peak	0.7 mgd average / 1.33 mgd peak	0.0 mgd average / 0 0 mgd peak
Additional Capacity in Substitute Offer	0.8 mgd average / 0 00 mgd peak	0.5 mgd average / 0 0 mgd peak	0.0 mgd average / 0 0 mgd peak	0.3 mgd average / 0.0 mgd peak.	0 0 mgd average / 0.0 mgd peak
Previous Purchases			0.7 mgd average / 2.0 mgd peak [2.0 mgd peak season with no off-peak supply requires an annual average of 0.7 mgd to be delivered]		
Remaining Available Capacity for Purchase	***10.0 mgd average / 13.33 mgd peak***	***7.5 mgd average / 10.0 mgd peak***	***0.8 mgd average / 0.0 mgd peak***	***1.0 mgd average / 1.33 mgd peak***	***0.0 mgd average / 0.0 mgd peak***

AGREEMENT FOR THE PURCHASE AND SALE OF CREDITS RELATING TO FINITE WHOLESALE WATER SUPPLY CAPACITY

THIS AGREEMENT ("Agreement") is made and entered into as of this 10th day of September 2013 ("Effective Date"), by and between the City of Auburn, Washington ("Auburn"), and Cascade Water Alliance, a joint municipal utilities services authority organized under Chapter 39.106 RCW ("Cascade"). The City and Cascade are sometimes referred to collectively as the "Parties" and individually as a "Party."

RECITALS

WHEREAS, in 2005, in order to meet Cascade's immediate and long-term water supply needs, Cascade purchased from Tacoma a supply of water both permanently and for a finite period of years pursuant to an "Agreement for the Sale of Wholesale Water";

WHEREAS, on February 5, 2010, Cascade and the Cities of Bonney Lake, Buckley, Sumner and Auburn entered the 2010 Lake Tapps Area Water Resources Agreement (the "Four Cities Agreement") that provided, among other things, for Cascade to assist the four cities in meeting their projected 50-year water supply needs;

WHEREAS, on December 31, 2012, Cascade and Tacoma entered the Amended and Restated Agreement for the Sale of Wholesale Water (the "Amended and Restated Agreement") that provided, among other things, for Tacoma to make available to the four cities a water supply to be purchased directly from Tacoma as a wholesale customer and to recognize credit for the System Development Charges that Cascade had previously paid to Tacoma;

WHEREAS, Cascade and Tacoma sent a letter, dated February 11, 2013, to inform Auburn of the availability of the "substitute" water supply opportunity and related time limitations and procedures for acting on the opportunity ("Joint Letter");

WHEREAS, Auburn timely approved, signed, and delivered the Confirmation Notice, dated May 21, 2013, to confirm Auburn's election of the substitute supply opportunity and its desire to purchase a System Development Charge Credit from Cascade as to the 6 MGD Wholesale Water Supply ("Confirmation Notice");

WHEREAS, Cascade paid a capacity reservation fee to Tacoma that covers a portion of the System Development Charge for 6 MGD Wholesale Water Supply and Auburn will owe Tacoma the remaining balance of any System Development Charges for Auburn's desired quantity, net of the credit purchased from Cascade under this Agreement;

WHEREAS, the Joint Letter and Confirmation Notice are set forth in Exhibit A hereto and are incorporated by reference in this Agreement; and

WHEREAS, the Parties have addressed the purchase of credits for the permanent, or 4 MGD Wholesale Water Supply, in a separate agreement, and the Parties set forth their agreement for purchase of credits for the 6 MGD Wholesale Water Supply in this Agreement.

NOW, THEREFORE, IN CONSIDERATION of the recitals stated above, which are incorporated herein, and the mutual covenants and conditions herein contained, the Parties agree as follows:

AGREEMENT

1. Definitions.

"6 MGD Wholesale Water Supply" means an average annual of 6 MGD wholesale water supply from Tacoma, with a Peaking Factor of 1.33, and a maximum peak day of 7.98 MGD, all as provided in the Amended and Restated Agreement. The 6 MGD Wholesale Water Supply is the Tacoma supply of water for a finite period of years.

"Amended and Restated Agreement" means the "Amended and Restated Agreement for the Sale of Wholesale Water" by and among Cascade and the City of Tacoma, Department of Public Utilities, Water Division, dated December 31, 2012.

"Confirmation Notice" means the document, dated May 21, 2013, in which Auburn confirmed its election of the substitute supply opportunity in fulfillment of Cascade's obligation in the Four Cities Agreement to assist with Auburn's projected 50-year water supply needs (attached in Exhibit A).

"Four Cities Agreement" means the "2010 Lake Tapps Area Water Resources Agreement among the Cities of Auburn, Bonney Lake, Buckley and Sumner, and Cascade Water Alliance," dated February 5, 2010.

"MGD" means million gallons per day.

"Joint Letter" means the letter, dated February 11, 2013, from Cascade and Tacoma to Cities of Auburn, Bonney Lake, Buckley and Sumner that is attached hereto in Exhibit A.

"Notice of Confirmation of System Development Charge Credit" means a notice, given by Cascade to Tacoma at the request of Auburn , confirming the amount of the System Development Charge Credit (if any) to be applied to the System Development Charge otherwise due and payable by Auburn to Tacoma in connection with a wholesale water supply agreement.

"System Development Charge" or "SDC" means the system development charge imposed upon wholesale customers by Tacoma in its wholesale water regulations.

"System Development Charge Credit" means a credit to be applied in a wholesale water supply agreement against the System Development Charge otherwise due and payable by Auburn to Tacoma. The System Development Charge Credit is expressed in million gallons per day (MGD) units and in dollars.

"Tacoma" means the City of Tacoma, Department of Public Utilities, Water Division.

2. Term of Agreement.

This Agreement takes effect on the first date that both Parties have duly approved, signed, and delivered the Agreement to the other Party. The term of the Agreement will commence on the effective date and will end on December 31, 2029 or the date that Auburn has fully paid Cascade for the price of the System Development Charge Credit consistent with Sections 3 and 4 of this Agreement. In the event that Auburn elects not to confirm a quantity consistent with the terms of this Agreement or by notice selects a quantity of zero (0.000 MGD), then this Agreement will terminate.

3. Purchase of 6 MGD System Development Charge Credit & Price.

Subject to Section 5 of this Agreement, Auburn agrees to purchase and Cascade agrees to sell a System Development Charge Credit regarding the 6 MGD Wholesale Water Supply in a maximum quantity of up to 2.763 MGD annual supply capacity (3.68 MGD peak supply capacity). Auburn shall confirm the specific quantity of the 6 MGD Wholesale Water Supply it will purchase in accordance with the procedure set forth in Section 5 below.

Until Auburn confirms its System Development Charge Credit with Cascade consistent with Section 5 and enters a wholesale water supply agreement with Tacoma as set forth in the Joint Letter, Auburn will not have access to the 6 MGD Wholesale Water Supply. After Auburn has confirmed its System Development Charge Credit with Cascade consistent with Section 5 and entered a wholesale water supply agreement with Tacoma, then Auburn may begin to take delivery of wholesale water from Tacoma.

In consideration for said System Development Charge Credit, Auburn will pay to Cascade a total price of $1,427,864.00, as of the date that this Agreement takes effect, for the quantity of 2.763 MGD annual supply capacity (3.68 MGD peak supply capacity). The parties agree that Auburn will pay interest at an annual rate of 3.2% on the balance due beginning in 2017 and continuing until the balance is fully paid and this Agreement terminates. Auburn will pay the total price by making an annual payment in 2017-2029 according to the annual payment schedule set forth in Section 4 below. This schedule incorporates interest at a rate of 3.2% on the balance due, beginning in 2017. Under this schedule the total of annual payments including interest is $1,977,128.00. In the event that Auburn confirms an amount less than the maximum quantity of 2.763 MGD annual supply capacity (3.68 MGD peak supply capacity), the total applicable price and payment schedule will be adjusted downward on a pro rata basis. If Auburn elects not to confirm a quantity, or by notice selects a quantity of zero (0.000 MGD), then no payment shall be due.

4. Annual Payment Schedule.

Auburn will make annual installment payments to Cascade to pay for the System Development Charge Credit as to the 6 MGD Wholesale Water Supply. In the event that Auburn purchases a System Development Charge Credit in the quantity of 2.763 MGD annual supply capacity (3.68 MGD peak supply capacity), then the following payment schedule shall apply:

Payment Schedule

Year	Amount
2014	0
2015	0
2016	0
2017	$45,692
2018	$45,692
2019	$45,692
2020	$45,692
2021	$45,692

Year	Amount
2022	$45,692
2023	$45,692
2024	$45,692
2025	$45,692
2026	$45,692
2027	$506,736
2028	$506,736
2029	$506,736
Total	$1,977,128

In the event that Auburn purchases a System Development Charge Credit in a quantity less than 2.763 MGD annual supply capacity, then the Parties shall calculate and determine the applicable total price and payment schedule and the Parties shall agree on an updated payment schedule that will be documented as Exhibit B to this Agreement.

Each year the annual payment shall due and payable by Auburn to Cascade on or before June 30 of the year in which such payment is due. If full payment of any annual payment is not received by Cascade on or before the date due, such payment shall be considered past due, and the unpaid amount shall accrue interest, from the date due until the date paid, at a rate per day equal to 0.03 percent per day. Upon not less than fifteen (15) days' advance notice to Cascade, the City may in any given year prepay without penalty any one or more of the next successive annual payments. Upon such notice, Cascade will provide Auburn documentation of the amount due for such payment, and adjustments to any remaining payment schedule, net of related interest incorporated into the above payment schedule.

5. Auburn Confirmation of Purchase Quantity & Termination Right

On or before June 30, 2017, Auburn shall give notice to Cascade as to the specific quantity of the System Development Charge Credit that it will purchase, up to a maximum of 2.763 MGD annual supply capacity (3.68 MGD peak supply capacity). Auburn's notice must identify and confirm one of the following three courses of action:

a) Auburn confirms purchase of a System Development Charge Credit in the quantity of 2.763 MGD annual supply capacity (3.68 MGD peak supply capacity).

b) Auburn confirms purchase of a System Development Charge Credit in a specific quantity less than 2.763 MGD annual supply capacity (peak supply capacity to be determined by Cascade).

c) Auburn confirms that it will not purchase an SDC Credit as to the 6 MGD Wholesale Water Supply, in which event this Agreement shall terminate and, except for Section 9, be of no further force or effect.

If Auburn fails to give such notice to Cascade by June 30, 2017, or by notice selects a quantity of zero (0.000 MGD), then no payment shall be due and this Agreement will terminate.

.

In order to facilitate communications, the Parties agree to meet and confer during the month of March 2017, or before, about status of water supply planning and this Agreement.

6. Notice of Confirmation of System Development Charge Credit.

Within 30 days after Auburn gives its notice to Cascade under Section 5 of this Agreement, Cascade will send to the Tacoma Water Superintendent a Notice of Confirmation of System Development Charge Credit regarding the 6 MGD Wholesale Water Supply. Cascade will provide a copy of the Notice to Auburn when it is sent to Tacoma.

7. Terms and Conditions of 6 MGD System Development Charge Credit.

Auburn acknowledges that, as stated in the Amended and Restated Agreement, Cascade has paid to Tacoma a capacity reservation fee (*i.e.*, $1,570,074.00 per MGD) for the 6 MGD Wholesale Water Supply that Tacoma will recognize as an System Development Charge Credit if all requirements of the Amended and Restated Agreement and the Joint Letter are met. However, the capacity reservation fee paid to Tacoma by Cascade covers only a portion of the System Development Charge for the 6 MGD Wholesale Water Supply. Accordingly, Auburn specifically acknowledges and agrees that it will pay Tacoma the remaining balance of any System Development Charges owing for Auburn's desired quantity, net of the SDC Credit obtained from Cascade. Auburn specifically acknowledges and agrees that Tacoma's SDC could increase and that Auburn will bear any increase in Tacoma's SDCs that may take effect before Auburn and Tacoma enter a wholesale water supply agreement.

Auburn understands that additional SDC payments to Tacoma will be required to convert the 6 MGD Wholesale Water Supply to permanent supply, in the event Auburn elects to do so pursuant to a future Auburn-Tacoma agreement. As an example calculation of Auburn's combined costs based on Tacoma's current SDC, the Parties have included an illustrative example in Exhibit C attached hereto. Exhibit C is not binding on any Party or Tacoma, and Exhibit C contains assumptions about Tacoma's SDC and interest rates in the future that may or may not turn out to be accurate. Accordingly, Cascade makes no representations or warranties about the accuracy of Exhibit C.

8. Wholesale Water Supply Purchase Negotiations with Tacoma.

In order to use the System Development Charge Credit and secure a wholesale water supply from Tacoma, Auburn acknowledges that it must make an offer, complete negotiations, and enter a wholesale water supply agreement with Tacoma consistent with the Joint Letter and Confirmation Notice set forth in Exhibit A and with the Amended and Restated Agreement. Auburn acknowledges and agrees that Cascade makes no representations or warranties as to the outcome of such negotiations, the Tacoma wholesale water supply that Auburn may (or may not) be able to purchase, or otherwise.

9. Effect on Four Cities Agreement.

The Parties agree that this Agreement constitutes full performance by Cascade of its obligations under Section 3(a) of the Four Cities Agreement. Accordingly, Section 3(a) of the Four Cities Agreement shall be of no further force or effect as between Cascade and Auburn. Other provisions of the Four Cities Agreement are unaffected by this Agreement and remain effective according to their terms. This section 9 shall survive termination of the Agreement in the event that Auburn elects not to purchase an SDC Credit.

10. Notices.

All notices and payments hereunder may be delivered or mailed. If mailed, they shall be sent to the following respective addresses:

Cascade Water Alliance:
520 112th Avenue NE, Suite 400
Bellevue, Washington 98004
Attn: Chief Executive Officer
Phone: (425) 453-0930
Fax: (425) 425-453-0953

City of Auburn:
Attn: Dennis Dowdy
25 W Main St
Auburn WA 98001
Phone: (253)931-3010
Fax: (253)931-3053

A Party may change its address from time to time by providing notice to the other Party. All notices and payments mailed by regular post (including first class) shall be deemed to have been given on the second business day following the date of mailing, if properly mailed and addressed. Notices and payments sent by certified or registered mail shall be deemed to have been given on the next business day following the date of mailing, if properly mailed and addressed. For all types of mail, the postmark affixed by the United States Postal Service shall be conclusive evidence of the date of mailing.

11. Dispute Resolution.

In the event that any dispute arises between Cascade and Auburn, the aggrieved Party shall give a notice of the dispute to the other Party. Cascade and Auburn shall, within five (5) days of such notice, each nominate a senior officer of its management to meet at a mutually agreed location, to attempt to resolve such dispute. The Parties shall each designate a representative(s) to confer on the best and most cost effective way to resolve the dispute. By

mutual agreement, they may choose direct negotiations or mediation. If there is no agreement between the Parties on how to proceed within thirty (30) days, either Party may pursue legal action; provided, however, no Party shall be precluded from filing an appeal or action to prevent the expiration of a time period for filing or any statute of limitations.

If a Party fails to perform its obligations hereunder, then it shall be in default hereunder unless the defaulting Party cures an event of default, whether monetary or non-monetary, within thirty (30) days after receiving written notice from the other Party of such default.

Subject to the procedures set forth in Section 9 (Dispute Resolution), if a Party is in breach or default of its obligations arising under this Agreement, the other Party shall have and shall be entitled to exercise any and all remedies available to it at law or in equity (including the right to specifically enforce this Agreement), all of which remedies shall be cumulative.

12. Attorneys' Fees.

If any Party shall be required to bring any action to enforce any provision of this Agreement, or shall be required to defend any action brought by the other Party with respect to this Agreement, and in the further event that one Party shall substantially prevail in such action, the losing Party shall, in addition to all other payments required therein, pay all of the prevailing Party's reasonable costs in connection with such action, including such sums as the court or courts may adjudge reasonable as attorney's fees in the trial court and in any appellate courts.

13. No Assignment.

This Agreement is specific to the Parties and may not be assigned in whole or in part.

14. Non-Waiver.

No delay or failure by a Party to exercise any of its rights, powers or remedies under this Agreement following any breach by another Party shall be construed to be a waiver of any such breach, or any acquiescence therein, or of or in any similar breach thereafter occurring, nor shall any waiver of any single breach be deemed a waiver of any other breach theretofore or thereafter occurring.

15. No Third Party Beneficiary.

This Agreement is for the sole and exclusive benefit of the Parties and is not intended to and shall not confer any rights or benefits on any third party not a signatory hereto.

16. Integrated Agreement.

This Agreement constitutes the entire agreement between the Parties with respect to the subject matter hereof and supersedes all prior or contemporaneous understandings or agreements with respect thereto; provided, however, that this Agreement shall be interpreted or construed together with the Amended and Restated Agreement, the Joint Letter, and the Confirmation Notice. No modifications or amendments of this Agreement shall be valid or effective unless evidenced by an agreement in writing signed by the Parties.

17. Signature in Counterparts.

This Agreement may be executed in counterparts and all of those counterparts taken together shall constitute one and the same instrument.

18. Representations of the Parties.

Each Party represents and warrants that it has duly approved, executed, and delivered this Agreement and that it has all necessary authority to enter into this Agreement and to perform its terms and obligations. Each Party represents and warrants that the approval, execution, and delivery have been duly authorized by the appropriate board or council, and no other act or proceeding on the part of any Party is necessary to authorize entry into or performance of this Agreement.

IN WITNESS WHEREOF, the Parties have duly executed this Agreement as of the Effective Date.

City of Auburn:

By: _____

Title: MAYOR

Date: SEP 10 2013

ATTEST

_____
City Clerk

APPROVED AS TO FORM

_____
City Attorney

Cascade Water Alliance:

By: Chuck Clarke

Title: Chief Executive Officer

Date: 9/18/13

Exhibit A

[Joint Letter signed by Cascade and Tacoma, dated February 11, 2013, and the Confirmation Notice signed by Auburn, dated May 21, 2013.]

CASCADE
WATER ALLIANCE

WATER
TACOMA PUBLIC UTILITIES

February 11, 2013

The Honorable Pete Lewis
City of Auburn
25 West Main Street
Auburn, WA 98001

The Honorable Pat Johnson
City of Buckley
933 Main Street
Buckley, WA 98321

The Honorable Neil Johnson
City of Bonney Lake
19306 Bonney Lake Blvd.
Bonney Lake, WA 98391

The Honorable Dave Enslow
City of Sumner
1104 Maple Street
Sumner, WA 98390

Re: Cascade Water Alliance and Tacoma Water Substitute Wholesale Water Supply Availability – Time is of the Essence (*Sent by Email and US Mail*)

Dear Mayors:

As you may be aware, the Cascade Water Alliance and City of Tacoma have been in ongoing discussions about potential changes to the 2005 Water Supply Agreement. In late 2012 a new agreement was reached and signed which benefits not only Tacoma and Cascade but also the Four Cities of Auburn, Bonney Lake, Buckley and Sumner. This new agreement preserves the right of the four cities under the 2009 Cascade/Four Cities Agreement and allows a new time sensitive supply option to be jointly offered to the four cities from Cascade and Tacoma.

The Cascade Water Alliance (Cascade), in cooperation with Tacoma Water, is offering the availability of a substitute wholesale water supply ("Substitute Supply") and to provide this notice of a limited period of time for your Cities to take action on this unique opportunity. Cascade and Tacoma have entered into a Restated and Amended Agreement for the Sale of Wholesale Water, which replaces the 2005 agreement between the parties for purchase and sale of wholesale water. The 2005 agreement is included as one of the "water supply assistance" measures in the 2010 Lake Tapps Area Water Resources Agreement between Cascade and your cities (the "Four Cities Agreement").

In the Restated and Amended Agreement, Cascade has agreed to relinquish its right to take delivery of the Substitute Supply. This water is now available to the Cities to purchase directly from Tacoma as a wholesale customer. Cascade has, however, previously paid capacity charges for this wholesale water supply. If your City now desires to purchase the Substitute Supply directly from Tacoma and takes action described in this letter, Cascade is willing to sell your City a credit (reflecting the amounts that Cascade has previously paid to Tacoma) that can be

applied against System Development Charges that would otherwise be due to Tacoma ("SDC Credit"). The amount and availability of any SDC Credit will be determined by Cascade in accordance with the terms set forth in the Confirmation Notice that is attached to this letter. You must act promptly, however, in order to secure the opportunity to obtain an SDC Credit from Cascade.

This letter provides Cascade's formal notice of the limited window of time for your City to act, the Confirmation Notice that you must return to Cascade to apply for a SDC Credit, and general guidance as to how Cascade and Tacoma intend to cooperate to facilitate the implementation of the Restated and Amended Agreement.

Limited Time to Act

You must act within 120 days from the first meeting of Tacoma, Cascade and the Four Cities to confirm your interest in this opportunity by delivering a signed "Confirmation Notice" to Cascade in the form attached to this letter. This opportunity expires at the end of 120 days. During this 120-day period, the quantity allocation among and between the Four Cities as stated in the Four Cities letter to Cascade, dated February 5, 2010, shall be recognized by Cascade and shall determine the maximum allocation of the Substitute Supply (and the Residual Wholesale Water Supply) among the Cities (unless the Four Cities jointly agree to reallocation in accordance with the Four Cities Agreement). A City has until the expiration date to deliver an executed Confirmation Notice to Cascade. If you select this opportunity by acting within the 120 days, then you have until March 1, 2018 to purchase (or agree to purchase) an SDC Credit from Cascade. (In anticipation of the required steps with Tacoma described below, it is advisable for your City to complete the SDC purchase agreement with Cascade in advance of March 2018 to allow your City adequate time for the Tacoma steps.) If you select this opportunity by acting within the 120 days, then you will also have until March 1, 2018 to submit a Wholesale Water Agreement with Tacoma that is eligible for the SDC Credit.

If you do not confirm your selection by delivering a Confirmation Notice to Cascade by the deadline, then you decline the Substitute Supply opportunity stated in this letter. In that event, you will still be able to purchase wholesale water supply (if any water supply capacity remains available) from Tacoma on terms consistent with Section 3(a) of the Four Cities Agreement. However, you will not be eligible for an SDC Credit.

Next Steps with Cascade

If you deliver the Confirmation Notice within the 120-day deadline stated above and select this Substitute Supply opportunity, then you will need to complete the following steps with Cascade:

(a) Confirmation to Cascade that your City will proceed with the Substitute Supply opportunity stated herein, and that it fully substitutes for Section 3(a) of the Four Cities Agreement which will have no further force or effect.

(b) Agree with Cascade for payment terms to Cascade for the SDC credit.

(c) Upon completion of the items in (a) and (b) above, Cascade will send Notice of Confirmation of System Development Charge Credit to Tacoma.

Next Steps with Tacoma Water

If you deliver the Confirmation Notice to Cascade within the deadline stated above and select this opportunity, then you would also need to complete the following steps with Tacoma in order to submit a timely offer to purchase all or a portion of the Substitute Supply. The procedures and requirements that must be followed to submit such an offer are set forth in Section 6 and Section 7 of the Restated and Amended Agreement (attached for reference). It is important to read these procedures and requirements carefully as any offer you make must be in strict compliance with these procedures and requirements. These procedures and requirements are briefly summarized as follows:

(a) In order to obtain a SDC Credit, Tacoma must be in receipt of a Notice of Confirmation of System Development Charge Credit from Cascade.

(b) Prior to submitting your offer to purchase water from Tacoma, you must obtain Tacoma's written review and approval of the Wholesale Water Supply Agreement (including any proposed modifications thereof) pursuant to which such offer is to be made to Tacoma.

(c) Your offer to Tacoma must be submitted in the form of duplicate executed originals of the Wholesale Water Supply Agreement, in strict conformity with the form of the Wholesale Water Supply Agreement approved by Tacoma.

(d) No later than March 1, 2018, you must deliver your offer to Tacoma, Attention: Water Superintendent, Tacoma Water, 3628 South 35th Street, Tacoma, WA 98409, and obtain Tacoma's acknowledgment of the time and date of Tacoma's receipt of such offer.

Clarifications

While we are pleased to present this opportunity to your City, we want to avoid any confusion as to what this opportunity is and is not. For avoidance of doubt, this letter does not constitute a modification or waiver of any of the procedures or requirements set forth in the Restated and Amended Agreement. This letter does not constitute an offer by Tacoma to sell a wholesale water supply to any person or entity. Any such sale by Tacoma is subject to and contingent upon the negotiation, execution and delivery of a mutually acceptable Wholesale Water Supply Agreement.

Conclusion

Cascade and Tacoma are pleased to provide the availability of Substitute Supply, and look forward to receiving your offer to purchase, should you desire to do so, in accordance with the

guidelines set forth above. We will be contacting your office within the next week to schedule a meeting to present and discuss this opportunity.

Sincerely,

Chuck Clarke
Chief Executive Officer
Cascade Water Alliance

Linda A. McCrea
Superintendent
Tacoma Water

Confirmation Notice

To Be Delivered to Cascade Water Alliance 120 days From the First Meeting of Tacoma, Cascade and The Four Cities

The City of _____ ("City") confirms receipt of the letter, dated _____, from Cascade Water Alliance ("Cascade") and Tacoma Water presenting the availability of a substitute wholesale water supply ("Substitute Supply"). The City understands that the Substitute Supply is an alternative to the provisions of Section 3(a) of the 2010 Lake Tapps Area Water Resources Agreement between Cascade and the Cities of Auburn, Bonney Lake, Buckley, and Sumner (the "Four Cities Agreement"). The City understands that the Substitute Supply requires the City to enter a wholesale water supply agreement with Tacoma Water to be negotiated and offered to Tacoma Water by March 1, 2018 as described in the above-referenced letter. The City understands that Cascade Water Alliance is offering to sell a System Development Charge Credit to the City on the terms and conditions stated on Exhibit 1 attached hereto, provided that by March 1, 2018 Cascade and the City need to enter an agreement to confirm the purchase and sale and Cascade's provision of a Notice of Confirmation of System Development Charge ("SDC") Credit to Tacoma Water.

Now, therefore, the City of _____ hereby confirms and agrees as follows:

(a) The City the elects the "Substitute Supply" opportunity described herein as an alternative that fully substitutes for section 3(a) of the Four Cities Agreement.

(b) The City provides this Confirmation Notice with respect to the following portion of the Substitute Supply
4 MGD wholesale supply: _____
6 MGD wholesale supply: _____

(c) By selecting the "Substitute Supply" alternative, the City agrees that Cascade has fully performed and satisfied all obligations to the City under 3(a) of the Four Cities agreement.

(d) The City agrees that section 3(a) of the Four Cities Agreement shall be of no further force or effect as between Cascade and the City.

(e) The City and Cascade shall proceed with diligence to negotiate an agreement for purchase of an SDC Credit consistent with the terms outlined in Exhibit 1.

CONFIRMED, ACCEPTED AND AGREED TO BY THE CITY OF _____ on this _____ day of _____, 2013:

By _____

_____

[Name]

Mayor

CITY OF
AUBURN
WASHINGTON

Peter B. Lewis, Mayor

25 West Main Street * Auburn WA 98001-4998 * www.auburnwa.gov * 253-931-3000

May 21, 2013

Cascade Water Alliance
Attn. Chuck Clarke, Chief Executive Officer
520 112th Avenue NE, Suite 400
Bellevue, Washington 98004

Re: Confirmation Notice – City of Auburn's Response to Cascade's Offer of Substitute Supply

Dear Mr. Clarke,

On May 6th, 2013 the Auburn City Council approved Resolution 4951 authorizing the City of Auburn to begin negotiations with Cascade Water Alliance in response to your February 11, 2013 offer.

Enclosed please find a signed original of the City's confirmation notice.

Our Public Works Director will be in touch with you soon to begin discussion of the city's desires to make use of the Substitute Supply.

Sincerely,

Pete Lewis
Mayor

Enclosures

cc: Dennis Dowdy, Director of Public Works

Received

MAY 23 2013

Confirmation Notice
To Be Delivered to Cascade Water Alliance 120 days From the First Meeting of Tacoma, Cascade and The Four Cities

The City of Auburn ("City") confirms receipt of the letter, dated February 11, 2013, from Cascade Water Alliance ("Cascade") and Tacoma Water presenting the availability of a substitute wholesale water supply ("Substitute Supply") The City understands that the Substitute Supply is an alternative to the provisions of Section 3(a) of the 2010 Lake Tapps Area Water Resources Agreement between Cascade and the Cities of Auburn, Bonney Lake, Buckley, and Sumner (the "Four Cities Agreement"). The City understands that the Substitute Supply requires the City to enter a wholesale water supply agreement with Tacoma Water to be negotiated and offered to Tacoma Water by March 1, 2018 as described in the above-referenced letter. The City understands that Cascade Water Alliance is offering to sell a System Development Charge Credit to the City on the terms and conditions stated on Exhibit 1 attached hereto, provided that by March 1, 2018 Cascade and the City need to enter an agreement to confirm the purchase and sale and Cascade's provision of a Notice of Confirmation of System Development Charge ("SDC") Credit to Tacoma Water.

Now, there fore, the City of Auburn hereby confirms and agrees as follows.

(a) The City the elects the "Substitute Supply" opportunity described herein as an alternative that fully substitutes for section 3(a) of the Four Cities Agreement provided that the City can negotiate acceptable terms with Cascade to provide and finance the necessary water supply SDC credits.

(b) The City provides this Confirmation Notice with respect to the following portion of the Substitute Supply:
4 MGD wholesale supply: 4 MGD
6 MGD wholesale supply: Possible option of 3 MGD

(c) By selecting the "Substitute Supply" alternative, the City agrees that upon execution of a new Substitute Supply agreement with Cascade to provide SDC Credits for 4 MGD of supply, Cascade will have fully performed and satisfied all obligations to the City under 3(a) of the Four Cities agreement.

(d) The City agrees that section 3(a) of the Four Cities Agreement shall be of no further force or effect as between Cascade and the City when a new substitute supply agreement with Cascade is executed.

(e) The City and Cascade shall proceed with diligence to negotiate an agreement for purchase of an SDC Credit consistent with the terms outlined in Exhibit 1 (Attached).

CONFIRMED, ACCEPTED AND AGREED TO BY THE CITY OF AUBURN on this 21st day of May, 2013:

By: _____
Pete Lewis, Mayor

Exhibit 1

TERMS FOR 4 CITIES SUBSTITUTE SUPPLY OFFER

I. This offer is structured to fulfill Cascade's obligations to make available Tacoma water as described in the existing "4 Cities Agreement ". Availability of the terms of this offer is contingent upon written acceptance of the substitution of this supply offer for the commitment defined in Section 3.a of that 4 Cities Agreement specifically:

a. Paragraph 3A, providing options for purchase of Cascade's contracted Tacoma supply capacity, is replaced by the substitute capacity offer defined in this proposal.

b. Paragraph 3A is confirmed in writing to be fully satisfied by acceptance of this substitute capacity offer.

c. Upon expiration of the substitute capacity offer on December 31, 2017, all Cascade obligations to make Tacoma water available are deemed fulfilled and terminated.

d. The substitute capacity offer must be accepted and executed no later than 120 days from the first meeting of Tacoma, Cascade and the Four Cities and the offer is withdrawn after expiration date. [Actual commitment to purchase water under those terms, once accepted, can occur anytime through 2017 as further delineated in section II.c below.]

II. **Substitute Capacity Offer**

a. The following capacity is made available:

i. 9.3 mgd of average supply and a peak supply of 11.3 mgd. [This is the remaining available capacity of Cascade's purchases from Tacoma]

ii. Cascade offers all capacity as firm and permanent. Cascade will be responsible for any transactions needed to convert reserve capacity to permanent capacity.

iii. All capacity will be offered as year-round capacity with the following structure: for each 1 mgd of year-round capacity, a peak season ratio of up to 1.33 will be available for purchase. The peak: annual ratio of 1.33:1.0 is based on the Tacoma capacity owned by Cascade, which originally totaled 10 mgd annual average and 13.3 mgd peak season. Cities may elect peak ratios ranging from 1.0 to 1 33, subject to total capacity limits defined in the attached table.

iv. Tacoma will provide wholesale service contingent on execution of a wholesale supply agreement defining terms for service and related charges. A sample agreement form is provided.

b. The following price and financial terms are offered:

i. Capacity will be offered at a price of 75% of the SDC ($3.17 per gallon * 75% = $2.3775 per gallon) originally paid by Cascade This charge will apply to annual capacity and to incremental peak season capacity.

1. For example, for a purchase of 1 mgd annual / 1.3 mgd peak season, the cost will be 1 mgd * $2 3775 million + 0 3 mgd * $2 3775 million = $3,090,750. A purchase of 1 mgd annual with no peak season increment would cost $2,377,500.

ii. Payments for capacity purchase will be to Cascade; when the purchase involves conversion of reserve capacity, Cascade may opt to direct all or part of the payment to Tacoma

iii For each purchase, the following financing terms are available.

1. Full payment of purchase price upon execution of purchase; or
2. Payment of 20% of purchase price upon execution; remainder financed on a note over 5 years at 3.3% interest with level annual payments due upon each anniversary date. Purchaser would be free to pay off note at any time.

iv. Wholesale rates for service and delivery are as defined by agreement with Tacoma (see also below).

c. The following schedule applies to the substitute offer:

i. The substitute capacity offer must be accepted and executed no later than 120 days after the first meeting of Tacoma, Cascade and the Four Cities and the offer is withdrawn after expiration date. If not accepted during this period, then the existing terms of paragraph 3.a would remain in effect.

ii. During the period from execution of this substitute offer until December 31, 2015, each City may elect to purchase its related share of capacity at any time. Shares of capacity can also be re-assigned upon notice provided to Cascade by both parties of such intent.

iii. Beginning January 1, 2016 and extending through December 31, 2017, any City may offer to purchase any or all capacity remaining available on a first come, first serve basis. Cascade will notify the Cities of available capacity early in 2016.

iv. After December 31, 2017, no substitute supply capacity will be available.

v. Participants in this substitute capacity offer are free to transfer rights to purchase to other participants, but only to other participants, provided that Cascade receives clear and binding direction to this effect from both parties.

III. ***Special Situation***. Bonney Lake previously acquired 2 mgd of peak season (June-September) capacity, with no right of service in the off-peak period. This is equivalent in quantity to 2.0 mgd peak and 0.7 mgd average annual. This leaves related off-peak capacity with no corresponding right of service in the peak period.

1. Bonney Lake is offered revision of this capacity right to 2 mgd peak together with 1.50 mgd annual capacity.
2. This offer to revise the capacity structure is made available for 90 days after the effective date of Bonney Lake's acceptance of the substitute capacity offer.
3. Purchase Price for this revision is the extension of existing payments by one year (to include 2019), a net cost addition of $391,222.
4. If Bonney Lake does not approve this extension prior to the expiration date, then other parties are free to acquire the related off-peak capacity as a part of a year-round capacity purchase at an incremental price of $391,222.

IV. Integration of Cascade and Tacoma obligations under this substitute capacity offer:

a. As defined in the revised agreement between Cascade and Tacoma, it is the intent of Cascade and Tacoma that any purchases under this offer are subject to execution of an agreement for wholesale service with Tacoma. Cascade would have no ongoing role in delivering wholesale water after execution of such agreement with Tacoma.

b. Tacoma will commit to supply water purchased under this agreement, subject to execution of a wholesale water agreement acceptable to Tacoma and generally defined in a draft wholesale agreement.
    i. Tacoma will work with the purchaser to establish a mutually acceptable delivery point or points, to be defined in the wholesale water agreement.
    ii. No SDCs will be due to Tacoma for water capacity purchased under this agreement.
    iii. The purchaser will be subject to Tacoma wholesale rates.

Substitute Offer of Available Tacoma Supply Capacity					
	Total	**Auburn**	**Bonney Lake**	**Buckley**	**Sumner**
Capacity Availability Previously Requested by the 4 Cities	9 2 mgd average / 13 33 mgd peak	7.0 mgd average / 10.0 mgd peak	1.5 mgd average / 2.0 mgd peak	0.7 mgd average / 1.33 mgd peak	0.0 mgd average / 0.0 mgd peak
Additional Capacity in Substitute Offer	0.8 mgd average / 0.00 mgd peak	0 5 mgd average / 0 0 mgd peak	0.0 mgd average / 0.0 mgd peak	0.3 mgd average / 0.0 mgd peak.	0.0 mgd average / 0.0 mgd peak
Previous Purchases			0.7 mgd average / 2 0 mgd peak [2.0 mgd peak season with no off-peak supply requires an annual average of 0.7 mgd to be delivered]		
Remaining Available Capacity for Purchase	***10.0 mgd average / 13.33 mgd peak***	***7.5 mgd average / 10.0 mgd peak***	***0.8 mgd average / 0.0 mgd peak***	***1.0 mgd average / 1.33 mgd peak***	***0.0 mgd average / 0.0 mgd peak***

Exhibit B

Updated Annual Payment Schedule

(To be completed by the Parties in the event Auburn confirms the purchase of an SDC credit in a quantity less than 2.763 MGD annual supply capacity)

Year	Amount
2014	0
2015	0
2016	0
2017	$_____
2018	$_____
2019	$_____
2020	$_____
2021	$_____
2022	$_____
2023	$_____
2024	$_____
2025	$_____
2026	$_____
2027	$_____
2028	$_____
2029	$_____
Total	$_____

Exhibit C

Illustrative Example of Total Auburn SDC Payments for Reserve Capacity

Year	Payment to Cascade	*Estimated Payment to Tacoma*	Total Estimated SDC Payment
2014	$0	*$0*	$0
2015	$0	*$0*	$0
2016	$0	*$0*	$0
2017	$45,692	*$234,283*	$279,974
2018	$45,692	*$234,283*	$279,974
2019	$45,692	*$234,283*	$279,974
2020	$45,692	*$1,183,994*	$1,229,686
2021	$45,692	*$1,183,994*	$1,229,686
2022	$45,692	*$1,183,994*	$1,229,686
2023	$45,692	*$1,183,994*	$1,229,686
2024	$45,692	*$1,183,994*	$1,229,686
2025	$45,692	*$1,183,994*	$1,229,686
2026	$45,692	*$1,183,994*	$1,229,686
2027	$506,736	*$0*	$506,736
2028	$506,736	*$0*	$506,736
2029	$506,736	*$0*	$506,736

Notes:

1) Estimated Payment to Tacoma is based on the following assumptions which are not assured: a) the current SDC; b) an interest rate of 3.2%, and c) a note term of 10 years structured with the first three years bearing only interest payments. Actual payments will be subject to Auburn's completion of a wholesale supply agreement with Tacoma and related terms
2) Does not include estimates of actual water rates for wholesale service from Tacoma.

RESOLUTION NO. 5033

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR TO EXECUTE A LEASE AGREEMENT BETWEEN THE CITY OF AUBURN AND VALLEY COMMUNICATIONS CENTER AND RATIFYING AND CONFIRMING PRIOR ACTS

WHEREAS, the City of Auburn owns real property commonly known as Water Reservoir 5 located in Auburn, Washington; and

WHEREAS, the Valley Communications Center ("ValleyCom") desires to lease a portion of the existing structures located on the property for an amount that is acceptable to the City; and,

WHEREAS, because of ValleyCom's operational requirements, the City administration granted them early access to the site in order to install and begin operating the communications equipment

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN, KING COUNTY, WASHINGTON, HEREBY RESOLVES as follows

Section 1. The Mayor is hereby authorized to execute a Lease Agreement between the City of Auburn and Valley Communications Center, which lease shall be in substantial conformity with the Lease Agreement attached hereto as Exhibit "1" and incorporated herein by this reference

Section 2. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

Section 3. All prior acts consistent with the intent of this resolution are hereby ratified and confirmed

Section 4. This resolution shall be in full force and effect upon passage and signatures hereon.

Dated and Signed this 18th day of February, 2014

CITY OF AUBURN

Nancy Backus
NANCY BACKUS, MAYOR

ATTEST:

Danielle E. Daskam, City Clerk

APPROVED AS TO FORM:

Daniel B Heid, City Attorney

EXHIBIT 1

LEASE AGREEMENT

This Lease is entered into the date fully executed by and between the City of Auburn, a Washington municipal corporation ("Landlord"), and VALLEY COMMUNICATIONS CENTER, a Washington interlocal government agency and instrumentality of its member governments ("Tenant").

RECITALS

A. Landlord is owner in fee simple or benefits from easements on parcels of land located in King County, Washington, legally described on the attached **Exhibit A**, and commonly known as Water Reservoir 5.

B. Tenant provides emergency communications and dispatch services for several municipalities and desires a nonexclusive lease for the portion of the Property described on the attached **Exhibit B**, for equipment installation and maintenance of a paging transmitter, antenna system, generator, and associated electronics, as described on the attached **Exhibit C**.

C. Accordingly, the parties are entering into this Lease on the terms and conditions set forth below.

AGREEMENT

In consideration of their mutual covenants, the parties agree as follows:

1. PREMISES

Landlord leases to Tenant a portion of certain existing structures located at 1326 57th Drive SE, Auburn, WA and described in **Exhibit "A"** ("Property"). The portion of the Property to be leased by Landlord to Tenant is more particularly described in **Exhibit "B"** ("Premises") which is attached and incorporated into this Lease.

2. CONSIDERATION

As consideration for this Lease, Tenant shall pay to Landlord the sum of One Thousand and no Dollars ($1,000.00) per month. Leasehold Excise Tax does not apply.

3. USE

Tenant shall use the Premises for a paging transmitter, antenna system, and associated electronics. A general description of the plans and specifications for equipment installation is attached as **Exhibit "C"** ("Improvements"). No use shall be made of Premises, or act done in or about the Premises, that is illegal, unlawful, or violates zoning codes. Tenant shall not commit, or allow to be committed upon the Premises, any waste or any public or private nuisance. Tenant will comply, at Tenant's own cost and expense, with all reasonable orders, notices, regulations or

requirements of any municipality, state or other governmental authority respecting the use of the Premises.

Tenant's installation, operation and maintenance of the Improvements on the Premises may not damage or interfere in any way with Landlord's or Landlord's other Tenants' use of the Property. Tenant will immediately cease, upon written notice from Landlord, all such actions that materially interfere with Landlord's use of the Property, provided however, that Tenant may then terminate the Lease. Landlord reserves the right to take any action it deems necessary in its reasonable discretion to repair, maintain, alter or improve the Premises in connection with its public service operations.

Tenant requires access twenty-four (24) hours per day, seven (7) days per week, for three hundred and sixty-five (365) days per year to the leased cabinet space in order to maintain the Public Safety critical infrastructure equipment (radio transmitter and associated equipment). Tenant access to the equipment cabinet area and antenna system (water reservoir) shall be gained by contacting the Landlord on-call water operations at 253-876-1985 or 253-876-1953. Landlord water operations staff shall meet the Tenant on site (within sixty (60) minutes of receiving the call) and grant access to the water facility

4. TERM AND TERMINATION

A. The term of this Lease shall begin On the last date signed by the parties. This Lease shall continue for a period of five (5) years from the Effective Date, unless sooner terminated as hereinafter provided. The parties may mutually agree to exercise the option to extend this lease for two (2) additional five (5) year terms by written amendment pursuant to the terms and conditions herein.

B. This Lease may be terminated by either party after a minimum 150 days' written notice of an intention to do so. By the effective date of the termination, Tenant will remove all of its equipment from the Premises at its sole expense. If Tenant does not remove its equipment from the Premises by the effective date of the termination, Tenant may not enter the Premises except upon written authorization of the Landlord, and Landlord may remove the equipment and invoice Tenant for the cost, which Tenant shall pay within thirty (30) days of receipt.

5. UTILITIES

Tenant shall be responsible for obtaining all required utility services at no cost to the Landlord.

6. REGULAR MAINTENANCE

Tenant shall, at Tenant's sole expense, perform all reasonable maintenance of, and keep in good repair, the Improvements and equipment installed on the Premises. All RF equipment or related improvements installed shall meet or exceed manufacture specifications and FCC requirements.

7. INSURANCE

Tenant shall, at Tenant's expense, maintain commercial general liability insurance, written on an occurrence basis with limits no less than $1,000,000 combined single limit per occurrence, and not less than $2,000,000.00 general aggregate, for personal injury, bodily injury and property damage.

All such insurance shall be issued by carriers acceptable to Landlord and shall contain a provision whereby the carrier agrees not to cancel or materially modify the insurance without thirty (30) days' prior written notice to the Landlord. Tenant shall furnish Landlord with a Certificate of Insurance, including a copy of the endorsement naming the Landlord as an additional insured.

No use shall be made or permitted to be made of the Premises, which will increase the existing rate of insurance upon the Premises (without consent of Landlord and compensation for increased premiums), or cause the cancellation of any insurance policy covering the Premises, or any part thereof, nor shall Tenant sell, or permit to be kept, used or sold in or about the Premises, any article that may be prohibited by the standard form of property insurance policies.

8. CONSTRUCTION DEFECTS:

The Tenant has inspected and knows the condition of the Premises, and it is understood and agreed that the Premises are leased on an "as is" basis, without any obligation on the part of the Landlord to make any changes, improvements or to incur any expenses whatsoever for the maintenance or repair of the Premises, except as required by law. If a defective condition is caused directly or indirectly by the Tenant or Tenant's guest, licensee, or any other person(s) acting with permission of or under the control or direction of Tenant, the Landlord shall have no obligation to repair that defect, and the Tenant shall immediately repair the defect at Tenant's cost. The Tenant shall have no defense against the Landlord to remedy the defective condition. This applies also where Tenant unreasonably fails to notify the Landlord of the condition or to allow Landlord access to the Premises for the purpose of repair.

9. ALTERATIONS

With the exception of Improvements depicted in **Exhibit C**, Tenant shall not make any alterations to the Premises without obtaining the consent of Landlord in writing first, which shall not be unreasonably withheld. All alterations, additions and improvements that are made by Tenant shall be at the sole cost and expense of Tenant. If the Tenant performs work with the consent of the Landlord, Tenant agrees to comply with all laws, ordinances, rules, regulations of the appropriate governing authority. Radio system equipment installed by Tenant will not be considered an improvement or alteration.

10. INDEMNIFICATION/HOLD HARMLESS

Landlord and Tenant shall each defend, indemnify and hold the other, and their

respective officers, officials, employees and volunteers harmless from any and all claims, injuries, damages, losses or suits including attorney fees, arising out of or in connection with the performance of this Lease, except for injuries and damages caused by the negligence or willful misconduct of the other. Landlord will not be liable to Tenant for damage to its equipment or property from any cause except to the extent damage is caused by Landlord's negligence or willful misconduct. Landlord will not be liable to Tenant for any interruption of utility services or theft of equipment.

11. LIENS

Tenant shall keep the leased Premises free from any mechanic, labor or material man liens arising out of any work performed, materials furnished, or obligations incurred by Tenant or Tenant's agents, contractors, or subtenant, in connection with work of any character performed or claimed to have been performed on the Premises or Improvements by or at the direction of Tenant; provided, however, that Tenant shall have the right to contest the validity or amount of any such lien or claimed lien. In the event of such contest, Tenant shall give to Landlord reasonable security as may be demanded by Landlord to ensure payment thereof and prevent any sale, foreclosure or forfeiture of the Premises or Improvements by reason of non-payment. Tenant will immediately pay a judgment rendered with all proper costs and charges and shall have such liens released or judgment satisfied at Tenant's own expense.

12. ASSIGNMENT

Tenant shall not assign or transfer this Lease or any interest therein. without the prior written consent of Landlord. Tenant shall not sublet the whole or any part of the Premises without the prior written consent of Landlord. This Lease or any interest therein shall not be assignable by operation of law or by any process or proceeding of any court or otherwise, without the prior written consent of Landlord.

13. ACCESS

A. Right of Entry. Landlord will allow Tenant access to the Premises upon signature by the authorized officers of each Party, notwithstanding further ratification of this Lease by the governing bodies of each Party.

B. Tenant will allow Landlord or Landlord's agents free access at all reasonable times to the Premises for the purposes of inspection, provided that Landlord shall not interfere unduly with Tenant's operations. This right shall not be construed as an agreement on the part of the Landlord to inspect to ascertain the condition of the Premises, or to make repairs, additions, or alterations.

14. DAMAGE OR DESTRUCTION, REPAIR OR REPLACEMENT

In the event the Premises is damaged to such extent as to render the Premises untenable in whole or in a substantial part thereof, or is destroyed, the Tenant shall give Landlord or Landlord's agent immediate written notice thereof, and, it shall be optional with the Landlord to repair or rebuild the same. Landlord shall have not more than fifteen (15) days after date of such notification to notify the Tenant in

writing of Landlord's intentions to repair or rebuild the Premises, or the part damaged. If Landlord elects to repair or rebuild the Premises, Landlord shall prosecute the work of repairing or rebuilding without unnecessary delay. If Landlord elects not to repair or rebuild the Premises this Lease shall be terminated immediately and Landlord shall not be obligated to provide Tenant another facility to lease. Any unused portion of Rent paid by Tenant in advance shall be prorated and returned to Tenant within thirty (30) days of termination under section 16. In the event Landlord requires relocation of tenant equipment, tenant shall be given 60 days notice to relocate equipment at tenants expense.

15. CONDEMNATION.

A. Landlord and Tenant will give to the other immediate written notice of the receipt of notice of any proceedings with respect to a condemnation and of any intention of any authority to exercise the power of eminent domain.

B. If all of the Premises are taken by any lawful authority under the power of eminent domain for a period which will end on or extend beyond the expiration of the term of this Lease, this Lease terminates as of the date the condemning authority takes possession, and Tenant will have no claim or interest in or to any award of just compensation except that the Tenant will be entitled to any amount equal to the fair market value of the Tenant's leasehold interest in any improvement taken by the condemning authority made to the Premises by the Tenant, but not to exceed the amount of that part, if any, of the award attributable to the value of the improvements.

C. If part of the Premises are taken by any lawful authority under the power of eminent domain for a period which will end on or extend beyond the expiration of the term of this Lease, Landlord or Tenant may choose to terminate the Lease, the Rent will be reduced in the same proportion that the value of the portion of the Premises to be taken bears to the value of the entire Premises as of the date the condemning authority takes possession. Tenant will have no claims or interest in or to any award of just compensation or damages except that the Tenant will be entitled to an amount equal to the fair market value of the Tenant's leasehold interest in the part taken by the condemning authority of any improvements made to the Premises by the Tenant, but not exceed the amount of that part, if any, of the award attributable to the value of the improvements.

D. If temporary use of all or a portion of the Premises is taken by any lawful authority for a period, which would reduce the leasehold and consequently, would cause the Premises to be untenable for the Use by Tenant for the purposes set forth in Section 2 of this Lease titled "Use," at Tenant's determination, then Landlord or Tenant may choose to terminate this Lease. If Landlord or Tenant elect to terminate this Lease, the Lease will terminate the date the condemning authority takes possession and Tenant will have no claim or interest in or to any award of just compensation except that the Tenant will be entitled to an amount equal to the fair market value of the Tenant's leasehold interest in any improvements made to the Premises by the Tenant. Any unused portion of Rent paid by Tenant in advance shall be prorated and returned to Tenant within thirty (30) days of termination under section 17. If neither Landlord or Tenant elects to terminate this Lease, the Lease will

continue in full force and Tenant will be entitled to receive any award from the condemning authority for the use of all or part of the Premises, EXCEPT that Tenant may elect to have the Rent reduced by the amount proportionally attributable to any partial temporary taking, in which event the Tenant shall not be entitled to any portion of the award attributable to said use.

E. It is understood and agreed that Tenant shall not be party to any negotiation or proceedings at law wherein Landlord claims compensation other than that which is defined statutorily as constituting "just compensation."

16. NOTICES

All notices to be given by the parties hereto shall be in writing and may either be served personally or may be deposited in the United States Mail, postage prepaid, by either registered mail or by regular mail with certificate of mailing obtained. Notices shall be mailed to the addresses below, or a later changed addressed provided in writing to the party:

LANDLORD:

City of Auburn
Attn: Facilities Manager
25 West Main Street
Auburn, WA 98001-4998

TENANT:

Valley Communications Center
Attn: Technical Services Manager
27519 – 108th Avenue Southeast
Kent, WA 98030

17. DEFAULT

If Tenant shall violate, default or not comply with any of the material covenants, agreements or provisions of this Lease, Landlord will give Tenant sixty (60) days' written notice to cure such default. If Tenant does not cure the default within that sixty (60) day period, then Landlord may cancel this Lease by giving sixty (60) days' written notice of cancellation.

18. NON-WAIVER

The failure of the Landlord to insist upon strict performance of any of the covenants and agreements of this Lease, or to exercise any option herein conferred in any one or more instances, shall not be construed to be a waiver or relinquishment of any such, or any other covenant or agreements, but the same shall be and remain in full force and effect.

19. SEVERABILITY

If any term or provision of this Lease or the application of any term or provision to any person or circumstance is invalid or unenforceable, the remainder of this Lease, or the application of the term or provision to persons or circumstances other than those as to which it is held invalid or unenforceable, shall not be affected and will continue in full force.

20. COSTS AND ATTORNEYS FEES

In any claim or lawsuit for damages arising from the parties' performance of this Lease, each party shall pay all its legal costs and attorney's fees incurred in defending or bringing such claim or lawsuit, including all appeals, in addition to any other recovery or award provided by law; provided, however, nothing in this paragraph shall be construed to limit either party's right to indemnification under Section 9 of this Lease.

21. VENUE AND JURISDICTION

This Lease shall be construed in accord with the Laws of the State of Washington. Venue and jurisdiction for the resolution of disputes shall be in the Superior Court for King County, Washington.

22. HEIRS AND SUCCESSORS

Subject to the provision pertaining to assignment and subletting, the covenants and agreements of this Lease shall be binding upon the heirs, legal representatives, successors and assigns of any or all of the parties.

23. HOLDOVER

If the Tenant shall, without the written consent of Landlord, holdover after the expiration of the term of this Lease, that tenancy shall be deemed a month to month tenancy, terminable as provided by the laws of the State of Washington. During any holdover tenancy, Landlord and Tenant will be bound by all of the terms, covenants, and conditions of this Lease.

24. CAPTIONS AND CONSTRUCTION

The captions in this Lease are for the convenience of the reader and are not to be considered in the interpretation of its terms.

25. ENTIRE AGREEMENT AND EFFECTIVE DATE

This Lease contains the entire agreement between the parties and, in executing it, Landlord and Tenant do not rely upon any statement, promise, or representation, whether oral or written, not expressed herein. No subsequent agreement may modify this Lease unless it is in writing and signed by the parties or their authorized agents. This Agreement shall be effective upon the last day executed ("Effective Date").

26. WARRANT OF AUTHORITY TO EXECUTE

Each person executing this Lease warrants that he/she has the requisite authority to bind the party for whom that person is executing.

IN WITNESS, this Lease is executed and shall become effective as of the last date signed below. The foregoing conditions are mutually agreed to by the Landlord and the Tenant.

TENANT:
VALLEY COMMUNICATIONS CENTER

Lora Ueland
Print Name: LORA UELAND
Its: EXECUTIVE DIRECTOR
Date: 1/29/14

LANDLORD:
CITY OF AUBURN

Nancy Backus
By: Nancy Backus
Its: Mayor
Date: 1-9-14

STATE OF WASHINGTON)
) ss.
COUNTY OF KING)

On this _____ day of _____, 2013, before me a Notary Public in and for the State of Washington, personally appeared _____, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person who executed this instrument and acknowledged it to be his/her free and voluntary act and deed for the uses and purposes mentioned in this instrument.

-Notary Seal Must Appear Within This Box-

IN WITNESS WHEREOF, I have hereunto set my hand and official seal the day and year first above written.

_____

_____
NOTARY PUBLIC, in and for the State
of Washington, residing at _____
My appointment expires _____

STATE OF WASHINGTON)
) ss.
COUNTY OF KING)

On this _____ day of _____, 2013, before me a Notary Public in and for the State of Washington, personally appeared _____, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person who executed this instrument and acknowledged it to be his/her free and voluntary act and deed for the uses and purposes mentioned in this instrument.

-Notary Seal Must Appear Within This Box-

IN WITNESS WHEREOF, I have hereunto set my hand and official seal the day and year first above written.

_____

_____
NOTARY PUBLIC, in and for the State
of Washington, residing at _____
My appointment expires _____

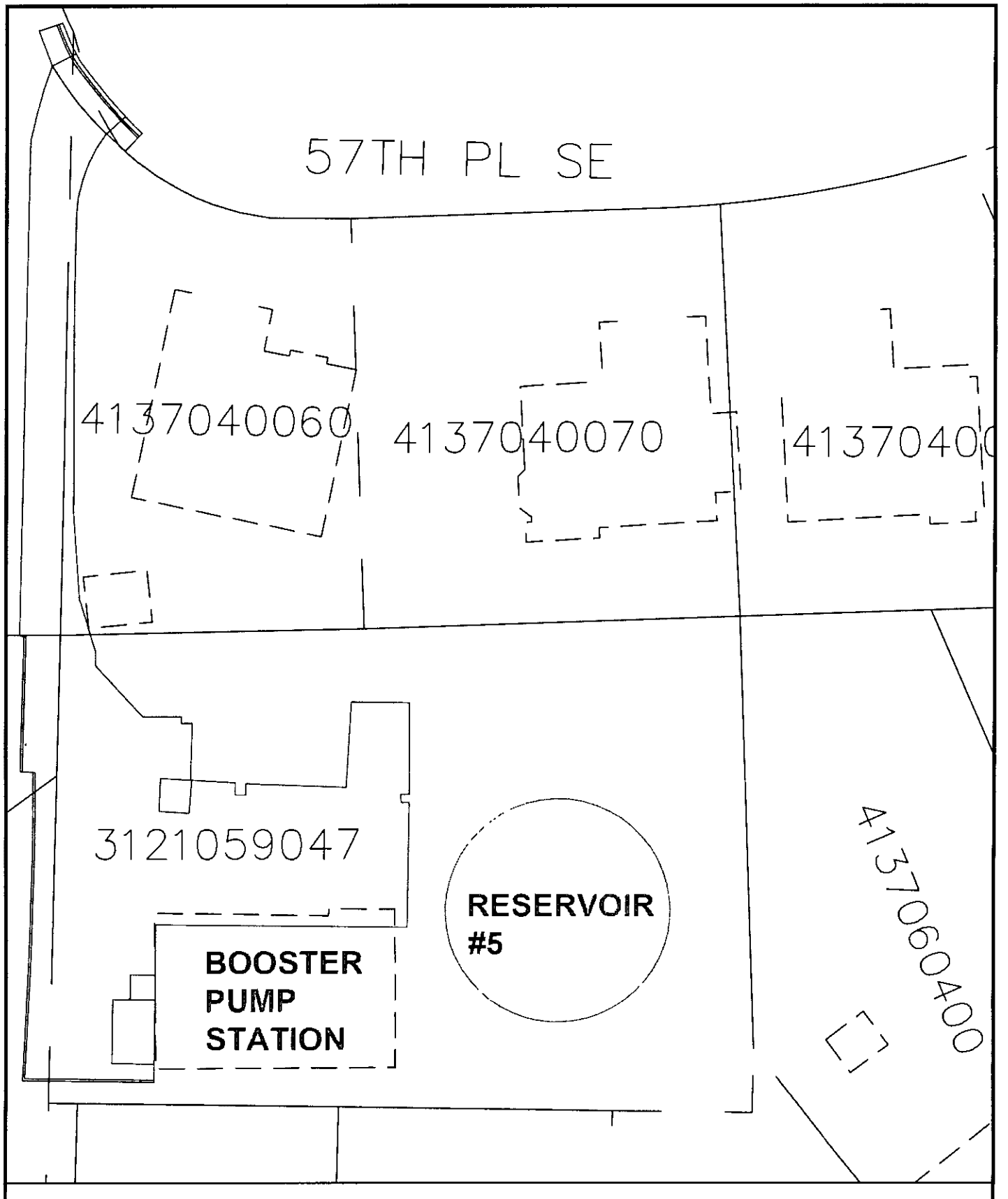


EXHIBIT A
RESERVOIR #5 PARCELS
SCALE: 1" = 30'

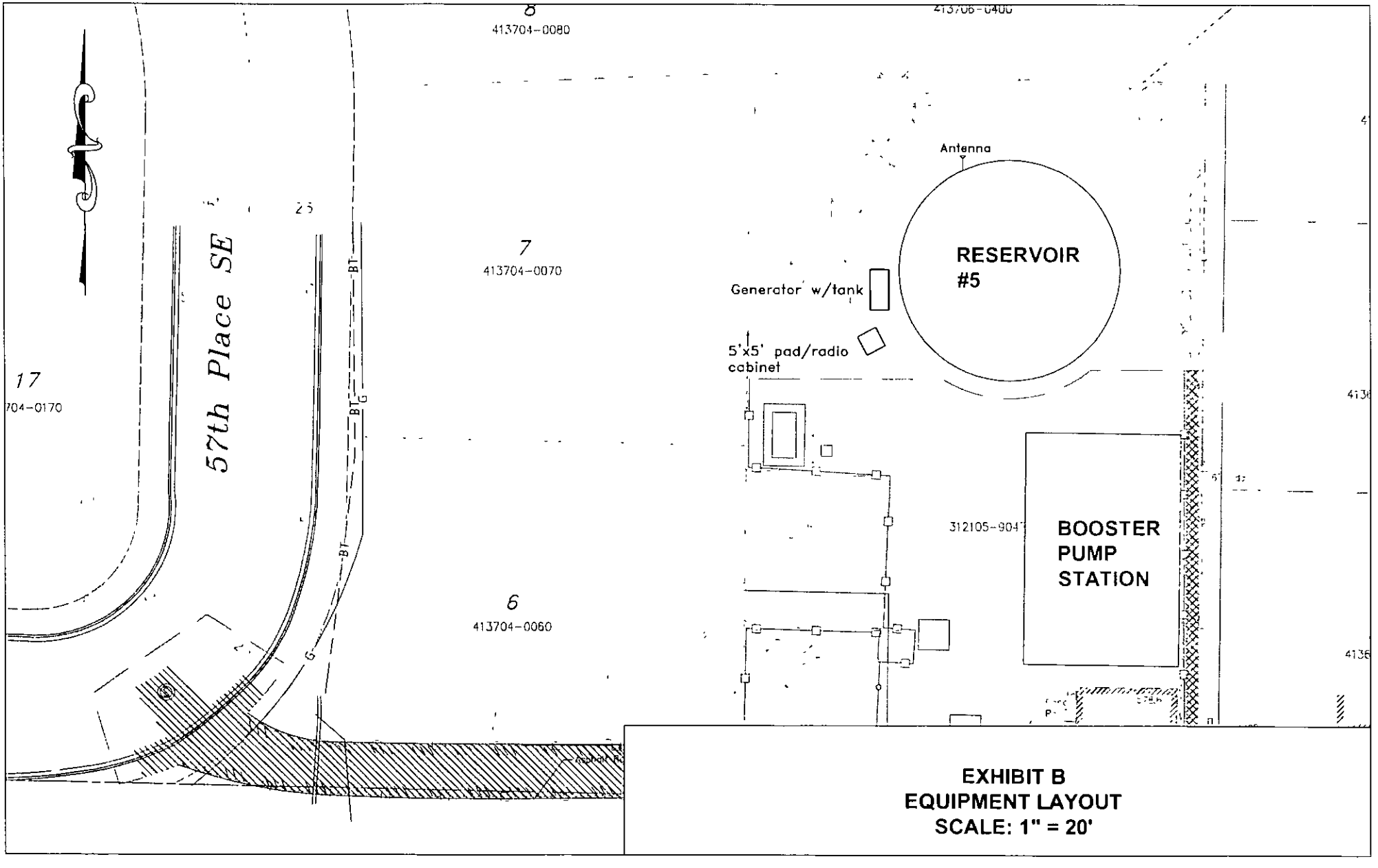

8
413704-0080
413706-0400
Antenna
RESERVOIR
#5
Generator w/tank
5'x5' pad/radio
cabinet
7
413704-0070
57th Place SE
25
17
704-0170
BT
G
6
413704-0060
312105-9041
BOOSTER
PUMP
STATION
4136
4136
EXHIBIT B
EQUIPMENT LAYOUT
SCALE: 1" = 20'

EXHIBIT C

VALLEY COMMUNICATIONS CENTER EQUIPMENT

VHF Paging Equipment:
The equipment will be installed in an outdoor cabinet secured to a 5' x 5' cement pad and located next to the existing radio equipment per Exhibit B. The outdoor cabinet measures 30"W x 30"D x 84"H. See Spec sheet below for more details.

VHF Antenna:
The Antenna will be of a similar style to a Sinclair SD212 and will be mounted on the outside tank railing per Exhibit B. 7/8" coaxial cable will be connected to the antenna and routed along the tank railing and down the side of the tank utilizing the existing cable tray and connected to the paging equipment. See antenna Spec sheet below for more details.

Generator and Tank:
The EATON EGENX17 17KW generator and tank will be mounted on a 5' x 10' cement pad with an auto transfer switch. The generator fuel source will be either Diesel or Propane. The generator type and configuration may change depending on permitting. See Generator Spec sheet below for more details.

Utilities:
T1 circuit will be installed in the existing outdoor enclosure that is mounted on the tank. The existing breaker panel in the same outdoor enclosure will be upgraded to accommodate two 120vac 20 amp circuits. Separate conduit will be installed between the enclosure and paging cabinet.

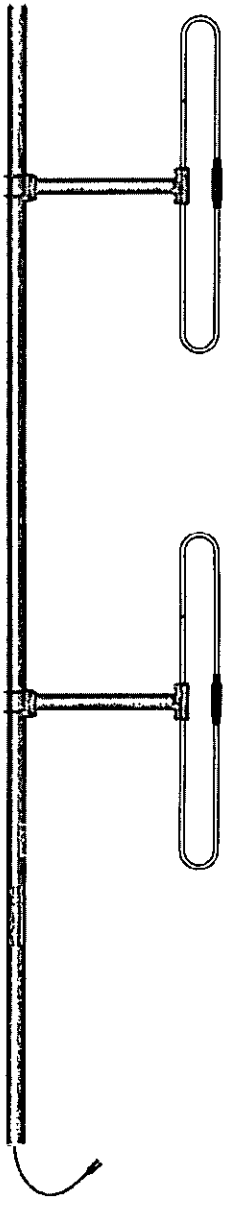
SINCLAIR
Superior then, Superior now.
A Norsat Company | Norsat

Antennas
Low Band, Aviation, and VHF Antennas
SD212 Series

SD212-SF2P4SNM(D00) 2 dipole, 5.5 dBd, offset, 138-174 MHz

- Covers the entire 138-174 MHz frequency range
- 5.5 dBd gain with offset pattern
- 300 Watt power handling
- Can be top or side mounted (Universal mount)

Recommend SMK-125-A3 or SMK-125-A7 for Offset Side Mount. Available from Sinclair separately.



The SD212 series is a 2-bay exposed dipole antenna designed for applications where moderate gain is required. These premium-quality antennas are well suited to public safety applications.

The design of these antennas provides for coverage from 118 to 225 MHz in 3 sub bands, 118-138 MHz for civil aviation applications, 138-174 MHz for private mobile networks, and public safety, and 220-225 MHz for transportation networks.

The standard connector offered is N male which is terminated on a 1 foot cable.

www.sinctech.com

Region	United States	Europe, Middle East and Africa	Caribbean and Latin America	Canada and rest of the world
Telephone	USA: 1 800 263 3275	International: +44 (0) 1487 84 28 19	International: +1 905 726 7676	Canada: 1 800 263 3275 International +1 905 727 0165
E-mail	salesusa@sinctech com	salesuk@sinctech com	salesla@sinctech com	salescan@sinctech.com

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Superior then, Superior now.
A Norsat Company | Norsat

Antennas
Low Band, Aviation, and VHF Antennas
SD212 Series

Electrical Specifications

Frequency Range	MHz	138 to 174
Bandwidth	MHz	36
Connector		N-Male
Gain (nominal)	dBd (dBi)	5 5 (7.6)
Input VSWR (max)		1 5:1
Polarization		vertical
Impedance	Ω	50
Pattern		Offset
Horizontal beamwidth (typ)	degrees	210
Vertical beamwidth (typ)	degrees	34
Average Power Input (max)	W	300
Lightning protection		DC ground
Electrical tilt (available)		0,2,4,6,8, or 10 degrees

Mechanical Specifications

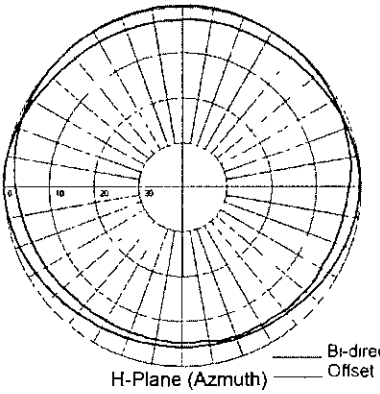
Depth	in (mm)	2.5 (64)
Length/ Height	in (mm)	120 (3048)
Width	in (mm)	23 (584)
Base pipe diameter	in (mm)	1.9 (48)
Base pipe mounting length	in (mm)	36 (914)
Radiating element material		aluminum
Base pipe material		aluminum
Weight	lbs (kg)	20 (9.08)
Weight iced	lbs (kg)	46 (20 88)
Mounting Hardware (Optional)		Clamp005, Clamp015, or Clamp130
Actual Shipping weight	lbs (kg)	34 (15.44)
Shipping dimensions	in (mm)	124x26x6 (3150x660x152)
Mounting configurations		Universal Mount
Recommended For Offset Side Mount		SMK-125-A3 or SMK-125-A7

Environmental Specifications

Temperature range	°F (°C)	-40 to +140 (-40 to +60)	
Wind Loading Area (Flat Plate Equivalent)	ft² (m²)	1 83 (0 17)	
Wind Loading Area (1/2" ice)	ft² (m²)	3.25 (0.3)	*1
Rated wind velocity (no ice)	mph (km/h)	145 (233)	
Rated wind velocity (1/2" radial ice)	mph (km/h)	110 (177)	
Lateral thrust (100 mph No Ice)	lbs (N)	68 (302.5)	*2
Torsional moment (100 mph No Ice)	ft-lbs (Nm)	34 (45 9)	*3
Bending moment (100 mph No Ice)	ft-lbs (Nm)	218 (294 3)	*4
Tip deflection (100 mph No Ice)	degrees	0 88	*5

Notes
*1 0 5" radial ice
*2 Value based on 100 mph with 0" ice
*3 Value based on 100 mph with 0" ice
*4 Value based on 100 mph with 0" ice
*5 Value based on 100 mph with 0" ice

Ordering Information
Clamps must be ordered separately



H-Plane (Azmuth)

www.sinctech.com

Region	United States	Europe, Middle East and Africa	Caribbean and Latin America	Canada and rest of the world
Telephone	USA: 1 800 263 3275	International· +44 (0) 1487 84 28 19	International· +1 905 726 7676	Canada· 1 800 263 3275 International· +1 905 727 0165
E-mail	salesusa@sinctech.com	salesuk@sinctech.com	salesla@sinctech com	salescan@sinctech.com

Sinclair s commitment to product leadership may result in improvement or change to this product
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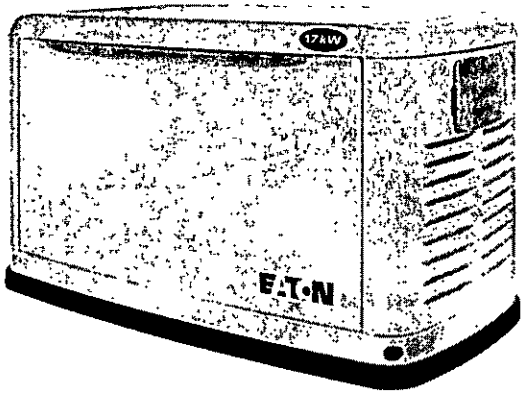
Standby Generators Air Cooled 17kW



Gas Engine Generator Sets

Continuous Standby Power Rating:

- EGEN17 (Steel) - 17 kW 60Hz
- EGEN17A (Aluminum) - 17 kW 60Hz

Features:

- True Power© Electrical Technology
- Two Line LCD Digital Controller
- Electronic Governor
- External Main Circuit Breaker, System Status & Maintenance Interval LED's and GFCI Duplex Outlet
- Flexible Fuel Line Connector
- Composite Mounting Pad
- Natural Gas or LP Gas Operation
- UL 2200 Listed

Benefits:

- Total commitment to component testing, reliability, environmental, destruction and life, plus testing to applicable CSA, NEMA, EGSA, and other standards
- True Power® Electrical Technology Superior harmonics and sine wave form produce less than 5% Total Harmonic Distortion for utility quality power This allows confident operation of sensitive electronic equipment and micro-chip based appliances, such as variable speed HVAC.
- Test Criteria:
  - Prototype Tested Nema Mg1-22 Evaluation
  - System Torsional Tested
  - Motor Starting Ability
- Solid-state, frequency compensated voltage regulation This state-of-the-art power maximizing regulation system is standard on all Eaton models. It provides optimized fast response to changing load conditions and maximum motor starting capability by electronically torque-matching the surge loads to the engine
- Single source service response from the industry's best dealer network provides parts and service know-how for the entire unit

E·T·N

Table 1. Features

	Features	Benefits
Engine	• OHVI Design • "Spiny-lok" cast iron cylinder walls Electronic ignition/spark advance • Full pressure lubrication system • Low oil pressure shutdown system • High temperature shutdown	• Maximizes engine "breathing' for increased fuel efficiency Plateau honed cylinder walls and plasma moly rings help engine run cooler, reducing oil consumption Because heat is the primary cause of engine wear, the OHVI has a significantly longer life than competitive engines • Rigid construction and added durability provide long engine life • These features combine to assure smooth, quick starting every time • Superior lubrication to all vital bearings means better performance, less maintenance and significantly longer engine life Now featuring a 2 year/200 hour oil change interval • Superior shutdown protection prevents catastrophic engine damage due to low oil • Prevents damage due to overheating
Generator	• Revolving field • Skewed stator • Displaced phase excitation • Automatic voltage regulation • UL 2200 Listed	• Allows for smaller, light weight unit that operates 25% more efficiently than a revolving armature generator • Produces a smooth output waveform for compatibility with electronic equipment • Maximizes motor starting capability • Regulates the output voltage to ±2% prevents damaging voltage spikes • For your safety
Transfer Switch	Sold Separately	
Controls	• Manual/Auto/Off switch • Utility voltage sensing • Utility interrupt delay • Engine warm-up • Engine cool-down • Seven day exerciser • Timed Trickle Battery charger • Main Line Circuit Breaker • Electronic governor	• Selects the operating mode • Constantly monitors utility voltage, setpoints 65% dropout, 75% pick-up, of standard voltage • Prevents nuisance start-ups of the engine, adjustable 10-30 seconds • Ensures engine is ready to assume the load, setpoint approximately 10 seconds • Allows engine to cool prior to shutdown, setpoint approximately 1 minute • Operates engine to prevent oil seal drying and damage between power outages • Maintains battery charge level to insure starting • Protects generator from overload • Maintains constant 60 Hz frequency
Unit	• Weather protective enclosure • Enclosed critical grade muffler • Small, compact, attractive	• Ensures protection against mother nature Hinged key locking roof panel for security Lift-out front for easy access to all routine maintenance items Electrostatically applied textured epoxy paint for added durability EGEN17A has aluminum enclosure • Quiet, critical grade muffler is mounted inside the unit to prevent injuries • Makes for an easy, eye appealing installation
Installation System	• 1' Flexible Fuel Line Connector • Composite Mounting Pad	• Easy Installation

Table 2. Specifications

Generator	EGEN17	EGEN17A
Rated Maximum Continuous Power Capacity (LP)	17,000 Watts*	
Rated Maximum Continuous Power Capacity (NG)	16,000 Watts*	
Rated Voltage	120/240	
Rated Maximum Continuous Load Current 240 Volts	70 8 LP/66 6 NG	
Total Harmonic Distortion	Less than 5%	
Main Line Circuit Breaker	65 Amp	
Phase	1	
Number of Rotor Poles	2	
Rated AC Frequency	60Hz	
Power Factor	1	
Battery Requirement (not included)	Group 26R, 12 Volts & 525 Cold-cranking Amps Min	
Unit Weight	455 Pounds	421 Pounds
Dimensions (L" x W" x H")	48 x 25 x 29	
Sound output in dB(A) at 23 ft. with generator operating at normal load	66	
Sound output in dB(A) at 23 ft. with generator in Quiet-Test™ low speed exercise mode	60	
Engine		
Type of Engine	OHVI V-TWIN	
Number of Cylinders	2	
Rated Horsepower	32 @ 3,600 rpm	
Displacement	992cc	
Cylinder Block	Aluminum w/ Cast Iron Slv	
Valve Arrangement	Overhead Valve	
Ignition System	Solid-state w/ Magneto	
Governor System	Electronic	
Compression Ratio	9 5:1	
Starter	12 Vdc	
Oil Capacity Including Filter	Approx 1 9 Qts	
Operating RPM	3,600	
Fuel Consumption **Natural Gas** **cu.ft./hr: 1/2 Load / Full Load** **Liquid Propane** **lt3/hr (gal/hr): 1/2 Load / Full Load**	 183 / 261 59 (1 61) / 94 (2 57)	
Required fuel pressure to generator fuel inlet at all load ranges 5 to 7 inches of water column for natural gas, 10 to 12 inches of water column for LP gas		
Controls		
2-Line Plain Text LCD Display	Simple user interface for ease of operation	
Mode Switch **-Auto** **-Off** **-Manual/Test (start)**	 Automatic Start on Utility failure 7 day exerciser Stops unit Power is removed Control and charger still operate Start with starter control, unit stays on If utility fails, transfer to load takes place	
Engine Start Sequence	Cyclic cranking 16 sec on, 7 rest (90 sec maximum duration)	
Engine Warm-up	10 seconds	
Engine Cool-Down	1 minute	
Starter Lock-out	Starter cannot re-engage until 5 sec after engine has stopped	
2.5 Amp Timed Trickle Battery Charger	Standard	
Automatic Voltage Regulator w/Overvoltage Protection	Standard	
Automatic Low Oil Pressure Shutdown	Standard	
Overspeed Shutdown	Standard / /2Hz	
Overcrank Protection	Standard	
Safety Fuse	Standard	
All ratings in accordance with BS5514, ISO3046 and DIN6271 * Maximum wattage & current are subject to & limited by such factors as fuel Btu content, ambient temperature, altitude, engine power & condition, etc Maximum power decreases about 3 5 percent for each 1,000 feet above sea level, and also will decrease about 1 percent for each 12° C (10° F) above 15 5° C (60°F)		

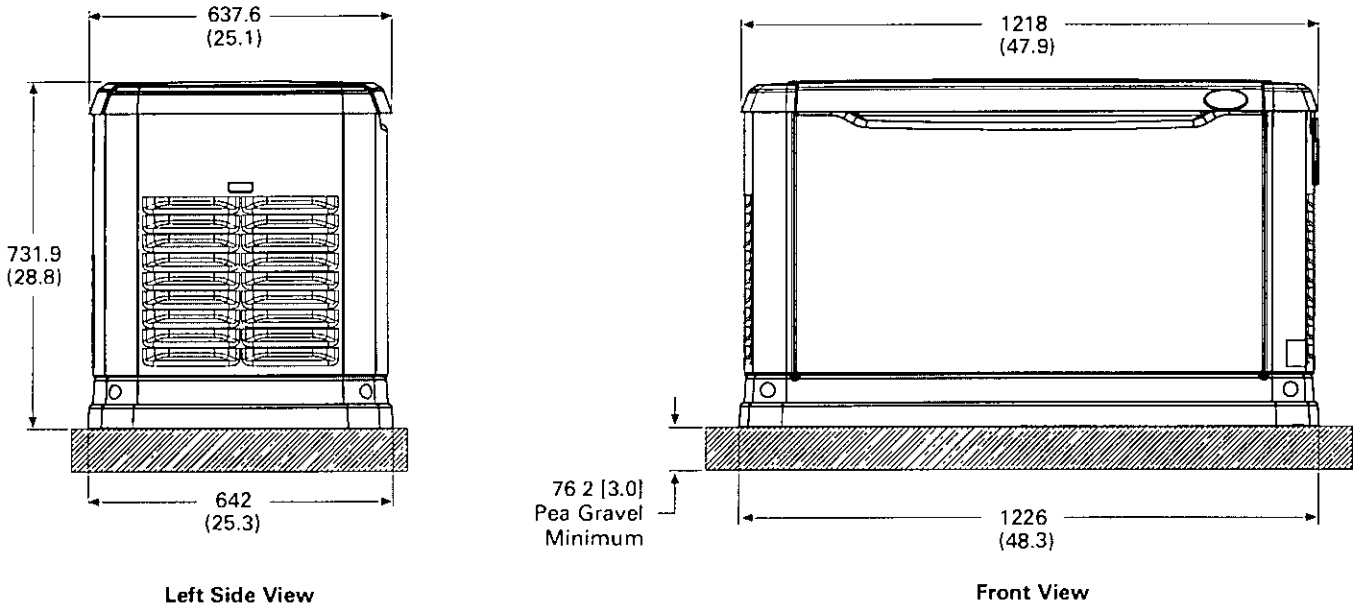


Figure 1. Air Cooled Generator 17kW

Design and specifications subject to change without notice
Dimensions shown are approximate Contact your Eaton Salesperson for certified drawings Do not use these dimensions for installation purposes

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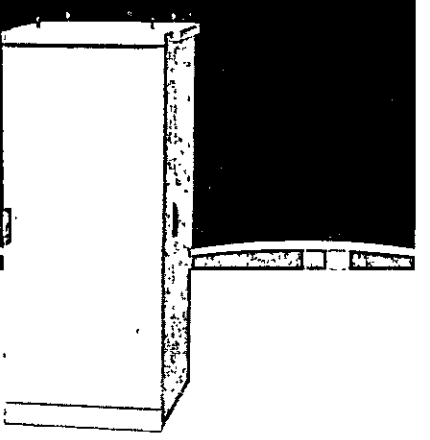
FlexSure® FLX36-3030

Power and Equipment Enclosure Solutions



Purcell Systems' Flexible EncloSure (FlexSure®) solution architecture allows the rapid creation and growth of virtually any outdoor cabinet configuration by leveraging pre-engineered common interchangeable components. The FlexSure® series is available in 12, 16, 20, 25, and 36 RU equipment bay options.

FlexSure® enclosures are UL 508 Listed, and certified by independent third-party Nationally Recognized Testing Laboratories to Telcordia GR-487 A wide range of thermal management system technologies and capacities ensures that the equipment you deploy in the cabinet will operate within its design parameters with the highest reliability and lowest Total Cost of Ownership. Options include battery backup, AC/DC power termination and distribution, cross connect and line protection, equipment and enclosure mounting features.

Applications

Provides a secure, thermally-controlled environment for any electronic equipment supporting a wide-range of Cable/MSO, Energy/Utility, Land Mobile Radio, Transportation, U.S. Government/Military, and Wireless and Wireline Telecommunication applications.

Product Features:

- Telcordia GR-487 certified, UL508 Listed
- Highly flexible and scalable
- Energy efficient advanced thermal solutions
- Field upgradeable
- AC and DC power options
- Pad, pole, wall, H-frame mounting options

The Purcell Advantage

Purcell Systems designs and manufactures thermally-managed outdoor enclosures that meet the exact needs of the enclosed equipment for network operators and utilities. Our enclosures provide comparable solutions to prefabricated buildings, containers and shelters at a fraction of the cost. Both standard and custom enclosures are delivered with the following capabilities:

Choice of Options: Pre-engineered and interchangeable modules provide optimal configurations with minimal cost and lead time.

Thermal Management: The industry's widest selection of heating and cooling systems ensures the most efficient thermal management solution with the lowest energy consumption.

Lowest Total Cost of Ownership: Engineering analysis and modeling ensures your enclosure configuration minimizes installation, maintenance, repair, capital, and operational expenses

Equipment Integration and Staging: Electronic equipment can be staged and installed in our enclosures prior to final deployment and installation.

Fanatical Service®: A national service organization with 24/7/365 access means procurement, installation, support, and warranty requests are addressed immediately.

Purcell® SYSTEMS

FlexSure® FLX36-3030

Dimensions and Expansion Options				Thermal Management Systems			
Exterior Dimensions		Rack Units	Side Chamber Options	Heat Exchanger			Air Conditioner
No battery pedestal	30"W x 30"D x 74"H 762mm x 762mm x 1880mm	36RU	+10"W +16"W	39W/°C 741W	70W/°C 1330W	99W/°C 1881W	2K BTU/585W with 500W heater 4K BTU/1172W with 1500W heater 6K BTU/1758W with 1500W heater
14" battery pedestal	30"W x 30"D x 84"H 762mm x 762mm x 2134mm						
16" battery pedestal	30"W x 30"D x 86"H 762mm x 762mm x 2184mm						

Specifications

EXTERIOR

Construction
- Frame: 0.090" Corrosion resistant aluminum, dual wall construction
- Finish: Ultra-light gray polyester powder coat
- Weight (Base Configuration) 375 lbs

Door/Side/Top Panels
- Doors: Front and rear doors, left or right open, front and rear hatches
- Door Handles. Pad-lockable
- Door Hinges. Hidden hinges
- Side Panels: Removable for field expandability for extra bays and side chambers

Cable Entry
- Ingress/Egress Knockouts on bottom/rear/side
- Protection Plastic/rubber glands

Battery Pedestal
- Ventilated compartment
- 14" or 16" Height: Supports up to 190 Ahr -48 Volt batteries
- Battery Heater Mat: Up to 280 Watts
- Compatible with pad, pole, or wall mount

Side Chamber
- Side chambers: One or two, 10", or 16" depth
- 19" or 23" Equipment rails

Mounting Options
- Anchor plate kit for concrete pad mounting
- Pole mount kit (up to 25 RU models)
- Plinth: 4" Height, standard footprint
- Corrosion inhibiting pad gasket

INTERIOR

Equipment Mounting
- 19" or 23" Equipment rails. Configurable locations front-to-back
- Second set of 19" or 23" rails optional

AC Power Termination and Distribution
- Load Center Locations: Internal to side chamber, or internal to equipment bay
- 8-12 Position internal load centers
- Up to 100 Amp main breaker
- Surge Protection Device (SPD)
- Generator Inlet: 30/60/100 Amp

DC Power Systems and Distribution
- Multiple suppliers and configurations available

Other Options
- Convenience Outlets: 15 or 20A, GFCI or standard
- Bonding and Grounding: Isolated or integrated, up to 10 positions
- Alarm Blocks. Up to 20 positions (includes intrusion and thermal alarms)
- Accessories: Document holder, service light, laptop tray

OTHER

Agency Compliance
- Telcordia GR-487 Issue 2
- UL Listed – UL508A
- NEMA 3R

Environmental
- IP Protection: IP 54
- Maximum earthquake risk Zone-4 (as per Telcordia GR-63)

Warranty
- 5 Years on enclosure, 1 year on thermal system

Purcell SYSTEMS
16125 East Euclid Avenue
Spokane, Washington 99216
509.755.0341
www.purcellsystems.com

FLX36-3030 2012-11-08
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Patents Pending Due to continual product enhancements, specifications may change without notice

RESOLUTION NO. 5102

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR TO EXECUTE A WHOLESALE WATER AGREEMENT BETWEEN THE CITY OF AUBURN AND THE CITY OF TACOMA

WHEREAS, the City of Auburn is obligated to provide an adequate water supply to meet customer demand; and

WHEREAS, the City has adopted a combined water supply strategy that includes improving City sources to fully utilize its water rights and purchasing water from adjacent purveyors; and

WHEREAS, on June 4, 2012, the City of Auburn City Council adopted Resolution No. 4822 authorizing the Mayor to execute a Wholesale Water Agreement with the City of Tacoma, which agreement allowed the City to purchase water in keeping with the City's supply strategy; and

WHEREAS, in July 2012, the City of Auburn entered into the Wholesale Water Agreement with the City of Tacoma, Department of Public Works, Water Division (Tacoma) to purchase 1.0 million gallons per day (MGD) (annual average daily use) water at a wholesale rate; and

WHEREAS, in September 2013, the City of Auburn entered into the Agreement for the Purchase and Sale of Credits Relating to Permanent Wholesale Water Supply Capacity with Cascade Water Alliance (Cascade) for 2.5 MGD (annual average daily use) of Tacoma water; and

WHEREAS, the City desires to enter into a Wholesale Agreement with the City of Tacoma to utilize the 2.5 MGD water purchased from Cascade along with the existing 1.0 MGD, for a total of 3.5 MGD annual average daily use.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN, KING COUNTY, WASHINGTON, HEREBY RESOLVES as follows:

Section 1. The Mayor is hereby authorized to execute a Wholesale Water Agreement between the City of Auburn and the City of Tacoma, which agreement shall be in substantial conformity with agreement attached hereto as Exhibit "A" and incorporated herein by this reference.

Section 2. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

Section 3. This Resolution shall be in full force and effect upon passage and signatures hereon.

Dated and signed this 6th day of October, 2014.

CITY OF AUBURN

Nancy Backus
NANCY BACKUS, MAYOR

ATTEST:

Danielle E. Daskam, City Clerk

APPROVED AS TO FORM:

Daniel B. Heid, City Attorney

WHOLESALE WATER SUPPLY AGREEMENT

This WHOLESALE WATER SUPPLY AGREEMENT ("Agreement"), by and between the City of Tacoma, Department of Public Utilities, Water Division ("Tacoma"), and the City of Auburn ("City"), is made and entered into as of this 28th day of October (2014) ("Effective Date"). Tacoma and City are sometimes referred to collectively as the "Parties" and individually as a "Party." This Agreement is made with reference to the following facts:

RECITALS

WHEREAS, Tacoma is a municipality organized and operating under the laws of the State of Washington and operates a water utility pursuant to RCW 35.92.010;

WHEREAS, pursuant to RCW 35.92.170-.200, Tacoma is authorized to operate a water utility outside its geographical boundaries and to sell surplus water to customers outside of Tacoma's city limits;

WHEREAS, City is a noncharter code city organized and operating as a municipal corporation under the laws of the State of Washington;

WHEREAS, City and Tacoma have previously entered into a "Wholesale Water Agreement" dated July 6, 2012, pursuant to which Tacoma is required to provide, upon City's request, a wholesale water supply of up to 1 MGD (annual average daily use, subject to certain 2.0 MGD peak day and 1.8 MGD peak period limitations set forth therein), for use by City in connection with the prudent use and management of its water system (the "Existing Agreement");

WHEREAS, Tacoma and Cascade Water Alliance, a joint municipal utilities services authority ("Cascade"), have heretofore entered into an "Amended and Restated Agreement for the Sale of Wholesale Water" dated December 31, 2012 (the "Cascade/Tacoma Agreement");

WHEREAS, pursuant to Section 6 of the Cascade/Tacoma Agreement, Tacoma has available surplus water and is willing to sell to City a 2.5 MGD (annual average daily use) wholesale water supply, which is a portion of the 4 MGD (annual average daily use) wholesale water supply that is available as of the Effective Date to sell to City pursuant to the Cascade/Tacoma Agreement;

WHEREAS, the Parties desire, by this Agreement, to amend and restate the Existing Agreement;

WHEREAS, Tacoma is willing to make a 3.5 MGD (1.0 MGD + 2 5 MGD) (annual average daily use) wholesale water supply available to City as a direct wholesale customer of Tacoma in accordance with the terms and conditions of this Agreement, which is a combination of the 1 MGD wholesale water supply currently provided under the Existing

Agreement and the 2.5 MGD available pursuant to the Cascade/Tacoma Agreement, subject to certain peak-period limitations set forth below;

WHEREAS, pursuant to the requirements of RCW 35.92.010, the Parties specifically find that this Agreement will at a minimum generate revenues sufficient for Tacoma to cover the marginal cost of the available surplus water supplied to City; and

WHEREAS, City is willing to purchase and accept delivery of such wholesale water supply from Tacoma as a direct wholesale customer of Tacoma in accordance with the terms and conditions of this Agreement.

NOW, THEREFORE, IN CONSIDERATION of the mutual covenants and conditions herein contained, the Parties agree as follows:

AGREEMENT

1. DEFINITIONS

For purposes of this Agreement, the following terms defined herein shall have the following meanings, whether singular or plural:

"Applicable Law" means any applicable and binding statute, law, rule, regulation, code, ordinance, judgment, decree, writ, legal requirement or order, and the written interpretations thereof, of any national, federal, state or local Governmental Authority having jurisdiction over the Parties or the performance of this Agreement.

"Cascade" shall have the meaning set forth in the Recitals.

"Cascade/Tacoma Agreement" shall have the meaning set forth in the Recitals.

"City" shall have the meaning set forth in the preamble of this Agreement.

"City Hazardous Substances" means any Hazardous Substances generated, transported, kept, handled, stored, placed, discharged or released by City, or by anyone directly or indirectly retained or employed by City, in connection with the performance of this Agreement.

"City Isolation Valve" means a positive shut-off valve owned and operated by City as part of the Interconnection Facilities.

"Dispute" shall have the meaning set forth in Section 17.1.

"Draft Operating Plan" means a non-binding informational plan intended to advise Tacoma of the amount of the Wholesale Water Supply that City anticipates it will use during the period starting June 1 and ending September 31 each year during the Term.

"Effective Date" shall have the meaning set forth in the preamble of this Agreement.

"Existing Agreement" shall have the meaning set forth in the Recitals.

"Flow Control Valve" means the valve that controls the volume of water that is delivered to City and is more particularly described in Exhibit A.

"Governmental Authority" means (a) any federal, national, state, tribal, county, municipal or local government (whether domestic or foreign), or any political subdivision thereof; (b) any court or administrative tribunal; (c) any other governmental, quasi-governmental, judicial, public or statutory instrumentality, authority, body, agency, bureau or entity of competent jurisdiction; or (d) any nongovernmental agency, tribunal or entity that is vested by a governmental agency with applicable jurisdiction.

"Hazardous Substances" means any substance or material regulated or governed by Applicable Law; any substance, emission or material now or hereafter deemed by any Governmental Authority or Applicable Law to be a "regulated substance," "hazardous material," "hazardous waste," "hazardous constituent," "hazardous substance," "dangerous material," "dangerous waste," "dangerous substance," "toxic substance," "radioactive substance" or a "pesticide"; and any other substance with properties that are harmful or deleterious to human health or to the environment.

"Interconnection Facilities" means all facilities, other than the Wholesale Service Connections, that are necessary for City to access and take delivery of the Wholesale Water Supply at the Wholesale Service Connections and to convey such water to City's transmission and distribution systems. Interconnection Facilities include the City Isolation Valve and such other pressure-reducing valves, power service, storm drainage, vaults, telecommunications service, conduit, controllers, pedestals and boxes operated by City as part of the Interconnection Facilities. For avoidance of doubt, Interconnection Facilities do not include the Wholesale Service Connections or any other facilities owned and operated by Tacoma that are necessary to deliver the Wholesale Water Supply to the Wholesale Service Connections.

"Meter" means the delivery metering equipment determined by Tacoma to be necessary for the implementation of this Agreement.

"Operating Protocols" shall have the meaning set forth in Section 11.3.

"Party" or "Parties" shall have the meaning set forth in the preamble of this Agreement.

"Person" means any individual, corporation, municipal corporation, company, voluntary association, partnership, incorporated organization, trust or limited liability company, or any other entity or organization, including any Governmental Authority.

"Project" means that certain water supply project commonly referred to as the Second Supply Project, which is owned and operated by Tacoma in order to meet Tacoma's future water supply requirements and to increase regional supply, with the participation of its project partners the City of Kent, the Covington Water District and the Lakehaven Utility District in

accordance with the terms and conditions of the 2002 Second Supply Project Partnership Agreement.

"Prudent Utility Practices" means, at any particular time, any of the practices, methods, decisions and acts that (a) in the exercise of a Party's reasonable judgment in light of the facts known at the time, would have been expected to accomplish the desired result consistent with Applicable Law, reliability, efficiency, economy, safety and expedition commonly engaged in or approved by the water supply industry in the United States prior thereto; and (b) in the case of Tacoma, includes all practices and methods needed to comply with the Wholesale Water Regulations. It is recognized that the term "Prudent Utility Practices" is not intended to be limited to the optimum practices, methods or acts to the exclusion of all others, but rather refers to a spectrum of possible practices, methods or acts that could have been expected to accomplish the desired result consistent with Applicable Law, reliability, efficiency, economy, safety and expedition.

"Schedule" shall have the meaning set forth in Section 11.2.

"System Development Charge" means the system development charge imposed upon wholesale customers by the Wholesale Water Regulations.

"Tacoma" shall have the meaning set forth in the preamble of this Agreement.

"Tacoma Indemnitees" means Tacoma and Tacoma's directors, officers, employees, agents, servants, elected officials and representatives, and the respective successors and assigns of each and all of the foregoing.

"Tacoma Isolation Valve" means a positive shut-off valve installed at the Wholesale Service Connections and that is more particularly described in Exhibit A.

"Telemetry Equipment" means a data-acquisition system owned and operated by Tacoma that is used to send signals from the Meter in support of operations and all appurtenances thereto.

"Temporary Wholesale Water Supply" shall have the meaning set forth in Section 19.

"Term" shall have the meaning set forth in Section 21.

"Uncontrollable Force" means any event or circumstance (or combination thereof) and the continuing effects of any such event or circumstance (whether or not such event or circumstance was foreseeable or foreseen by the Parties) that delays or prevents performance by a Party of any of its obligations under this Agreement. An Uncontrollable Force shall include the following:

(i) flood, earthquake, drought, climate change, storm, fire, lightning and other natural catastrophes;

(ii) acts of public enemies, armed conflicts, acts of foreign enemies, acts of terrorism (whether domestic or foreign, state-sponsored or otherwise), war (whether declared or undeclared), blockade, insurrection, riot, civil disturbance, revolution or sabotage;

(iii) any form of compulsory government acquisition or condemnation or change in Applicable Law (other than such acquisition, condemnation or change by City) that affect the performance of the Parties' obligations under this Agreement;

(iv) accidents or other casualty, damage, loss or delay during transportation, explosions, fire, epidemics, quarantines or criminal acts that affect the performance of the Parties' obligations under this Agreement;

(v) labor disturbances, stoppages, strikes, lock-outs or other industrial actions affecting the Parties or any of their contractors, subcontractors (of any tier), agents or employees;

(vi) inability, after the use of commercially reasonable efforts, to obtain any consent or approval from any Governmental Authority (other than City) that affects the performance of the Parties' obligations under this Agreement;

(vii) inability, after the use of commercially reasonable efforts, to obtain any consent or approval from any Person required by a Party in connection with this Agreement; and

(viii) third-party litigation contesting all or any portion of the right, title and interest of a Party in any service, property or other item to be provided to the other Party in connection with this Agreement.

Notwithstanding the foregoing, the insufficiency of funds, the financial inability to perform or any changes in such Party's cost of performing its obligations hereunder shall not constitute an Uncontrollable Force, and neither Party may raise a claim for relief hereunder, in whole or in part, in connection with such event or circumstance.

"Wholesale Service Connections" means a physical connection(s) between water mains of the Parties and is the point of delivery of the Wholesale Water Supply. The Wholesale Service Connections are more particularly described in Exhibit A and include the Tacoma Isolation Valve and the Flow Control Valve.

"Wholesale Water Regulations" means all applicable terms and conditions of the Tacoma Municipal Code, including but not limited to Chapters 12.01 and 12.10 thereof, as such terms and conditions may now exist or may hereafter be changed, deleted, supplemented, modified or amended. The Wholesale Water Regulations include Tacoma's "Customer Service Policies" and such other rules, regulations, policies and guidelines as

Tacoma shall, from time to time, adopt and apply on a uniform basis to Tacoma's wholesale customers.

"Wholesale Water Service" shall have the meaning set forth in Section 4.2.

"Wholesale Water Supply" means a quantity of water of up to 3.5 MGD (annual average daily demand), subject to the following peak-period limitations:

(a) 5.12 MGD during any consecutive twenty-four (24) hour period, and

(b) 4.92 MGD during any consecutive ninety-six (96) hour period.

2. EXHIBITS TO THIS AGREEMENT

This Agreement includes the Exhibits listed below, and any reference in this Agreement to an "Exhibit" by letter designation or title shall mean one of the Exhibits identified below. If there is an express conflict between the provisions contained within the body of this Agreement and the provisions of any Exhibit hereto, then the body of this Agreement shall take precedence, except that with respect to technical specifications and requirements pertaining to the design, engineering, operation or testing of the Wholesale Service Connections, the conflicting Exhibit shall take precedence.

Exhibit A: Wholesale Service Connections
Exhibit B: Dispute Resolution Procedures

3. AMENDMENT AND RESTATEMENT OF EXISTING AGREEMENT

The rights and obligations of the Parties arising under the Existing Agreement shall remain in full force and effect and unchanged by this Agreement for the period beginning on July 6, 2012, and ending on the Effective Date. From and after the Effective Date, this Agreement fully restates, replaces and supersedes the Existing Agreement and shall govern and control the rights and obligations of the Parties with respect to the subject matter of the Existing Agreement, as amended and restated in its entirety by this Agreement. Except as otherwise provided by this Section 3, from and after the Effective date, the Existing Agreement is null, void and no longer of any force or effect.

4. WHOLESALE WATER SERVICE

4.1 Subject to the terms and conditions of this Agreement, during the Term, Tacoma agrees to sell and deliver the Wholesale Water Supply to City, and City agrees to purchase and take delivery of the Wholesale Water Supply from Tacoma. The Wholesale Water Supply may be resold by City to another water purveyor, subject to the terms and conditions of this Agreement.

4.2 The Wholesale Water Supply shall be provided to City as wholesale water service subject to and in compliance with the Wholesale Water Regulations, Applicable Law,

Prudent Utility Practices and the terms and conditions of this Agreement ("Wholesale Water Service"). Except as otherwise provided by this Agreement, City shall be subject to and governed by the Wholesale Water Regulations. If, however, there is an express conflict or inconsistency between the terms and conditions of this Agreement and the terms and conditions of the Wholesale Water Regulations, then the terms and conditions of this Agreement shall take precedence, govern and control.

4.3 The Wholesale Water Service shall be provided to City with the same degree of reliability and certainty of supply as water provided by Tacoma to its existing wholesale customers (including limitations thereof, such as provisions of the Wholesale Water Regulations pertaining to interruption of service). The Wholesale Water Service provided to City is not for the purpose of providing fire flows or for fire suppression purposes, and Tacoma does not warrant that the flow and pressure of the Wholesale Water Service provided to City will meet Wholesale Water Regulations or Applicable Law related to providing fire flows or for fire suppression purposes. City acknowledges it is solely responsible for compliance with Applicable Law related to fire flows and fire suppression. The Parties acknowledge that Wholesale Water Service is inherently subject to disruption, interruption, suspension, curtailment and fluctuation. Tacoma shall not have any liability to City or any other Person for any disruption, interruption, suspension, curtailment or fluctuation in the Wholesale Water Service.

5. WHOLESALE WATER SERVICE CHARGES AND FEES

City shall pay Tacoma all charges, fees and other amounts for the Wholesale Water Service as shall be due and payable, from time to time, pursuant to the Wholesale Water Regulations. All rates, charges, fees and other amounts due Tacoma for the Wholesale Water Service pursuant to the Wholesale Water Regulations are subject to periodic adjustment by the Public Utility Board and Tacoma City Council. At any time during the Term, the applicable rate, charge, fee or other amount due Tacoma from City for the Wholesale Water Service shall be the rate, charge, fee or amount as shall then be in effect.

6. SYSTEM DEVELOPMENT CHARGES

As of the Effective Date, the System Development Charge due and payable to Tacoma pursuant to the Existing Agreement has been fully paid by City to Tacoma pursuant to the terms and conditions of the Existing Agreement. A System Development Charge for a wholesale water supply of 2.5 MGD has been paid by Cascade to Tacoma pursuant to the terms and conditions of the Cascade/Tacoma Agreement. The remaining System Development Charge due Tacoma from City pursuant to the Wholesale Water Regulations has, as of the Effective Date, been fully paid to Tacoma by or on behalf of City.

7. PAYMENTS

Amounts due Tacoma from City for the Wholesale Water Service shall be determined, billed and collected by Tacoma and paid by City in accordance with the procedures for billings, collections and payments set forth in the Wholesale Water Regulations.

8. WHOLESALE WATER DELIVERIES

From and after the Effective Date, the Wholesale Water Supply shall be made available to City at the Wholesale Service Connections. The delivery and receipt of water, and the transfer of title to and custody and control of such water, shall occur at the Wholesale Service Connections. Upon City's acceptance of such water at the Wholesale Service Connections, City assumes full responsibility for such water, its quality, and the means, methods and facilities necessary to connect, receive, transport, deliver and use such water as a source of water for resale by City to City's retail customers.

9. WHOLESALE WATER CONNECTIONS AND INTERCONNECTION FACILITIES

9.1 From and after the Effective Date, Tacoma shall be responsible for the maintenance and operation of the Wholesale Service Connections in a manner that is consistent with Applicable Law and Prudent Utility Practices. If at any time during the Term Tacoma shall determine a need to upgrade, replace or modify any of the Wholesale Service Connections, in whole or in part, Tacoma shall so notify City, and cause such upgrade, replacement or modification to occur at such time, place and manner and with such labor, design, materials and equipment as Tacoma shall determine, in its sole discretion. No wholesale service connections other than the Wholesale Service Connections are authorized by this Agreement, and no other such connections shall be allowed without a subsequent and separate written agreement between the Parties. Neither Party shall be obligated to agree to or execute any agreement or permit with the other Party to construct or use any additional wholesale service connection.

9.2 From and after the Effective Date, City shall, at its expense, cause the Interconnection Facilities to be constructed, tested, maintained and available for normal and reliable commercial operations. City shall submit to Tacoma for review and approval the designs, specifications and construction schedule for any material repairs or replacements of the Interconnection Facilities, or for any expansions, improvements or upgrades of the Interconnection Facilities. Tacoma will not unreasonably delay its review of the designs, specifications and construction schedule submitted to it by City and will not unreasonably withhold its approval of such designs, specifications and construction schedule. City will not commence any such repairs, replacements, expansions, improvements or upgrades of the Interconnection Facilities unless and until City has received approved designs, specifications and construction schedule from Tacoma. City shall construct and operate the Interconnection Facilities in a manner that is consistent with Applicable Law; the approved designs, specifications and construction schedule; the provisions of all permits, regulatory approvals and agreements governing the construction and operation of the Interconnection Facilities; and Prudent Utility Practices. City shall own and operate the Interconnection Facilities and shall be responsible for the repair and maintenance thereof.

9.3 Without limiting the generality of the foregoing, City shall:

(a) be responsible for the operation and control of the City Isolation Valve and any pressure-reducing valves, controllers, pedestals and boxes operated by City as part of the Interconnection Facilities; and

(b) provide a sufficient permitted discharge location for sump pump discharge for the Wholesale Service Connections vault.

9.4 If, at any time or from time to time during the Term, Tacoma determines a need to repair, maintain, replace, renew, expand or improve any of Tacoma's infrastructure, facilities or systems and such work requires the relocation of all or any portion of the Interconnection Facilities, Tacoma shall, not less than one hundred twenty (120) days prior to the commencement of such work, request by written notice to City that City relocate such Interconnection Facilities so as to accommodate the time, place and manner of Tacoma's work. Upon receipt of such notice from Tacoma, City shall promptly so relocate such Interconnection Facilities at City's sole cost and expense.

10. METER AND TELEMETRY EQUIPMENT

10.1 Tacoma shall, at City's expense, provide for the procurement, installation, repair, replacement, calibration and testing of the Meter and the Telemetry Equipment. Such costs paid by City to Tacoma are considered funds provided in aid of construction. City shall provide, at its expense, a sufficient and reliable source of power and communications to the Meter and the Telemetry Equipment. Tacoma shall determine the size of the Meter and the flow range within which the Meter must operate.

10.2 Tacoma shall perform the calibration and testing of the Meter. During the Term, Tacoma shall periodically test the Meter for accuracy, and the results of such testing shall be made available to City. City may also test the Meter at any reasonable time and at City's expense. The results of any Meter test conducted by City shall be made available to Tacoma at no charge. A Meter accuracy measurement of two percent (2%) or better shall be considered within calibration tolerance.

10.3 If a Party shall require access to any area under the care, custody or control of the other Party for purposes of this Section 10, then such Party may request such access, subject to the other Party's prior approval, which such approval shall not be unreasonably withheld, conditioned or delayed.

11. WATER MANAGEMENT AND SCHEDULING

11.1 On or before May 1 of each year during the Term, City shall provide Tacoma with a Draft Operating Plan.

11.2 Prior to 10:00 a.m. on any Thursday during the Term, City may submit to Tacoma, in the manner and in the form established by Tacoma, a schedule for wholesale

water deliveries for the following seven (7) days ("Schedule"). The Schedule shall contain at a minimum a uniform rate of water deliveries for each day of the Schedule, and shall take effect on the day following the Thursday the Schedule is submitted. Schedules so submitted shall remain in effect until replaced by a subsequent Schedule submitted in accordance with this Section 11.2.

11.3 The Parties agree to jointly develop and maintain operating protocols for items including the scheduling of water demand to assure consistent flow control and treatment, routine operational communication, emergency shutdown, emergency contacts and other items the Parties determine appropriate ("Operating Protocols"). The Operating Protocols shall be subject to Tacoma's approval, which such approval shall not be unreasonably withheld, conditioned or delayed.

11.4 Tacoma reserves the right to modify, suspend, change or amend Schedules and Operating Protocols as necessary to comply or conform with this Agreement, the Wholesale Water Regulations, Applicable Law, or Prudent Utility Practices, or to respond to Uncontrollable Forces. Tacoma will provide City with thirty (30) days' advance notice of any modifications, suspensions, changes or amendments to the Operating Protocols; provided, however, if the need to modify, suspend, change or amend the Operating Protocols is attributable to Uncontrollable Forces, then Tacoma shall provide as much notice as is practicable under the circumstances.

12. CONSERVATION AND PLANNING

12.1 The Parties will seek to coordinate regional supply, planning, scheduling and operational programs that promote efficient use of water supplies, facilities, finances and staff resources. If requested by Tacoma, City shall participate in the planning and implementation process for conservation programs as they are developed and will share available conservation resources where beneficial to both Parties. In the event there is a water shortage or drought that requires Tacoma to institute water rationing or water use restrictions, Tacoma may institute reductions to deliveries of the Wholesale Water Supply consistent with the Wholesale Water Regulations and Prudent Utility Practices.

12.2 During the Term, City shall implement and maintain a water conservation and water curtailment program substantially equivalent to Tacoma's program. Tacoma reserves the right to reduce or discontinue Wholesale Water Service in the event City fails to adopt and conform its use of the Wholesale Water Supply to Tacoma's Water Shortage Response Plan.

13. RISK OF LOSS

13.1 Title to and risk of loss of water delivered by Tacoma to City pursuant to Section 8 shall pass from Tacoma to City at the Wholesale Service Connections.

13.2 Title to the Wholesale Service Connections, the Meter and the Telemetry Equipment shall be vested in Tacoma. Except as otherwise provided by Section 10.2, City shall have no right to operate, suspend, curtail, design, construct, test, maintain, repair,

improve, replace and use the Wholesale Service Connections, the Meter and the Telemetry Equipment. Title to the Interconnection Facilities shall be vested in City. Tacoma shall have no right or responsibility to operate, suspend, curtail, design, construct, test, maintain, repair, improve, replace or use the Interconnection Facilities.

14. INDEMNIFICATION

City shall defend, indemnify and hold each and all of the Tacoma Indemnitees harmless from and against any and all claims, liens, demands, actions, losses, damages, costs, expenses and liabilities (including attorneys' fees) arising directly or indirectly from or in connection with:

(a) the transportation, storage, sale, delivery and use of any water delivered to City in accordance with this Agreement;

(b) the negligent, reckless, or otherwise tortious acts or omissions of City, or of anyone directly or indirectly retained or employed by City, in performance of this Agreement;

(c) any material breach, failure, inconsistency, inaccuracy or default of any one or more representations made to Tacoma in Section 20;

(d) the use or resale of the Wholesale Water Supply for fire flows or fire suppression purposes, or

(e) City Hazardous Substances.

Nothing herein shall, however, require City to defend, indemnify and hold harmless the Tacoma Indemnitees for that portion (if any) of any such liability that is so proportionately and legally attributable to the negligent acts or omissions of any one or more of the Tacoma Indemnitees. As between the Parties and solely for the purpose of the indemnities contained in this Section 14, City expressly waives any immunity, defense or protection that may be granted to it under the Washington State Industrial Insurance Act, Title 51 RCW, or any other industrial insurance, workers' compensation or similar laws of the State of Washington to the fullest extent permitted by Applicable Law. This Section 14 shall not be interpreted or construed as a waiver of City's right to assert such immunity, defense or protection directly against any of its own employees or any such employee's estate or other representatives. This Section 14 has been mutually negotiated by the Parties and shall survive the expiration or termination of this Agreement.

NKB
City's Initials

15. REGULATORY COMPLIANCE

The Wholesale Water Service is provided subject to Applicable Law (including permits, authorization and the jurisdiction of a Governmental Authority to issue orders and

regulations regarding the Wholesale Water Service, the Wholesale Water Supply and the Project). City understands and agrees that Tacoma must comply with all such laws, permits, authorizations, orders and regulations, and that such laws, permits, authorizations, orders and regulations are an Uncontrollable Force to the extent that they affect the ability of Tacoma to fulfill its obligations under this Agreement.

16. NO RIGHT OR CLAIM TO WATER RIGHTS

By this Agreement, City secures a contractual right to receive Wholesale Water Service and to accept delivery from Tacoma of the Wholesale Water Supply as a wholesale customer. By this Agreement, City acquires no right, title or interest in or to (a) the Project, the Wholesale Service Connection, the Meter or the Telemetry Equipment; or (b) any water rights, water claims, water permits or water certificates.

17. DISPUTE RESOLUTION

17.1 Any and all claims, controversies or disputes arising out of, relating to or in connection with this Agreement (each, a "Dispute") as between the Parties shall be resolved in accordance with the Dispute resolution procedures set forth in this Section 17.

17.2 The Parties shall inform one another promptly following the occurrence or discovery of any item or event that would reasonably be expected to result in a Dispute required to be resolved in accordance with this Dispute resolution procedure. The initial mechanism to resolve Disputes will involve negotiations between the Parties' representatives, so designated by the Parties by notice given pursuant to Section 23.

17.3 If the Parties cannot resolve a Dispute satisfactorily within ten (10) days after receipt of the initial notice in accordance with Section 17.2, either Party may deliver to the other Party notice of the Dispute with a detailed description of the underlying circumstances of such Dispute. The Dispute notice shall include a schedule of the availability of the notifying Party's senior officers duly authorized to settle the Dispute during the thirty (30) day period following the delivery of the Dispute notice. The recipient Party shall, within three (3) business days following receipt of the Dispute notice, provide to the notifying Party a parallel schedule of availability of the recipient Party's senior officers duly authorized to settle the Dispute. Following delivery of the respective senior officers' schedules of availability, the senior officers of the notifying Party and the recipient Party shall meet and confer, as often as they deem reasonably necessary during the remainder of the thirty (30) day period, in good-faith negotiations to resolve the Dispute to the satisfaction of both Parties.

17.4 If at any time during the good-faith efforts to resolve any Dispute arising under this Agreement either of the Parties determines that such informal discussions will not result in a resolution of the issue or issues in Dispute, such Party may initiate the Dispute resolution process in accordance with the provisions of Exhibit B.

17.5 Pending resolution of any Dispute, the Parties shall continue to fulfill their respective duties under this Agreement.

18. DEFAULT AND REMEDIES

18.1 If a Party fails to perform its obligations hereunder, then it shall be in default hereunder unless the defaulting Party cures:

(a) a monetary event of default within thirty (30) days after receiving written notice from the other Party of such monetary default; and

(b) a non-monetary event of default within sixty (60) days after receiving a notice of default from the non-defaulting Party; provided, however, that if the nature or extent of the obligation or obligations is such that more than sixty (60) days are required, in the exercise of commercially reasonable diligence, to cure such non-monetary default, then the defaulting Party shall not be in default if it commences such performance within such sixty (60) day period and thereafter pursues the same to completion with commercially reasonable diligence.

18.2 Except as otherwise provided by the Wholesale Water Regulations, and subject to the procedures set forth in Section 17, if a Party is in breach or default of its obligations arising under this Agreement, the other Party shall have and shall be entitled to exercise any and all remedies available to it at law or in equity (including the right to specifically enforce this Agreement), all of which remedies shall be cumulative. If either Party elects to pursue singularly any remedy available to it under this Section 18, then such Party may at any time thereafter continue to pursue or cease pursuing that remedy and simultaneously elect to pursue any other remedy available to it under this Section 18.

19. ADDITIONAL WATER

During the Term, City may request that Tacoma supply City with wholesale water on a temporary basis in addition to the Wholesale Water Supply ("Temporary Wholesale Water Supply"). The availability of the Temporary Wholesale Water Supply for sale by Tacoma to City at any time or from time to time during the Term shall be determined by Tacoma in its sole discretion. If Tacoma shall determine that some or all of the Temporary Wholesale Water Supply is available for sale to City, it may be sold, scheduled, priced and delivered to City on such terms and conditions as may then be acceptable to the Parties upon approval of the Parties' applicable governing bodies. Without limiting the generality of the foregoing, any such sales shall be subject to the Wholesale Water Regulations (as applicable), the System Development Charge, the availability of resources, and the disruption, interruption, suspension and curtailment of the Temporary Wholesale Water Supply by Tacoma at any time.

20. REPRESENTATIONS OF THE PARTIES

20.1 Each Party is duly authorized and validly existing under the laws of, is authorized to exercise its powers, rights and privileges under the laws of, and is in good standing in the State of Washington, and has full power and authority to carry on its business

as presently conducted, to execute this Agreement and to perform the transactions on its part contemplated by this Agreement.

20.2 The execution, delivery and performance of this Agreement, and the consummation of the transactions contemplated hereby, have been duly authorized by the appropriate board or council, and no other act or proceeding on the part of a Party is necessary to authorize this Agreement, or the transactions contemplated hereby.

20.3 The execution, delivery and performance by each of the Parties of this Agreement does not (a) contravene Applicable Law; or (b) conflict with or result in a breach of or default under any material agreement or instrument to which any Party is a party or by which it is bound.

20.4 There are no actions, suits, claims or proceedings pending or, to the best of each Party's knowledge, threatened against either Party that is likely to impair the consummation or the transactions contemplated hereby.

21. TERM

The term of this Agreement (the "Term") shall commence as of the Effective Date and shall remain in full force and effect until the date that Tacoma ceases making wholesale water sales in accordance with the Wholesale Water Regulations.

22. UNCONTROLLABLE FORCES

If performance of this Agreement or of any obligation hereunder (other than the insufficiency of funds, the financial inability to perform or changes in a Party's cost of performing its obligations) is prevented or substantially restricted or interfered with by reason of an Uncontrollable Force, the affected Party, upon giving notice to the other Party, shall be excused from such performance to the extent of and for the duration of such prevention, restriction or interference. The affected Party shall use its reasonable efforts to avoid or remove such causes of nonperformance and shall continue performance hereunder whenever such causes are removed.

23. NOTICES

23.1 All notices or other communications required or permitted by this Agreement must be in writing and be personally delivered, delivered by recognized overnight courier service or given by mail or via facsimile. Any notice given by mail must be sent, postage prepaid, by certified or registered mail, return receipt requested. All notices must be addressed to the Parties at the following addresses or at such other addresses as the Parties may from time to time direct in writing:

Tacoma:	Water Superintendent P.O. Box 11007 Tacoma, WA 98411 Phone: (253) 502-8245 Fax: (253) 502-8694
City:	Assistant Director of Engineering/City Engineer 25 West Main Street Auburn, WA 98001 Phone: (253) 931-3010 Fax: (253) 931-3053

23.2 Any notice will be deemed to have been given (a) if personally delivered, when delivered, (b) if delivered by courier service, one (1) business day after deposit with the courier service, (c) if mailed, two (2) business days after deposit at any post office in the United States, and (d) if delivered via facsimile, the same day as verified; provided that any verification that occurs after 5:00 p.m. on a business day, or at any time on a Saturday, Sunday or holiday, will be deemed to have occurred as of 9:00 a.m. on the following business day.

24. MISCELLANEOUS

24.1 The rights and obligations of the Parties arising under this Agreement may not be sold, assigned or otherwise transferred in whole or in part by a Party without the prior written consent of the other Party, which consent shall not be unreasonably withheld or delayed. Subject to the foregoing, this Agreement shall be binding upon the Parties' respective successors and permitted assigns.

24.2 The Parties agree that in taking actions or making determinations required or provided for under this Agreement, each Party shall act in fairness and in good faith. The Parties will cooperate and use commercially reasonable efforts to facilitate the implementation of all aspects of this Agreement. During the Term, each Party, upon the request of the other Party, shall, without further consideration, execute, deliver and acknowledge all such further documents and do and perform all such other acts and things as either Party may reasonably request to effectively carry out the intent of this Agreement.

24.3 A Party shall not have the right to offset any amounts owed to the other Party pursuant to this Agreement against any amounts due from the other Party pursuant to this Agreement, nor may a Party offset any amounts due to the other Party pursuant to this Agreement against any amounts owed by the other Party pursuant to this Agreement. A Party may not withhold any payment due the other Party by reason of a Dispute; such payment shall be paid "under protest" and any and all Disputes with respect to such payment shall be resolved pursuant to Section 17.

24.4 Any of the terms or conditions of this Agreement may be waived at any time and from time to time, in a signed writing, by the Party or Parties entitled to the benefit of

such terms or conditions. Any waiver given by a Party shall be narrowly construed to specifically waive, in time and subject, only the express matter contained in such waiver. The failure of either Party to insist on or enforce strict performance of any provision of this Agreement or to exercise any right or remedy under this Agreement or Applicable Law will not be construed as a waiver or relinquishment to any extent of the right to assert or rely upon any such provision, right or remedy in that or any other instance; rather, the same will be and remain in full force and effect. Tacoma's review, revision or approval of or comment upon any matter arising under this Agreement, or Tacoma's failure to review, revise, approve or comment upon any matter arising under this Agreement, shall not in any way (a) relieve or release City from any of its obligations arising under this Agreement, or (b) subject Tacoma to any liability with respect to such matter.

24.5 This Agreement shall be governed by and construed in accordance with the laws of the State of Washington (regardless of the laws that might otherwise govern under applicable principles of conflict of laws of such state). Except with respect to a lawsuit or judicial action or proceeding commenced by a third party in another jurisdiction and subject to Exhibit B, the Parties will (a) agree that any lawsuit, judicial action or proceeding arising out of or relating to this Agreement must be heard in the Superior Court of the State of Washington, in and for the County of Pierce, or the United States District Court for the Western District of Washington in Tacoma; (b) waive any objection to the laying of venue of any such suit, action or proceeding; and (c) irrevocably submit to the jurisdiction of any such court in any such lawsuit, judicial action or proceeding.

24.6 Terms defined in a given number, tense or form shall have the corresponding meaning when used in this Agreement with initial capitals in another number, tense or form. References containing terms such as "hereof," "herein," "hereto," "hereinafter" and other terms of like import are not limited in applicability to the specific provision within which such references are set forth but instead refer to this Agreement taken as a whole. "Includes" or "including" shall not be deemed limited by the specific enumeration of items, but shall be deemed without limitation. The term "or" is not exclusive. The headings contained in this Agreement are included solely for the convenience of the Parties. Accounting terms used but not defined herein have the meanings given to them under generally accepted accounting principles in the United States consistently applied throughout the specified period and in the immediately prior comparable period. The term "day" means a calendar day unless otherwise specified as a "business day"; a business day means a day, other than a Saturday or Sunday or public holiday, on which banks are generally open for business in Pierce County, Washington.

24.7 Any provisions of this Agreement prohibited or rendered unenforceable by Applicable Law shall be ineffective only to the extent of such prohibition or unenforceability without invalidating the remaining provisions of this Agreement. In such event, the remainder of this Agreement will remain valid and enforceable. Upon such determination that any term or other provision is prohibited or rendered unenforceable, the Parties shall negotiate in good faith to modify this Agreement so as to effect the original intent of the Parties as closely as possible in an acceptable manner to the end that transactions contemplated under this Agreement are fulfilled to the greatest extent possible.

24.8 This Agreement may be amended only by an instrument in writing executed by the Parties that expressly refers to this Agreement and states that it is an amendment hereto. This Agreement constitutes the entire agreement between the Parties and supersedes all other prior agreements and understandings, oral and written, between the Parties with respect to the subject matter hereof. No amendment, modification or waiver of any provision of this Agreement will be valid unless set forth in a written instrument signed by both Parties. If a Party becomes aware of a conflict between this Agreement and any other agreement in place between such Party and any Person, it will promptly notify such other Party, and the Parties will work in good faith to resolve the conflict.

24.9 Nothing contained in this Agreement shall be deemed or construed by the Parties, or by any third party, as creating the relationship of principal and agent, or of partnership or of joint venture, between the Parties. Neither Party shall enter into any contract, agreement or other commitment, or incur any obligation or liability, in the name of or otherwise on behalf of the other Party. This Agreement shall create no rights, responsibilities and/or obligations in, to or from any Persons other than Tacoma and City.

24.10 Sections 13,14,16,17,18, 20, 24.5 and all other terms and conditions of this Agreement that must be reasonably construed to survive the expiration or termination of this Agreement in order to give full force and effect to the intent of the Parties as set forth herein shall survive the expiration or termination of this Agreement, regardless of whether such survival is expressly specified herein.

24.11 This Agreement may be executed in several counterparts, each of which shall be deemed to be an original and all of which together shall constitute one and the same instrument.

24.12 This Agreement has been negotiated on an arm's-length basis by the Parties and their respective counsel and shall be interpreted fairly in accordance with its terms and without any strict construction in favor of or against either Party.

IN WITNESS WHEREOF, the Parties have duly executed this Agreement as of the Effective Date.

Dated this 10th day of November, 2014.

City of Tacoma

Department of Public Utilities
Water Division

Linda A. McCrea
Water Superintendent

City of Auburn

Nancy Backus
Mayor

Approved as to form:

Chief Deputy City Attorney

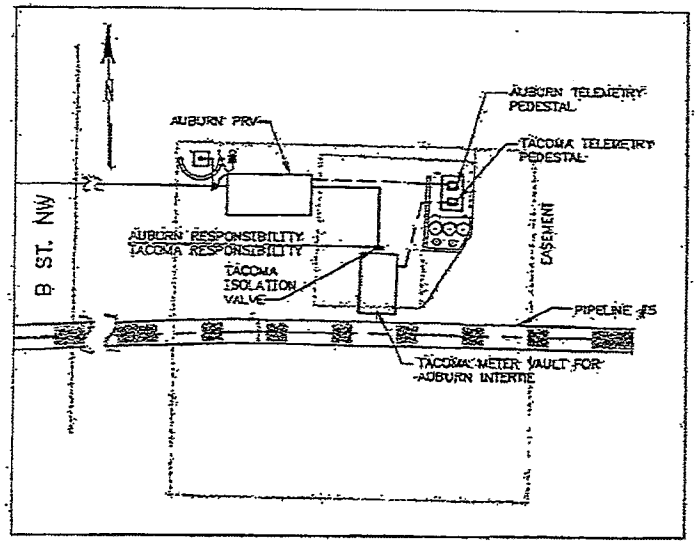
Approved as to form:

EXHIBIT "A"

WHOLESALE SERVICE CONNECTIONS SPECIFICATIONS

Intertie Location	Connection	Meter	Static Elevation (ft)		Operating Pressure (psi)		Flow Capacity (gpm)	Flow Capacity (mgd)
	Size	Size	Tacoma	Auburn	Tacoma	Auburn	To/From Utility	To/From Utility
Tacoma Water Pipeline 5 at 3200 "B" St. NW Auburn, WA (STA 765+05)	12"	6"	894 (NGVD29)	253 (NAVD 88)	309	80	2,200	3.2
Tacoma Water Pipeline 5 at 29600 132nd Ave SE, Kent, WA (STA 933+00)	12"	8"	894 (NGVD29)	579 (NAVD 88)	173	80	4,500 (PRV 2,200)	6.5 (PRV 3.2)

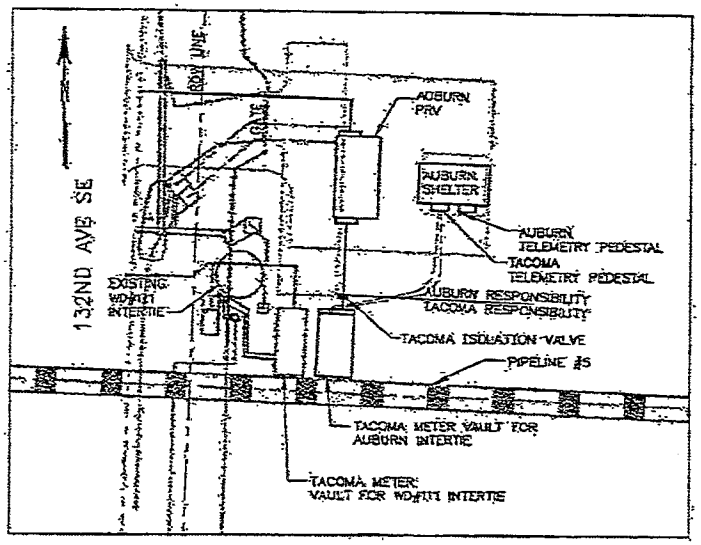
Note: For connection specific elevations remember the NGVD29 (Tacoma) Datum is 3.47 feet higher than the NAVD88 (Auburn) Datum.



STA 765+05

3200 B ST NW, AUBURN, WA

SCALE: N.T.S.



STA 933+00

29600 132nd AVE. SE, KENT, WA

SCALE: N.T.S.

Resolution No 5102

Exhibit B

Dispute Resolution Procedures

The following procedures shall govern the resolution of any dispute arising under the Wholesale Water Supply Agreement dated _____ (the "Agreement") between the Parties that cannot be resolved by good-faith negotiations between the Parties, unless the Parties mutually agree to use different procedures to resolve a specific dispute by executing a document setting forth such different procedures. The Parties agree that these dispute resolution procedures are intended to be used in conjunction with and governed by Chapter 4.48 RCW, and both Parties hereby waive their right to a trial by jury for any dispute arising under the Agreement.

1. The Party that believes that continued good-faith negotiations will not produce a resolution of the issue or issues that are the subject of such negotiations will notify the other Party in writing that it is invoking the dispute resolution procedures of this Exhibit B.

2. Within twenty (20) days of the date of such notice invoking the dispute resolution procedures of this Exhibit B, the Parties shall meet and select an individual to recommend to the court as referee of the dispute resolution process in accordance with RCW 4.48.020. The Parties shall select an individual who is qualified as a juror as provided by statute, is competent as a juror between the Parties, is a duly admitted and practicing attorney, and has experience presiding over civil litigation of contract disputes. The Parties will use the following procedure to select the recommended referee:

   2.1 Each Party will make a list of three individuals that are qualified pursuant to Paragraph 2 to serve as referee and exchange such list with the other Party. If the Parties agree upon a person from either list, or if both Parties list the same person, that person will be the recommended referee.

   2.2 If the Parties are unable to agree upon a referee after exchanging their respective lists, they will make a joint list setting forth all six candidates from the two lists.

3. Upon the selection of the recommended referee, or the creation of the joint list pursuant to Subparagraph 2.2 of this Exhibit B, the Party that invoked the dispute resolution procedures shall file a complaint, in the superior court of the appropriate county as set forth in Section 24.5 of the Agreement, setting forth the issue or issues in dispute, and the other Party shall file an answer to such complaint. Not later than twenty (20) days after the filing of the answer, the Parties shall jointly file a motion, with the Agreement (including this Exhibit B) attached, with the court requesting an order of reference that:

3.1 Directs that the issue or issues raised by the complaint and answer be resolved pursuant to Chapter 4.48 RCW by reference to a referee;

3.2 Appoints, pursuant to RCW 4.48.020, either the recommended referee selected by the Parties pursuant to Subparagraph 2.1 of this Exhibit B, or a single referee from the joint list prepared pursuant to Subparagraph 2.2 of this Exhibit B; and

3.3 Directs the referee to conduct the proceeding in accordance with the procedures set out in Paragraphs 4-10 of this Exhibit B.

4. In accordance with RCW 4.48.060, the Parties hereby waive their rights to discovery and cross-examination, and direct that the proceeding be conducted in the same manner as a motion for summary judgment as follows:

4.1 The Parties shall present their respective positions by written briefs and affidavits, and without testimonial evidence or cross-examination;

4.2 Oral argument will be conducted before the referee; and

4.3 The burdens of proof and persuasion that pertain in a civil trial shall apply, rather than those that apply to motions for summary judgment.

5. After appointment of the referee, the Parties shall endeavor in good faith to prepare for the referee a joint statement of facts and the questions to be decided in the proceeding. In the absence of an agreed-to joint statement of facts and questions to be decided, each Party may include its own statement of facts and questions to be decided in its initial brief.

6. Within ninety (90) days after the submission of the joint statement of facts and questions to be decided, or within ninety (90) days after the appointment of the referee if the Parties cannot agree to a joint submission of facts and questions to be decided, each Party shall submit to the referee a one-page statement of the proposed resolution and/or award it seeks for each issue in dispute, and its initial brief. The statement and initial brief (excluding any attached affidavits or evidentiary documents) shall not exceed fifty (50) 8½" x 11" double-spaced pages with 1½-inch margins and 12-point typeface. The statement and initial brief shall be filed simultaneously by e-mail and regular mail with the referee and opposing Party.

7. Within thirty (30) days after the date the Parties filed their initial briefs, the Parties shall file their respective reply briefs with the referee and the opposing Party. The reply briefs (excluding any attached affidavits or evidentiary documents) shall not exceed twenty-five (25) 8½" x 11" double-spaced pages with 1½-inch margins and 12-point typeface. The reply briefs shall be filed simultaneously by e-mail and regular mail with the referee and opposing Party.

8. After the reply briefs have been filed, if the referee deems that additional responses are needed, then the referee may request that the Parties file a supplemental brief only as to those specific matters or questions raised by the referee. Such supplemental briefs shall be limited to fifteen (15) 8½" x 11" double-spaced pages with 1½-inch margins and 12-point typeface, and shall be filed at such time requested by the referee. Any such supplemental briefs shall be filed simultaneously by e-mail and regular mail upon the referee and opposing Party.

9. When all briefs have been filed, the referee will schedule oral argument on the issue or issues in dispute.

10. After the completion of oral argument, the referee will prepare his or her proposed report in accordance with RCW 4.48.70 and shall provide a copy of the proposed report to the Parties, who shall have the right to suggest changes and modifications to the proposed report, all in accordance with RCW 4.48.110. The referee will file the final report with the court within twenty (20) days of the completion of the process under RCW 4.48.110.

11. Either Party may move the court to modify or set aside, in whole or in part, the final report of the referee. If the court modifies or sets aside, in whole or in part, the final report of the referee and makes another reference, then this Exhibit B shall also apply to such reference.

12. Each Party shall be responsible for its own costs of the dispute resolution process (including any judicial proceedings), and the Parties shall each pay one-half of the other costs of the dispute resolution proceeding, including the fees of the referee. The fees of the referee shall be established in accordance with RCW 4.48.100.

RESOLUTION NO. 5153

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR TO EXECUTE THE INTERLOCAL AGREEMENT BETWEEN THE CITY OF AUBURN AND THE MUCKLESHOOT INDIAN TRIBE FOR THE ALLOTMENT M-TWO SUBDIVISION AND CASINO PREMISES UTILITY ISOLATION

WHEREAS, the City of Auburn and the Muckleshoot Indian tribe (MIT) have worked together to provide utility services for those portions of the Muckleshoot Reservation property located within the City, having heretofore entered into master development agreements and utility easement agreements; and

WHEREAS, MIT desires to develop a certain portion of its property for a residential subdivision and wishes to utilize a portion of City property for access and storm drainage utilities for the MIT Allotment M2 Subdivision; and

WHEREAS, the City of Auburn desires to complete premise isolation improvements at the MIT Casino Property for the protection of the City's potable water system; and

WHEREAS, the City of Auburn and MIT have negotiated terms and conditions of an interlocal agreement with respect to the exchange of property rights and the completion of improvements by both parties to the benefit of both the City and MIT, which terms and conditions are acceptable to both parties.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, HEREBY RESOLVES as follows:

Section 1. That the Mayor is hereby authorized to execute an Interlocal Agreement between the City and the Muckleshoot Indian Tribe for the Allotment M-2

Subdivision and Casino Premises Utility Isolation which agreement shall be in substantial conformity with the agreement attached hereto as Exhibit 1 and incorporated herein by this reference.

Section 2. That the Mayor is authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

Section 3. That this Resolution shall take effect and be in full force upon passage and signatures hereon.

Dated and Signed this 6th day of July, 2015.

CITY OF AUBURN

Nancy Backus
NANCY BACKUS, MAYOR

ATTEST:

Danielle E. Daskam, City Clerk

APPROVED AS TO FORM:

Daniel B. Heid, City Attorney

CITY OF AUBURN – MUCKLESHOOT INDIAN TRIBE
INTERLOCAL AGREEMENT FOR THE ALLOTMENT M-2 SUBDIVISION AND CASINO PREMISES UTILITY ISOLATION

THIS INTERLOCAL AGREEMENT made and entered into, pursuant to the Interlocal Cooperation Act, Chapter 39.34 of the Revised Code of Washington, The Constitution of the Muckleshoot Tribe of Indians, and 25 U.S.C. § 81, on the 17th day of July, 2015, by and between the CITY OF AUBURN, a municipal corporation of the State of Washington (the "City"), and the Muckleshoot Indian Tribe, a sovereign jurisdiction located within the State of Washington ("MIT"), (together, the "Parties")

RECITALS:

1. MIT intends to develop a portion of parcel of property which is identified as King County Tax Parcel Number 2021059001, such Real Property as legally described on Exhibit A, located on the northeast corner of R Street SE and Old Howard Road (the "Parcel") within the boundaries of the MIT reservation boundary and known as the Parcel B Allotment M-2; and specifically, the MIT is developing the southwest corner of the Parcel B Allotment M-2 with a residential plat (known as "Allotment M-2 Subdivision"); and

2. The parties agree that the City shall transfer ownership of a triangular portion of an adjacent parcel of City-owned land which is identified as King County Tax Parcel No. 2021059019 ("Parcel 2021059019)" Real Property as legally described on Exhibit B and the triangular portion (approximately 5,165 square feet) which is necessary for access to be transferred as depicted on Exhibit "C", to MIT in exchange for MIT constructing for the City a storm drainage infiltration facility and storm line; and

3. The City requires premise isolation on large commercial water systems such as the MIT Casino Facility ("Casino"), which requires constructing two master meters and premise isolation (backflow prevention) systems on Casino Property; and

4. The Parties previously entered into a Water or Sanitary Sewer Service Line Agreement ("Service Line Agreement") dated May 14, 2004 (Recording No. 20040603002585), attached as Exhibit "D", for the Casino Property (which is legally described on Exhibit A of the Service Line Agreement), which provided the City with the right to access, inspect, construct, operate, maintain, repair, replace and enlarge water or sanitary sewer lines within Casino Property; and

5. The Parties agree that it is in their mutual interest to grant each other the necessary rights and responsibilities to do all other things agreed to be necessary to implement this Agreement.

NOW THEREFORE in consideration of their mutual covenants, conditions and promises, **THE PARTIES HERETO DO HEREBY AGREE** as follows:

The Parties shall consult with each other on a government-to-government basis in order to achieve their mutual goals and implement this Agreement.

A. CITY'S RESPONSIBILITIES

1. Short-plat the northwest portion of the adjacent City-owned parcel (Parcel No. 2021059019), the approximate location and extent of the triangular portion to be short-platted is depicted on Exhibit "C". The City shall record the short plat, then transfer ownership of the newly-created triangular parcel to MIT in exchange for MIT's construction of the storm drainage facilities described in Paragraphs A.4 and B.5 hereinafter.

2. Construct, at no cost to MIT, two (2) premise isolation facilities including master meters, backflow assemblies, piping, and disconnection of existing piping to adjacent parcels north and east of the Casino Property, as the City determines, is necessary to supply the Casino with domestic water and fire flows. The City will provide final design documents of the two (2) premise isolation facilities and a demo plan for disconnection of existing piping to MIT prior to construction. City understands that the revenues for MIT are contingent upon the access and service quality at the Casino. For that reason, City will agree to require their contractors to complete construction activities between the months of June and August, and between the hours of 5 a.m. and 2 p.m. for the work to occur within the Casino Property to provide the least disruptive customer access and water service interruption.. Contractors will be required to use equipment and implement a demo plan that does not interfere with ingress and egress of delivery trucks in the driveway located at the rear of the Casino. Upon completion of construction, the City shall convey all City-owned water system infrastructure behind the master meter vault (i.e., on the Casino side of the vault) to MIT. This shall include the new backflow prevention equipment, piping, hydrants, and other appurtenances. At the same time, the City shall convey all City-owned sewer system infrastructure that is located within the Casino property to MIT.

3. The City represents and warrants that the new premise isolation facilities once installed by or on behalf of the City shall not unreasonably adversely impact the Casino.

4. The City shall allow MIT access to construct a storm water infiltration facility, a storm drain line, and relocate the existing chain-link fence on City property (Parcel 2021059019) just south of the southern MIT property line separating the MIT (Parcel 2021059001) and City properties through a temporary construction and access easement. The system shall intercept storm water drainage located near the northeast corner of the City's property, be linked to a MIT storm infiltration system by means of a raised berm and connection pipe(s), and shall divert

overflow stormwater through a new pipe to an existing City storm line in Howard Road SE. City shall apply for, obtain and pay for any permits required to construct the storm drain system on City property if such permits are required beyond the development permit MIT is obtaining from the City for its Allotment M-2 Subdivision. City shall be entitled to inspect the work within City properties to insure it meets the City's requirements. MIT access to the City's properties shall be restricted to normal working hours on normal business days.

B. MIT RESPONSIBILITIES

1. Grant permits to the City of Auburn and right of entry agreements as necessary to allow the City to construct, operate and maintain two (2) Master Water Meter Assemblies (Master Meter Assemblies) and their associated piping from the Right-of-Way to the Master Meter Assemblies for the Casino on the Casino Property. MIT shall honor the Water or Sanitary Sewer Service Line Agreement, Reference Recording No. 20040603002585 and attached hereto as Exhibit "D", which provides access to the Master Meter Assemblies wherever located or relocated on the Casino Property for as long as the City provides water service to the Casino Property. The approximate location and extent of the Master Meter Assemblies is shown in Exhibit "E". Should MIT determine the need to relocate any part of the Master Meter Assemblies, MIT shall provide the City no less than 90 days' notice and the Parties shall meet to discuss and agree to the optimal new location. Should MIT's construction plan for the Casino Property include building or installing an obstruction or impediment including but not limited to fences, rockeries, or trees within ten (10) feet of the Master Meter Assemblies, the parties shall meet to determine whether relocation of the assemblies is necessary to maintain access to the meters. Any such reasonable relocation costs of the Master Meter Assemblies shall be paid by MIT.

2. MIT shall own and maintain the Casino Property water system infrastructure behind (downstream of) the City Master Meter Assemblies as described herein including required annual testing and reporting to the City for the two backflow assemblies required for premise isolation.

3. MIT shall own and maintain the Casino Property sewer system infrastructure located within the Casino Property.

4. Execute necessary utility access easement documents for the City-owned utilities serving the Allotment M-2 Subdivision by the MIT. The City shall record the approved easements.

5. MIT shall design and construct at its own expense a storm water infiltration facility, drainage line, and relocation of the existing chain-link fence on City property (Parcel 2021059019) just to the south of the southern MIT property line separating MIT (Parcel 2021059001) and City properties. The system shall intercept storm water drainage located near

the northeast corner of the City's property, be linked to a MIT storm infiltration system by means of a raised berm and connection pipe(s) and shall divert overflow stormwater through a new pipe to an existing City storm line in Howard Road SE. MIT shall access the site and secure it when they or their agents leave the site. MIT shall complete the work and upon completion of all work leave the site in a condition acceptable to the City.

6. Provide the City with an electronic AutoCAD file of the proposed subdivision and access road that references city survey monuments to facilitate plotting the proposed easement and associated setbacks on the existing city water property.

7. MIT shall complete the necessary legal descriptions and drawings in paper, mylar and electronic formats for the City's use in creating the short plat on Tax Parcel 2021059019.

C. INSURANCE

1. Throughout the period of performance of this Agreement for all construction related activities, the Parties or their respective Contractors shall carry and maintain commercial general liability insurance with limits of not less than one million dollars ($1,000,000.00) per occurrence for bodily injury, including death, and one million dollars ($1,000,000.00) per occurrence for property damage or, alternatively, one million dollars ($1,000,000.00) per occurrence combined single limit for bodily injury and property damage combined, and two million dollars ($2,000,000.00) general aggregate.

2. This insurance shall be in a form and with an insurer acceptable to the City's insurance carrier and shall contain coverage for all premises and operation, broad form property damage, contractual liability (including without limitation that specifically mentioned in the Agreement, and products and contemplated operations insurance. In addition, the insurance for construction work performed by the City or its Contractor shall be in the form acceptable to MIT and consistent with the City's requirements.

3. This insurance shall provide coverage for explosion, collapse, underground excavation, and lateral support.

4. Any policy or policies that provide the insurance required in this Agreement shall name the other Party as an additional insured on a separate endorsement, to the extent of the contractual obligations set forth here. If the Contractor, as the Agent of MIT, provides the required insurance, then such insurance shall name both the MIT and the City as additional insured.

5. Before the beginning of any construction work required under this Agreement, each Party shall provide the other Party for review and approval, a certificate of insurance reflecting

full compliance with the requirements set forth in this Agreement. The certificate shall be kept current and in compliance throughout the construction work until final acceptance by the other Party and for two years thereafter for products and contemplated operations liability, and shall provide for 30 days advance written notice to the City if cancellation or material change adversely affect the interests of the other Party.

6. Throughout the period of performance of the Agreement, MIT shall cover or maintain insurance in compliance with the applicable worker's compensation laws, with respect to all of its respective employees working on or about the facility site, regardless of whether such coverage or insurance is mandatory or merely elective under the law.

7. For the purposes hereof, the period of performance of this Agreement includes and refers to the time during which any party hereto is obligated to perform tasks required herein.

D. INDEMNIFICATION

1. MIT shall indemnify and hold the City and its agents, employees, and/or officers, harmless from and shall process and defend at its own expense any and all claims, demands, suits, at law or equity, actions, penalties, losses, damages, or costs, of whatsoever kind or nature, brought against the City arising out of, in connection with, or incident to the execution of this Agreement and/or the MIT's performance or failure to perform any aspect of this Agreement; provided, however, that if such claims are caused by or result from the concurrent negligence of the City, its agents, employees, and/or officers, this indemnity provision shall be valid and enforceable only to the extent of the negligence of the MIT; and provided further, that nothing herein shall require the MIT to hold harmless or defend the City, its agents, employees and/or officers from any claims arising from the sole negligence of the City, its agents, employees, and/or officers. No liability shall attach to the City by reason of entering into this Agreement except as expressly provided herein.

2. The City shall indemnify and hold MIT and its agents, employees, and/or officers, harmless from and shall process and defend at its own expense any and all claims, demands, suits, at law or equity, actions, penalties, losses, damages, or costs, of whatsoever kind or nature, brought against MIT arising out of, in connection with, or incident to the execution of this Agreement and/or the City's performance or failure to perform any aspect of this Agreement; provided, however, that if such claims are caused by or result from the concurrent negligence of MIT, its agents, employees, and/or officers, this indemnity provision shall be valid and enforceable only to the extent of the negligence of the City; and provided further, that nothing herein shall require the City to hold harmless or defend MIT, its agents, employees and/or officers from any claims arising from the sole negligence of MIT, its agents, employees, and/or officers. No liability shall attach to MIT by reason of entering into this Agreement except as expressly provided herein.

E. WAIVER OF SUBROGATION

1. MIT and the City hereby mutually release each other from liability and waive all right of recovery against each other for any loss caused by fire or other perils which can be insured against under fire insurance contracts including any extended coverage endorsements thereto which are customarily available from time to time in the State of Washington, provided, that this paragraph shall be inapplicable to the extent that it would have the effect of invalidating any insurance coverage of MIT or the City.

F. WAIVER OF SOVEREIGN IMMUNITY

1. MIT agrees to a limited waiver of sovereign immunity. MIT does hereby expressly waive its right to sovereign immunity and its right to assert sovereign immunity defense in the courts of the State of Washington for the limited purpose of any legal claim or complaint for the interpretation and/or enforcement of this Agreement, and/or for any complaints or counterclaims for monetary damages or equitable relief for any breach of this Agreement, and/or for the enforcement of any final judgment by any court of the State of Washington regarding such matters. This limited waiver of immunity is solely for the benefit of the City of Auburn for the purposes stated herein, and the Tribe does not waive its sovereign immunity as to any party other than the City. The Tribe agrees not to invoke sovereign immunity as a defense up to the limits of the insurance policy in connection with the enforcement of the rights of the City.

2. MIT consents to the jurisdiction of the Washington State Superior Court in the event that either Party deems it necessary to institute legal action or proceedings to enforce any right or obligation under this Agreement; the Parties further agree that any such action or proceedings shall be brought in the superior court situated in King County, Washington.

G. COMPLIANCE WITH REGULATIONS AND LAWS

1. The parties shall comply with all applicable rules and regulations pertaining to them in connection with the matters covered herein.

H. ASSIGNMENT

1. The parties shall not assign this Agreement or any interest, obligation or duty therein without the express written consent of the other party.

I. ATTORNEYS' FEES

1. If either party shall be required to bring any action to enforce any provision of this Agreement, or shall be required to defend any action brought by the other party with respect to this Agreement, and in the further event that one party shall substantially prevail in such action, the losing party shall, in addition to all other payments required therein, pay all of the prevailing party's reasonable costs in connection with such action, including such sums as the court or courts may adjudge reasonable as attorney's fees in the trial court and in any appellate courts.

J. NOTICES

1. All notices and payments hereunder may be delivered or mailed. If mailed, they shall be sent to the following respective addresses:

To MIT (Notice):
Muckleshoot Indian Tribe
39015 172nd Avenue SE
Auburn, WA 98092
Attn: Office of the Tribal Attoney
Phone: 253-939-3311

To MIT (Payment):
Muckleshoot Indian Tribe
39015 172nd Avenue SE
Auburn, WA 98092
Attn: Finance Department Mgr.
Phone: 253-939-3311

To the City:
City of Auburn
25 West Main
Auburn, WA 98001-4998
Attn: Ingrid Gaub, City Engineer
Phone:(253) 931-3010
FAX (253) 931-3053

or to such other respective addresses as either party hereto may hereafter from time to time designate in writing. All notices and payments mailed by regular post (including first class) shall be deemed to have been given on the second business day following the date of mailing, if properly mailed and addressed. Notices and payments sent by certified or registered mail shall be deemed to have been given on the day next following the date of mailing, if properly mailed and addressed.

For all types of mail, the postmark affixed by the United States Postal Service shall be conclusive evidence of the date of mailing.

K. MISCELLANEOUS

1. All of the covenants, conditions and agreements in this Agreement shall extend to and bind the legal successors and assigns of the parties hereto.

2. The captions in this Agreement are for convenience only and do not in any way limit or amplify the provisions of this Agreement.

3. The duration of this Agreement shall be perpetual.

4. No separate legal entity is created by this Agreement.

5. The funding of the respective obligations of the parties shall be out of the respective general funds/current expenses of the parties, except as otherwise specifically provided.

6. The performances of the duties of the parties provided hereby shall be done in accordance with standard operating procedures and customary practices of the parties.

7. The oversight and administration of the Agreement shall be by the respective named representatives identified in Paragraph J hereof, or their designees.

8. If any term or provision of this Agreement or the application thereof to any person or circumstance shall, to any extent, be held to be invalid or unenforceable by a final decision of any court having jurisdiction on the matter, the remainder of this Agreement or the application of such term or provision to persons or circumstances other than those as to which it is held invalid or unenforceable shall not be affected thereby and shall continue in full force and effect, unless such court determines that such invalidity or unenforceability materially interferes with or defeats the purposes hereof, at which time the City shall have the right to terminate the Agreement.

9. This Agreement constitutes the entire agreement between the parties. There are no terms, obligations, covenants or conditions other than those contained herein. No modifications or amendments of this Agreement shall be valid or effective unless evidenced by an agreement in writing signed by both parties.

10. Copies of this Agreement shall be filed with the King County Recorder's Office; the Secretary of State of the State of Washington; and the respective Clerks of the parties hereto.

IN WITNESS WHEREOF the parties hereto have executed this Agreement as of the day and year first above written.

MUCKLESHOOT INDIAN TRIBE

By: _____

Its: Tribal Council Chairperson

CITY OF AUBURN

Nancy Backus

Nancy Backus, Mayor

Attest: _____

City Clerk

Approved as to form:

_____, Asst. City Atty.

Auburn City Attorney

STATE OF WASHINGTON)
) ss.
COUNTY OF King)

ON THIS 17th day of July, 2015, before me, personally appeared Virginia Cross, to me known to be the Chairperson of the Muckleshoot Indian Tribe, the Tribe that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said Tribal Community for the uses and purposes therein mentioned, and on oath stated that he/she was authorized to execute said instrument.

WITNESS my hand and official seal hereto the day and year in this certificate first above written.

DERYL JUNE BROWN-ARCHER NOTARY PUBLIC COMMISSION EXPIRES 1-19-18 STATE OF WASHINGTON

Deryl June Brown-Archer
NOTARY PUBLIC in and for the State of Washington, residing at Federal Way, WA
My Commission Expires: 1/19/18

STATE OF WASHINGTON)
) ss.
COUNTY OF _____)

ON THIS 22nd day of July, 2015 before me, personally appeared Nancy Backus and Danielle Daskam to me known to be the Mayor and City Clerk of the CITY OF AUBURN, a municipal corporation, the corporation that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that they were authorized to execute said instrument.

WITNESS my hand and official seal hereto the day and year in this certificate first above written.

SHAWN K. CAMPBELL NOTARY PUBLIC COMMISSION EXPIRES 4-08-16 STATE OF WASHINGTON

Shawn Campbell
NOTARY PUBLIC in and for the State of Washington, residing at Auburn, WA
My Commission Expires: 4/09/2016

EXHIBIT A
LEGAL DESCRIPTION OF MIT REAL PROPERTY

TAX PARCEL 2021059001 (Allotment M-2)

United States Department of the Interior
Bureau of Indian Affairs
Title Status Report

Report Certification Time and Date: 08/04/2014 11:51:13 AM
Requestor: MHENSEL Date/Time: 08/04/2014 15:38:46

Land Legal Description

Land Area	Land Area Name	Tract Number	LTRO	Region	Agency	Resources
109	MUCKLESHOOT	2	PORTLAND, OR	NORTHWEST REGIONAL OFFICE	PUGET SOUND AGENCY	Both

Section	Township	Range	State	County	Meridian	Legal Description	Acres
20	021.00N	005.00E	WASHINGTON	KING	Willamette		76.840

METES AND BOUNDS: GOVERNMENT LOT 1 AND GOVERNMENT LOT 2 AND THE NE¼ SW¼ OF SECTION 20, T.21N., R.5E., WILLAMETTE MERIDIAN, KING COUNTY, WASHINGTON, EXCEPT THE WEST 30.00 FEET OF SAID GOVERNMENT LOTS 1 AND 2, CONTAINING, AFTER SAID EXCEPTION, 76.84 ACRES, MORE OR LESS.

TOTAL TRACT ACRES: 76.840

Title Status

Tract 109 2 is held by the United States of America in trust for the land owner(s) with trust interests and/or by the land owner(s) with restricted interests and/or fee simple interests, as listed in Appendix "A" attached to and incorporated in this Title Status Report.

The title to Tract 109 2 is current, complete, correct, and without defect. Ownership is in unity and interests are owned in the following title status: trust, fee, restricted.

The tract ownership is encumbered by the title documents as listed on Appendix "B" attached to and incorporated in this Title Status Report.

The following notes apply to this land title:

Fee (Other) THIS REPORT DOES NOT CERTIFY THE OWNERSHIP OF FEE SIMPLE OWNER INTERESTS AND MAKES NO CLAIM OR REPRESENTATION CONCERNING CURRENT OWNERSHIP OF SAID INTERESTS.

This report does not cover encroachments nor any other rights that might be disclosed by a physical inspection of the premises, nor questions of location or boundary that an accurate survey may disclose. This Report also does not cover encumbrances, including but not limited to irrigation charges, unpaid claims, not filed or recorded in this Land Titles and Records Office. This report does not state the current ownership of the interests owned in fee simple but states the ownership at the time the interest ceased to be held in trust or restricted ownership status.

This Title Status Report is a true and correct report of the status of title to the real estate described herein according to the official land records recorded and maintained in this office.

/s/ Michele Hensel
Manager

United States Department of the Interior
Bureau of Indian Affairs
Title Status Report

Report Certification Time and Date: 01/21/2015 09:19:58 AM
Requestor: MHENSEL Date/Time: 02/18/2015 10:30:43

Land Legal Description

Land Area	Land Area Name	Tract Number	LTRO	Region	Agency	Resources
109	MUCKLESHOOT	2 -A	PORTLAND, OR	NORTHWEST REGIONAL OFFICE	PUGET SOUND AGENCY	Both

Section	Township	Range	State	County	Meridian	Legal Description	Acres
20	021.00N	005.00E	WASHINGTON	KING	Willamette		.910

METES AND BOUNDS: THE WEST 30.00 FEET OF GOVERNMENT LOT 1 AND GOVERNMENT LOT 2 OF SECTION 20, T. 21 N., R. 5 E., WILLAMETTE MERIDIAN, KING COUNTY, WASHINGTON, CONTAINING 0.91 ACRES, MORE OR LESS.

TOTAL TRACT ACRES: .910

Title Status

Tract 109 2 -A is held by the United States of America in trust for the land owner(s) with trust interests and/or by the land owner(s) with restricted interests and/or fee simple interests, as listed in Appendix "A" attached to and incorporated in this Title Status Report.

The title to Tract 109 2 -A is current, complete, correct, and without defect. Ownership is in unity and interests are owned in the following title status: trust, restricted.

The tract ownership is encumbered by the title documents as listed on Appendix "B" attached to and incorporated in this Title Status Report.

No Tract Notes or Coded Remarks for this tract.

This report does not cover encroachments nor any other rights that might be disclosed by a physical inspection of the premises, nor questions of location or boundary that an accurate survey may disclose. This Report also does not cover encumbrances, including but not limited to irrigation charges, unpaid claims, not filed or recorded in this Land Titles and Records Office. This report does not state the current ownership of the interests owned in fee simple but states the ownership at the time the interest ceased to be held in trust or restricted ownership status.

This Title Status Report is a true and correct report of the status of title to the real estate described herein according to the official land records recorded and maintained in this office.

EXHIBIT B
LEGAL DESCRIPTION OF CITY OF AUBURN REAL PROPERTY

TAX PARCEL 2021059019

THAT PORTION OF THE NORTH HALF OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 20, TOWNSHIP 21 NORTH, RANGE 5 EAST, LYING AND SITTING ON THE NORTHEASTERLY SIDE OF THAT PORTION OF AUBURN-ENUMCLAW ROAD RUNNING IN A NORTHWESTERLY AND SOUTHEASTERLY DIRECT THROUGH THE SAME, RECORDS OF KING COUNTY, WASHINGTON.

EXHIBIT C
DEPICTION OF PROPERTY TRANSFER

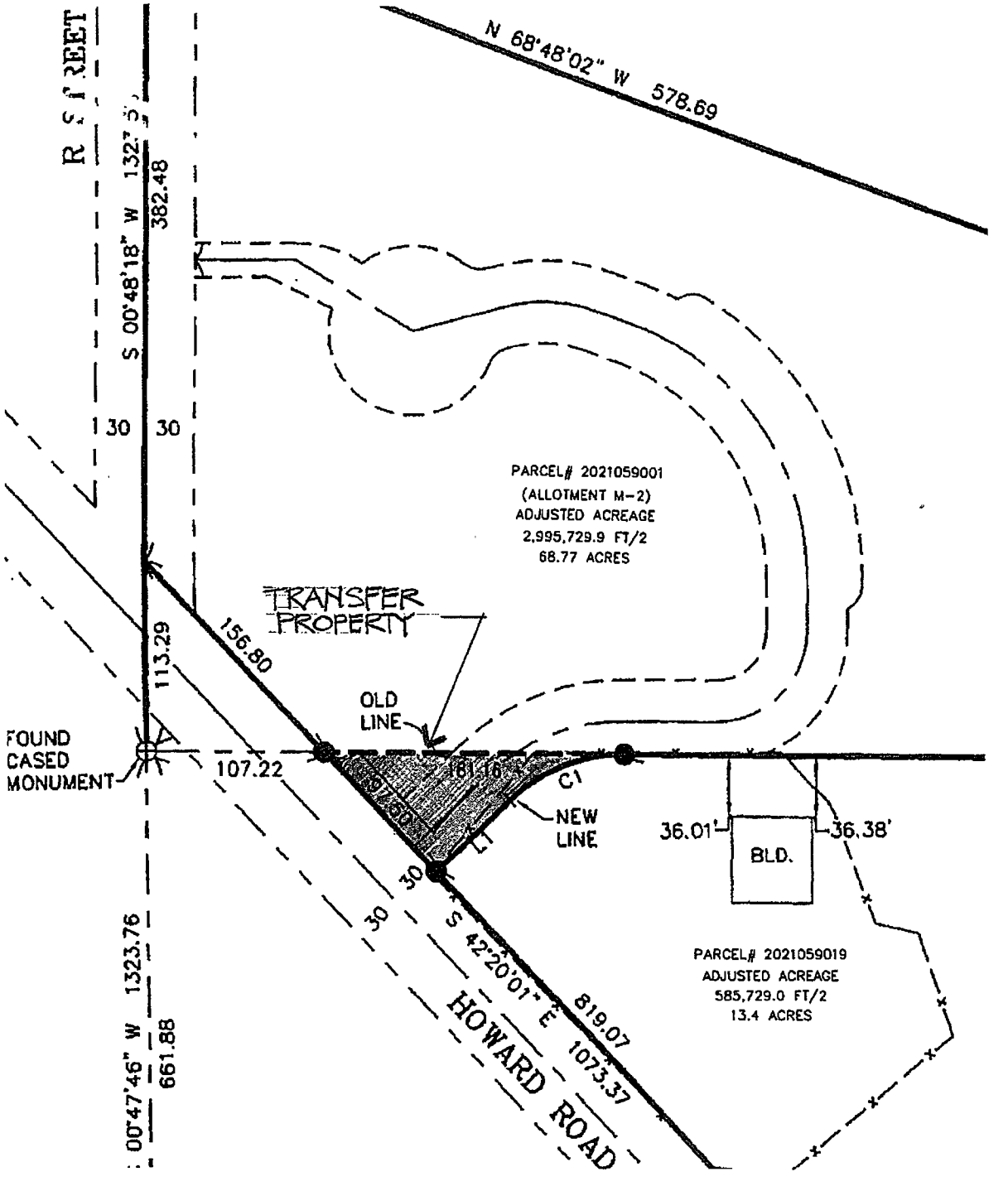


EXHIBIT D

RETURN ADDRESS
City of Auburn
ATTN
25 West Main Street
Auburn, WA 98001-4998

WATER OR SANITARY SEWER SERVICE LINE AGREEMENT

REFERENCE #	
GRANTOR	THE MUCKLESHOOT INDIAN TRIBE
GRANTEE:	CITY OF AUBURN
SHORT LEGAL	SE 1/4 Sec 20, Twp. 21 N, Rg 5E, W.M
ASSESSOR'S PROPERTY TAX PARCELS	202105-9044, 202105-9045 AND 202105-9059

7/25 PNWT
W8073.12

For and in consideration of One Dollar ($1 00) and other valuable consideration, the receipt of which is hereby acknowledged, THE MUCKLESHOOT INDIAN TRIBE ("Grantor" herein), hereby grants and conveys to the CITY OF AUBURN, a Washington municipality ("Grantee" herein), for the purposes hereinafter set forth a water or sanitary sewer line right-of-way over, across and under the following described real property (the "Property" herein) in KING COUNTY, Washington

Exhibit "A" attached hereto and by this reference made a part hereof

Except as may be otherwise set forth herein Grantee's rights shall be exercised upon that portion of the Property (the "Right-of-Way" herein) described as follows

A Right-of-Way fifteen (15) feet in width having seven and one-half (7 5) feet of such width on each side of a centerline described as follows

The Centerline of Grantee's facilities as constructed or to be constructed extended or relocated, lying within the above described Property as more particularly depicted on the document marked as Exhibit"B" attached hereto and by this reference made a part hereof

1 **Purpose.** Grantee shall have the right to access, inspect, construct, operate, maintain, repair, replace and enlarge one or more water distribution lines or sanitary sewer lines over

and/or under the Right-of-Way together with all necessary or convenient appurtenances thereto, which may include but are not limited to the following

For water distribution lines Backflow assemblies, water mains, hydrants, meters and meter boxes, blowoff assemblies and appurtenances

For sanitary sewers manholes, cleanouts and sewer mains

Following the initial construction of its facilities, Grantee may from time to time construct such additional lines and other facilities as it may require Grantee shall have the right to place any type of driving surface within said Right-of-Way not inconsistent with Grantor's use of the Property

Grantor additionally grants to Grantee the use of such additional area immediately adjacent to the Right-of-Way area as shall be required for the construction, reconstruction, maintenance and operation of said water or sewer facilities The use of such additional area shall be held to a reasonable minimum and in the case of any damage or disruption of the premises, the Grantee shall return the Property to a condition as reasonably comparable to its condition as it existed immediately before entry and/or work was made thereon by the Grantee or its agents

2 **Access.** Grantee shall have the right of access to the Right-of-Way over and across the Property to enable Grantee to exercise its rights hereunder, provided, that Grantee shall compensate Grantor for any damage to the Property caused by the exercise of the rights granted herein Grantor shall not in any way block, restrict or impede access and egress to or from said Right-of-Way, and/or in any way block, restrict or impede full use of the real property within the above-described Right-of-Way by the Grantee for the above-described purposes

3 **Grantor's Use of Right-of-Way.** Grantor reserves the right to use the Right-of-Way for any purpose not inconsistent with the rights herein granted, provided, that Grantor shall not take actions that may adversely affect the integrity of the water facilities located within the Right-of-Way, such as excavation or filling, without first notifying Grantee of the proposed activity Grantee shall have the right to inspect any activities of Grantor that may adversely affect the water facilities, and take appropriate action to protect the water facilities

4 **Indemnity.** By accepting and recording this service line agreement, Grantee agrees to indemnify and hold harmless Grantor from any and all claims for injuries and/or damages suffered by any person, which may be caused by the Grantee's exercise of the rights herein granted, provided, that Grantee shall not be responsible to Grantor for any injuries and/or damages to any person caused by acts or omission of Grantor

5. **Abandonment or Termination.** The rights herein granted shall continue until such time as Grantee ceases to use the Right-of-Way In the event that Grantor desires to terminate this service line agreement, the Grantor shall provide Grantee with funds sufficient to install any necessary backflow preventor or preventors on Grantee's waterlines located outside the subject property that connect to the subject property

6. **Cooperation and Coordination.** Grantor and Grantee agree to cooperate in the implementation of this service line agreement and to coordinate their respective duties and activities relating to this service line agreement with each other.

Dated this 14th day of MAY, 2004

GRANTOR
THE MUCKLESHOOT INDIAN TRIBE

By _____
Print Name JOHN DANIELS, JR.

GRANTEE
CITY OF AUBURN

Peter B Lewis, Mayor

Attest

Danielle E Daskam City Clerk

Approved as to form

Daniel B Heid, City Attorney

STATE OF WASHINGTON)
)SS.
COUNTY OF KING)

On this 14th day of May, 2004, before me the undersigned, a Notary Public, in and for the State of Washington, duly commissioned and sworn, personally appeared John Daniels, Jr. to me known to be the Chairman of THE MUCKLESHOOT INDIAN TRIBE, the Tribe that executed the foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said Tribal Community for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument

Witness my hand and official seal hereto affixed the day and year above written

KENNETH H. LEWIS NOTARY PUBLIC STATE OF WASHINGTON COMMISSION EXPIRES 6-20-04

_____
Notary Public in and for the State of Washington Residing at Puyallup
My commission expires June 20, 2004

SERVICE LINE AGREEMENT Page 3

EXHIBIT "A"

Attached hereto and made a part hereof
Electric Service Line Agreement dated MAY 14, 2004

LEGAL DESCRIPTION PARCEL 1-REC. NO. 9308182077

That portion of the W½SE¼ of Section 20, Township 21 North, Range 5 East, W.M., in King County, Washington, being more particularly described as follows: Commencing at the south quarter corner of said Section 20; thence North 00 degrees 00 minutes 04 seconds East along the north-south centerline of said Section 1073.05 feet to a point on the north margin of Primary State Highway No. 5, according to the plan on file in the Office of the State Highway Department, approved June 17, 1941; thence South 69 degrees 34 minutes 32 seconds East along said margin 24.06 feet to the point of beginning; thence continuing South 69 degrees 34 minutes 32 seconds East along said margin 38.97 feet to the beginning of a curve, concave to the northeast having a radius of 5680.00 feet; thence along the arc of said curve and margin, passing through a central angle of 10 degrees 23 minutes 18 seconds, a distance of 1029.85 feet, more or less, to the southwest corner of that certain parcel of land conveyed to Bush, Road and Hitchings, P.S. Inc. by deed recorded under King County recording No. 6598081; thence North 26 degrees 52 minutes 41 seconds East along the westerly line of said parcel 161.09 feet (161.04 feet per deed) to the northwest corner thereof; thence South 79 degrees 50 minutes 21 seconds East (South 79 degrees 47 minutes 09 seconds East per deed) along the north line of said parcel, 175 feet to a point on the west margin of Dogwood Street southeast as established by deed recorded under King County recording No. 5110135; thence along said margin North 00 degrees 27 minutes 58 seconds East 39.46 feet to the southeast corner of that certain parcel of land conveyed to the Southland Corporation by deed recorded under King County recording No. 6534478; thence North 81 degrees 27 minutes 51 seconds West (North 80 degrees 48 minutes 37 seconds West per deed) along the south line of said parcel 170 feet, more or less, to the southwest corner thereof; thence North 00 degrees 27 minutes 58 seconds East (parallel to the west margin of Dogwood Street per deed) along the west line of said parcel 82.30 feet to the northwest corner thereof; said corner also being a point on the south line of that certain tract of land conveyed to Robert E. Dowd and Margaret H. Dowd, husband and wife, herein after called the Dowd tract, by deed recorded under King County recording No. 5379802, said corner also being a point on a curve, said curve being concentric with and 330 feet northerly of the centerline of said Primary State Highway No. 5, the center of said curve bears North 09 degrees 11 minutes 21 seconds East 5400.00 feet distant; thence in a northwesterly direction along the arc of said curve and the south line of said Dowd tract, passing through a central angle of 01 degrees 57 minutes 02 seconds a distance of 183.83 feet, more or less to the southwest corner of said Dowd tract; thence North 00 degrees 27 minutes 58 seconds East (due north per deed) 173.32 feet, more or less along the west line of said Dowd tract to the northwest corner thereof; thence South 89 degrees 32 minutes 02 seconds East (due East per deed) 180 feet, more or less, along the north line of said Dowd tract to a point 120 feet west of the west margin of Dogwood Street southeast as established by deed recorded under King County recording No. 5110135; thence leaving said Dowd tract and running North 00 degrees 27 minutes 58 seconds east (parallel to the east line of said subdivision per deeds of record) 217.98 feet; thence South 89 degrees 32 minutes 02 seconds East (due east per deeds of record) 120 feet to a point on the west margin of Dogwood Street southeast as established by deed recorded under recording No. 5110134; thence along said margin North 00 degrees 27 minutes 58 seconds East 388.31 feet, more or less, to the north line of that certain parcel of land conveyed to Commonwealth Investors Group by deed recorded under King County recording No. 6285466; thence North 89 degrees 32 minutes 02 seconds West (North 89 degrees 31 minutes 21 seconds West per deed) along the north line of said Commonwealth Investors Group parcel 1271.57 feet; thence South 00 degrees 29 minutes 50 seconds West 537.31 feet; thence South 01 degree 12 minutes 52 seconds West 291.28 feet to the point of beginning; except that portion thereof conveyed to the United States of America in trust for the

A-1

Muckleshoot Indian Tribe by deed recorded under King County recording No. 8403080814; except that portion thereof, if any, lying north of the south line of Skycrest Terrace Division No. 2, according to the plat thereof recorded in Volume 101 of Plats, Page 55, records of King County, Washington; and except that portion thereof, if any, lying north of the south line of Greentree, a Condominium, according to the map and plans thereof recorded in Volume 22 of Condominiums, Pages 78 through 81, records of King County, Washington, containing after said exceptions, 23.5 acres, more or less. Situate in the County of King, State of Washington

Title to the land herein described shall be subject to any existing easements for public roads and highways, for public utilities, and for railroads and pipelines and any other rights of way of record.

LEGAL DESCRIPTION PARCEL 2-REC. NO. 8403080814

THAT PORTION OF THE WEST HALF OF THE SOUTHEAST QUARTER OF SECTION 20, TOWNSHIP 21 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

COMMENCING AT THE INTERSECTION OF THE WEST LINE OF SAID SOUTHEAST QUARTER AND THE CENTERLINE OF STATE HIGHWAY NO. 164; THENCE SOUTH 69° 31' 40" EAST, ALONG SAID CENTERLINE, A DISTANCE OF 46.63 FEET TO A POINT OF CURVATURE TO THE LEFT, THE CENTER OF WHICH BEARS NORTH 20° 28' 20" EAST, A DISTANCE OF 5730.00 FEET; THENCE ALONG SAID CENTERLINE AND SAID CURVE TO THE LEFT, HAVING A RADIUS OF 5730.00 FEET, THROUGH A CENTRAL ANGLE OF 04° 51' 45", AN ARC DISTANCE OF 486.29 FEET, thence NORTH 13° 44' 33" EAST, A DISTANCE OF150.09 FEET TO THE TRUE POINT OF BEGINNING, THENCE NORTH 13° 44' 33" EAST, A DISTANCE OF 175.00 FEET; THENCE SOUTH 76° 15' 27" EAST, A DISTANCE OF 373.37 FEET, THENCE SOUTH 13° 44' 33" WEST, A DISTANCE OF 175.00 FEET; THENCE NORTH 76° 15' 27" WEST, A DISTANCE OF 373.37 FEET TO THE TRUE POINT OF BEGINNING.

RETYPED FOR FORM IN COMPLIANCE WITH KING COUNTY RECORDING REQUIREMENTS

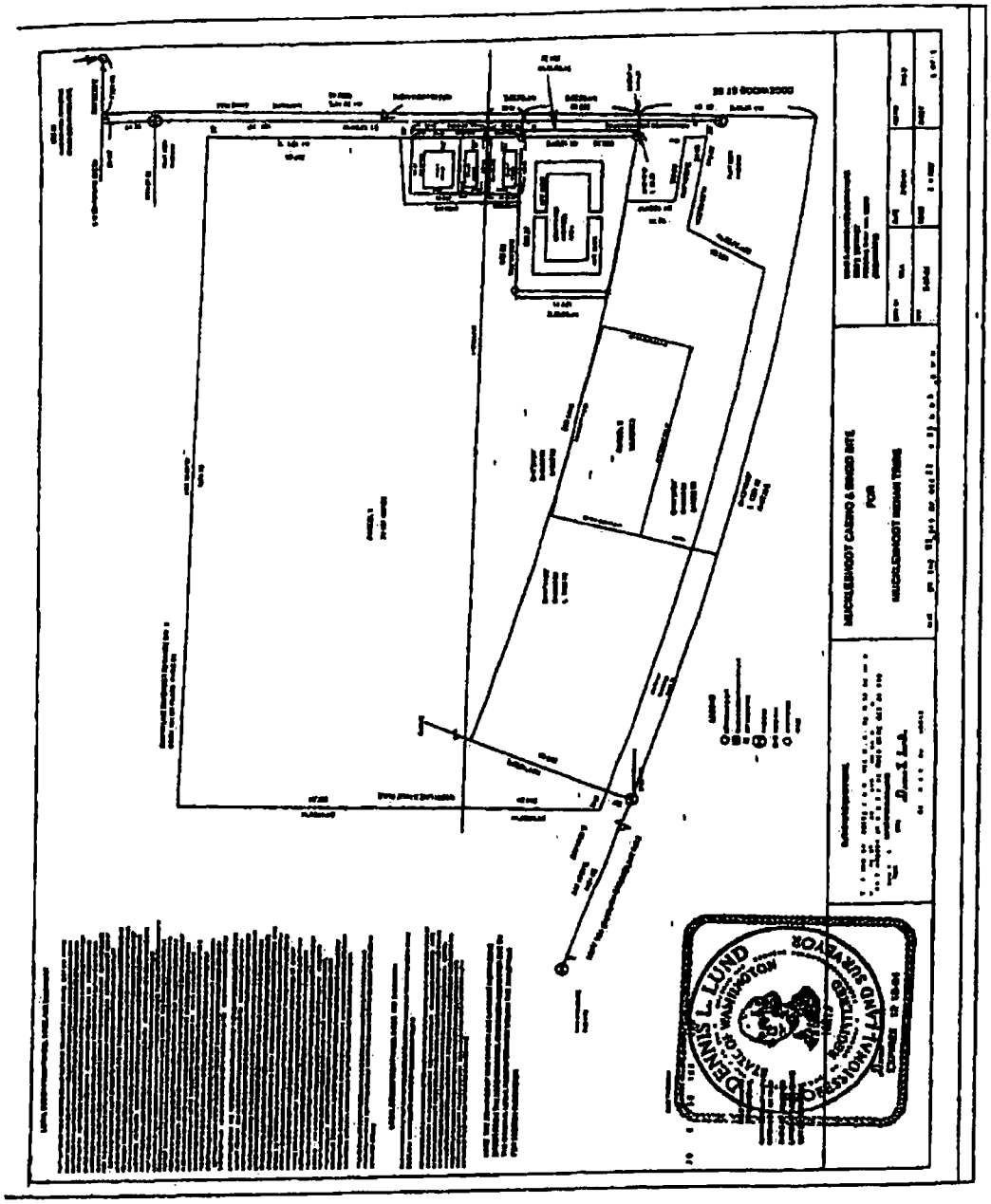


EXHIBIT B

LEGAL DESCRIPTION PARCEL 1-REC. NO. 9308182077

THAT PORTION OF THE W1/2 OF THE SE1/4 OF SECTION 20, TOWNSHIP 21 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTH QUARTER OF SAID SECTION 20; THENCE N0°10'04"E ALONG THE NORTH-SOUTH CENTERLINE OF SAID SECTION 1073.05 FEET TO A POINT ON THE NORTH MARGIN OF PRIMARY STATE HIGHWAY NO. 6, ACCORDING TO THE PLAN ON FILE IN THE OFFICE OF THE STATE HIGHWAY DEPARTMENT, APPROVED JUNE 17, 1911; THENCE S89°34'32"E ALONG SAID MARGIN 24.08 FEET TO THE POINT OF BEGINNING; THENCE CONTINUING S89°34'32"E ALONG SAID MARGIN 38.97 FEET TO THE BEGINNING OF A CURVE, CONCAVE TO THE NORTHEAST HAVING A RADIUS OF 5680.00 FEET; THENCE ALONG THE ARC OF SAID CURVE AND MARGIN, PASSING THROUGH A CENTRAL ANGLE OF 10°23'18", A DISTANCE OF 1029.86 FEET, MORE OR LESS TO THE SOUTHWEST CORNER OF THAT CERTAIN PARCEL OF LAND CONVEYED TO BUSH, ROED AND HITCHINGS, P.S. INC. BY DEED RECORDED UNDER KING COUNTY RECORDING NO. 6596091; THENCE N25°53'41"E ALONG THE WESTERLY LINE OF SAID PARCEL 161.59 FEET (161.64 FEET PER DEED) TO THE NORTHWEST CORNER THEREOF; THENCE S78°59'21"E (S78°47'09"E PER DEED) ALONG THE NORTH LINE OF SAID PARCEL, 175 FEET TO A POINT ON THE WEST MARGIN OF DOGWOOD STREET SOUTHEAST AS ESTABLISHED BY DEED RECORDED UNDER KING COUNTY RECORDING NO. 5110136; THENCE ALONG SAID MARGIN N0°27'09"E 99.48 FEET TO THE SOUTHEAST CORNER OF THAT CERTAIN PARCEL OF LAND CONVEYED TO THE SOUTHLAND CORPORATION BY DEED RECORDED UNDER KING COUNTY RECORDING NO. 6594478; THENCE N81°27'51"W (N80°48'37"W PER DEED) ALONG THE SOUTH LINE OF SAID PARCEL 130 FEET, MORE OR LESS, TO THE SOUTHWEST CORNER THEREOF; THENCE N0°27'09"E (PARALLEL TO THE WEST MARGIN OF DOGWOOD STREET PER DEED) ALONG THE WEST LINE OF SAID PARCEL 92.39 FEET TO THE NORTHWEST CORNER THEREOF; SAID CORNER ALSO BEING A POINT ON THE SOUTH LINE OF THAT CERTAIN TRACT OF LAND CONVEYED TO ROBERT E. DOWD AND MARGARET H. DOWD, HUSBAND AND WIFE, HEREIN AFTER CALLED THE DOWD TRACT, BY DEED RECORDED UNDER KING COUNTY RECORDING NO. 5370022, SAID CORNER ALSO BEING A POINT ON A CURVE, SAID CURVE BEING CONCENTRIC WITH AND 330 FEET NORTHERLY OF THE CENTERLINE OF SAID PRIMARY STATE HIGHWAY NO. 6, THE CENTER OF SAID CURVE BEARS N39°11'21"E 5400.00 FEET DISTANT; THENCE IN A NORTHWESTERLY DIRECTION ALONG THE ARC OF SAID CURVE AND THE SOUTH LINE OF SAID DOWD TRACT, PASSING THROUGH A CENTRAL ANGLE OF 1°57'02" A DISTANCE OF 183.93 FEET, MORE OR LESS TO THE SOUTHWEST CORNER OF SAID DOWD TRACT; THENCE N0°27'09"E (DUE NORTH PER DEED) 173.32 FEET, MORE OR LESS ALONG THE WEST LINE OF SAID DOWD TRACT TO THE NORTHWEST CORNER THEREOF; THENCE S89°32'51"E (DUE EAST PER DEED) 180 FEET, MORE OR LESS, ALONG THE NORTH LINE OF SAID DOWD TRACT TO A POINT 130 FEET WEST OF THE WEST MARGIN OF DOGWOOD STREET SOUTHEAST AS ESTABLISHED BY DEED RECORDED UNDER KING COUNTY RECORDING NO. 5110136; THENCE LEAVING SAID DOWD TRACT AND RUNNING N0°27'09"E (PARALLEL TO THE EAST LINE OF SAID SUBDIVISION PER DEEDS OF RECORD) 217.85 FEET; THENCE S89°32'51"E (DUE EAST PER DEEDS OF RECORD) 129 FEET TO A POINT ON THE WEST MARGIN OF DOGWOOD STREET SOUTHEAST AS ESTABLISHED BY DEED RECORDED UNDER RECORDING NO. 5110134; THENCE ALONG SAID MARGIN N0°27'09"E 869.21 FEET, MORE OR LESS, TO THE NORTH LINE OF THAT CERTAIN PARCEL OF LAND CONVEYED TO COMMONWEALTH INVESTORS GROUP BY DEED RECORDED UNDER KING COUNTY RECORDING NO. 8203468; THENCE N89°32'02"W (N89°31'21"W PER DEED) ALONG THE NORTH LINE OF SAID COMMONWEALTH INVESTORS GROUP PARCEL 1271.57 FEET; THENCE S0°29'09"W 837.31 FEET; THENCE S1°12'52"W 291.39 FEET TO THE POINT OF BEGINNING; EXCEPT THAT PORTION THEREOF CONVEYED TO THE UNITED STATES OF AMERICA IN TRUST FOR THE MUCKLESHOOT INDIAN TRIBE BY DEED RECORDED UNDER KING COUNTY RECORDING NO. 8403080814; EXCEPT THAT PORTION THEREOF, IF ANY, LYING NORTH OF THE SOUTH LINE OF SKYCREST TERRACE DIVISION NO. 2, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 101 OF PLATS, PAGE 66, RECORDS OF KING COUNTY, WASHINGTON; AND EXCEPT THAT PORTION THEREOF, IF ANY, LYING NORTH OF THE SOUTH LINE OF GREENTREE, A CONDOMINIUM, ACCORDING TO THE MAP AND PLANS THEREOF RECORDED IN VOLUME 23 OF CONDOMINIUMS, PAGES 78 THROUGH 81, RECORDS OF KING COUNTY, WASHINGTON, CONTAINING AFTER SAID EXCEPTIONS, 23.6 ACRES, MORE OR LESS. SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

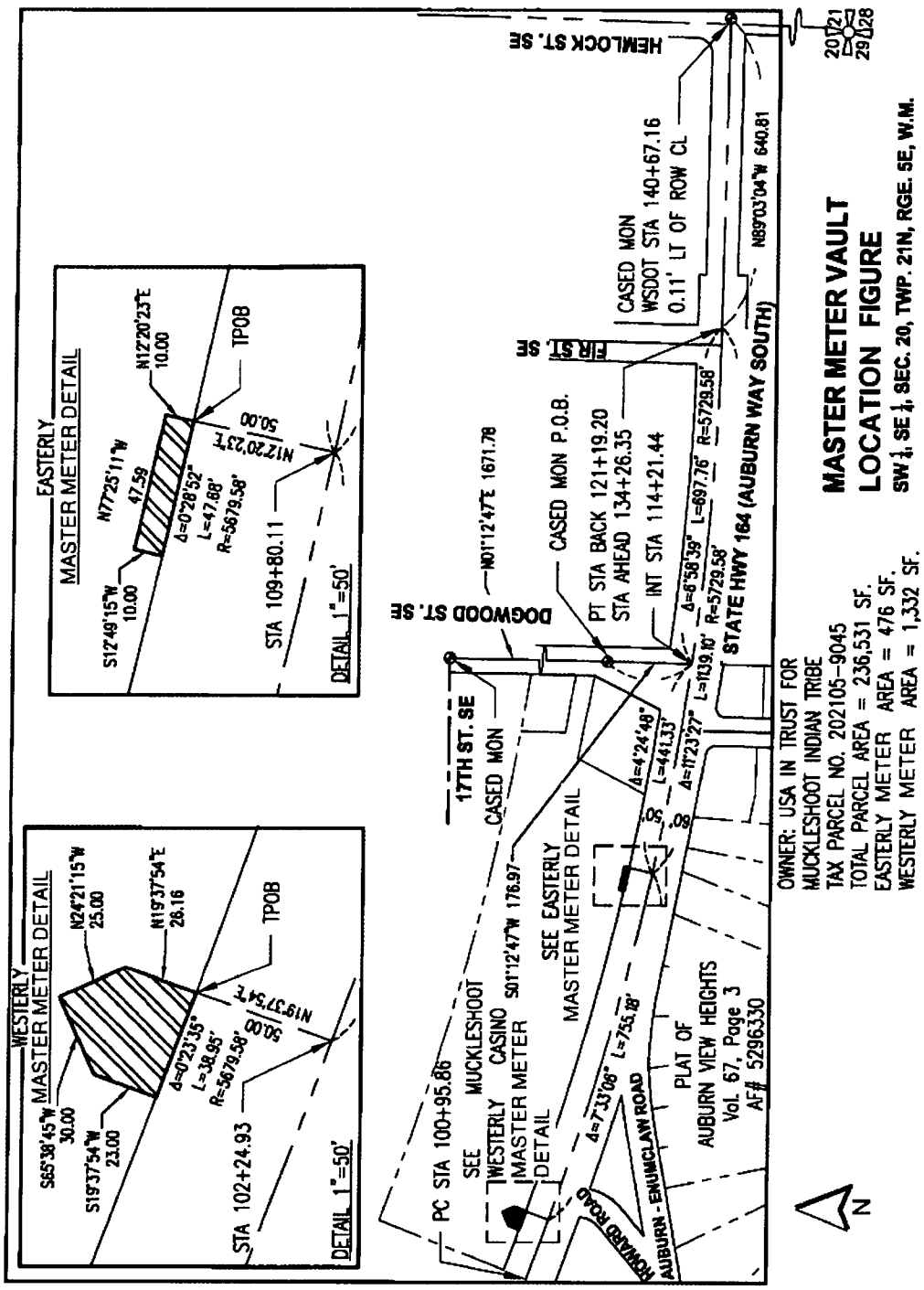
TITLE TO THE LAND HEREIN DESCRIBED SHALL BE SUBJECT TO ANY EXISTING EASEMENTS FOR PUBLIC ROADS AND HIGHWAYS, FOR PUBLIC UTILITIES, AND FOR RAILROADS AND PIPELINES AND ANY OTHER RIGHTS OF WAY OF RECORD.

LEGAL DESCRIPTION PARCEL 2-REC. NO. 8403080814

THAT PORTION OF THE WEST HALF OF THE SOUTHEAST QUARTER OF SECTION 20, TOWNSHIP 21 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

COMMENCING AT THE INTERSECTION OF THE WEST LINE OF SAID SOUTHEAST QUARTER AND THE CENTERLINE OF STATE HIGHWAY NO. 164; THENCE S89°31'40"E, ALONG SAID CENTERLINE A DISTANCE OF 45.03 FEET TO A POINT OF CURVATURE TO THE LEFT, THE CENTER OF WHICH BEARS N0°28'20"E, A DISTANCE OF 5730.00 FEET; THENCE ALONG CENTERLINE AND SAID CURVE TO THE LEFT, HAVING A RADIUS OF 5730.00 FEET THROUGH A CENTRAL ANGLE OF 4°51'45" AN ARC DISTANCE OF 486.29 FEET; THENCE N13°44'37"E, A DISTANCE OF 180.09 FEET TO THE TRUE POINT OF BEGINNING; THENCE N13°44'37"E A DISTANCE OF 175.00 FEET; THENCE S76°15'23"E A DISTANCE OF 373.37 FEET; THENCE S13°44'37"W A DISTANCE OF 175.00 FEET; THENCE N76°15'23"W A DISTANCE OF 373.37 FEET TO THE TRUE POINT OF BEGINNING.

EXHIBIT E
LOCATION AND EXTENT OF MASTER METER ASSEMBLIES



RESOLUTION NO. 5182

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR TO EXECUTE A SERVICE AREA AGREEMENT BETWEEN THE CITY OF AUBURN AND PIERCE COUNTY, ESTABLISHING WATER UTILITY SERVICE AREA BOUNDARIES

WHEREAS, the City of Auburn is a water purveyor located partly within Pierce County, Washington; and

WHEREAS, service area agreements are required by WAC 246-293-250 to help assure that water reserved for public water supply purposes will be utilized in the future in an efficient and planned manner; and

WHEREAS, in conformity with the requirements of WAC 246-293-250, the City of Auburn and Pierce County, Washington, have developed a water utility service area agreement establishing water utility service area boundaries, with terms acceptable to both entities.

NOW THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, HEREBY RESOLVES as follows:

Section 1. The Mayor is hereby authorized to execute a Service Agreement between the City of Auburn and Pierce County, which agreement shall be in substantial conformity with the agreement a copy of which is attached hereto, denominated as Exhibit A, incorporated herein by this reference.

Section 2. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

Section 3. This Resolution shall be in full force and effect upon passage and signatures hereon.

DATED and SIGNED this 16th day of November 2015.

CITY OF AUBURN

Nancy Backus
NANCY BACKUS, Mayor

ATTEST:

Danielle E. Daskam
Danielle E. Daskam,
City Clerk

APPROVED AS TO FORM:

Daniel B. Heid
Daniel B. Heid,
City Attorney

RESOLUTION No. 5182

EXHIBIT A

STANDARD SERVICE AGREEMENT ESTABLISHING WATER UTILITY SERVICE AREA BOUNDARIES

City of Auburn
STANDARD SERVICE AGREEMENT ESTABLISHING WATER UTILITY SERVICE AREA BOUNDARIES

PREAMBLE

THIS AGREEMENT establishing water utility service area boundaries is entered into this day for purposes of identifying the external boundaries of the service area for which this water purveyor has assumed water service responsibility.

WHEREAS, service area agreements are required by WAC 246-293-250 to help assure that water reserved for public water supply purposes within Pierce county will be utilize din the future in an efficient and planned manner; and

WHEREAS, the designation of retail water service area and future service planning areas, together with the cooperation of other utilities, will help assure efficient planning to accommodate growth, avoid duplication f service, and facilitate the best use of resources; and

WHEREAS, the responsibilities applicable to water purveyors are outlined in the Pierce County Coordinated Water System Plan (CWSP) and by the adopted rules and regulations of the Washington State Department of Health (DOH); and

Whereas, IT IS NOT THE INTENT OF THIS Agreement to give new authority or responsibilities to the water purveyor or to the County or State regulatory agencies, in addition to those requirements imposed by law; and

NOW, THEREFORE, the undersigned party, having entered into this Agreement by its signature, concurs with and will abide by the following provisions:

Section 1. The terms used within the contract shall be as defined in the implementing regulations of Chapter 70.116 RCW, except as identified below.

A. Lead Agency shall mean the department or organization within Pierce County that has been designated by the Pierce County Executive as being administratively responsible for the coordination and filing of the Pierce County Water Service Area map, Standard Service Agreement Establishing Water Utility Service Area Boundaries, Agreements for Retail Service Areas, Utility Service Policies, and other administrative documents necessary for the implementation of the Pierce County CWSP.

B. Pierce County Coordinated Water System Plan (CWSP) shall mean the plan adopted by the Pierce County Council for public water systems within critical water supply service areas within Pierce County which identifies the present and future needs of the systems and sets forth means for meeting those needs in the most efficient manner possible.

C. Pierce County Water Service Area Map shall mean the map reference din this Agreement for the retail service area signed by the water purveyor, except as amended in accordance with the CWSP procedures and with the concurrence of the affected water purveyors.

AUBURN COPY

D. Retail Service Area shall mean the designated geographical area within Pierce County in which the undersigned water purveyor assumes full responsibility for providing water service to individual customers.

E. Utility Service Policies shall mean those policies and conditions of service that area attached to the provision of water service for individual customers. The identified policies and conditions of service are those conditions incorporated within the water purveyor's water system improvement and expansion plans required under the provisions of the Public Water Systems Coordination Act and DOH.

Section 2. Lead Agency. The lead agency for administering the Pierce county Water Utility service area agreements shall be the Pierce County Department of Planning and Land Services unless otherwise established by the Pierce County Executive. The lead agency shall function only as a coordination center. The lead agency will maintain the original documents and will be responsible for updating the water system map and agreements as provided for in the CWSP.

Section 3. Authority. The authority for this Agreement is granted by the Public Water Systems Coordination Act of 1977, Chapter 70.116 RCW.

Section 4. Service Area Boundaries. The undersigned Water Purveyor acknowledges that the Pierce County Water Service Area Maps identifying its retail service area boundaries, dated July 28, 2015 and included as Attachment A to this Agreement, identify the water purveyor's present and future service area. The undersigned further acknowledges that there are no service area conflicts with an adjacent water utility or purveyor, or, if such a conflict exists, agrees that no new water service will be extended within disputed areas except as stipulate din an adjudication by DOH.

This Agreement shall apply to service areas existing as of August 1994, and to the service area boundaries identified in the above referenced maps, or as shown on current revisions thereof, provided that no revisions of service areas shown on these maps shall be made without prior written concurrence of the water utilities/purveyors involved and such written concurrence is filled with the Lead Agency. Revisions may also require an amendment to the purveyor's or utility's service plans.

Section 5. Boundary Adjustments. If, at some time in the future, it is in the best interest of the undersigned parties to make service area boundary adjustments, such modifications must be by written concurrence of all involved utilities and the proper legislative authority(ies), and must be noted an filed with the designated Pierce County lead agency and DOH. It is understood by the undersigned utility that it may decline to provide service within its designated service area boundary, but in that case, an applicant may be referred to other adjacent purveyors or utilities or a new utility may be created and the original service area boundary will be adjusted accordingly.

Section 6. System Extension Policies. The undersigned utility agrees that in order to expand its existing water service area, (other than by addition of retail customers to existing water mains), or to serve in the capacity of a pre-qualified satellite system management agency (SSMA), it shall have adopted design standards and Utility Service extension policies. The design standards shall meet or exceed the pierce County Water System Minimum Standards and Specifications.

A water utility anticipating expansion of retail service in unincorporated areas of Pierce County, or intending to operate as an SSMA, shall identify utility service policies in its updated water system plan. The undersigned utility agrees to identify, for information, its utility service policies or provide a copy of the updated water system plan to the Lead Agency prior to application for extension of its existing water system into new service areas within the unincorporated areas of Pierce County.

Municipalities further agree that if they identify a service area outside of their existing municipal corporate boundaries, the municipality will assume full responsibility for providing water service equivalent to the level of service provided for their customers inside the city limits with similar service requirements, and must also meet or exceed Pierce County's minimum design standards.

Section 7. Special Working Agreements. Special working agreements, if they exist and are relevant, between this water purveyor and any adjacent water purveyor shall be attached to this Agreement as Attachment B and incorporated herein by this reference.

Section 8. Compliance with the CWSP. Nothing in this Agreement shall waive any requirement of the state, federal, or local government regarding the provision of water service. This Agreement shall comply with the interlocal agreement requirement of the CWSP.

IN WITNESS WHEREOF, the undersigned party has executed this Agreement as of

11/16/2015
Date

City of Auburn
Water Purveyor

Nancy Backus
Representative

Mayor
Title

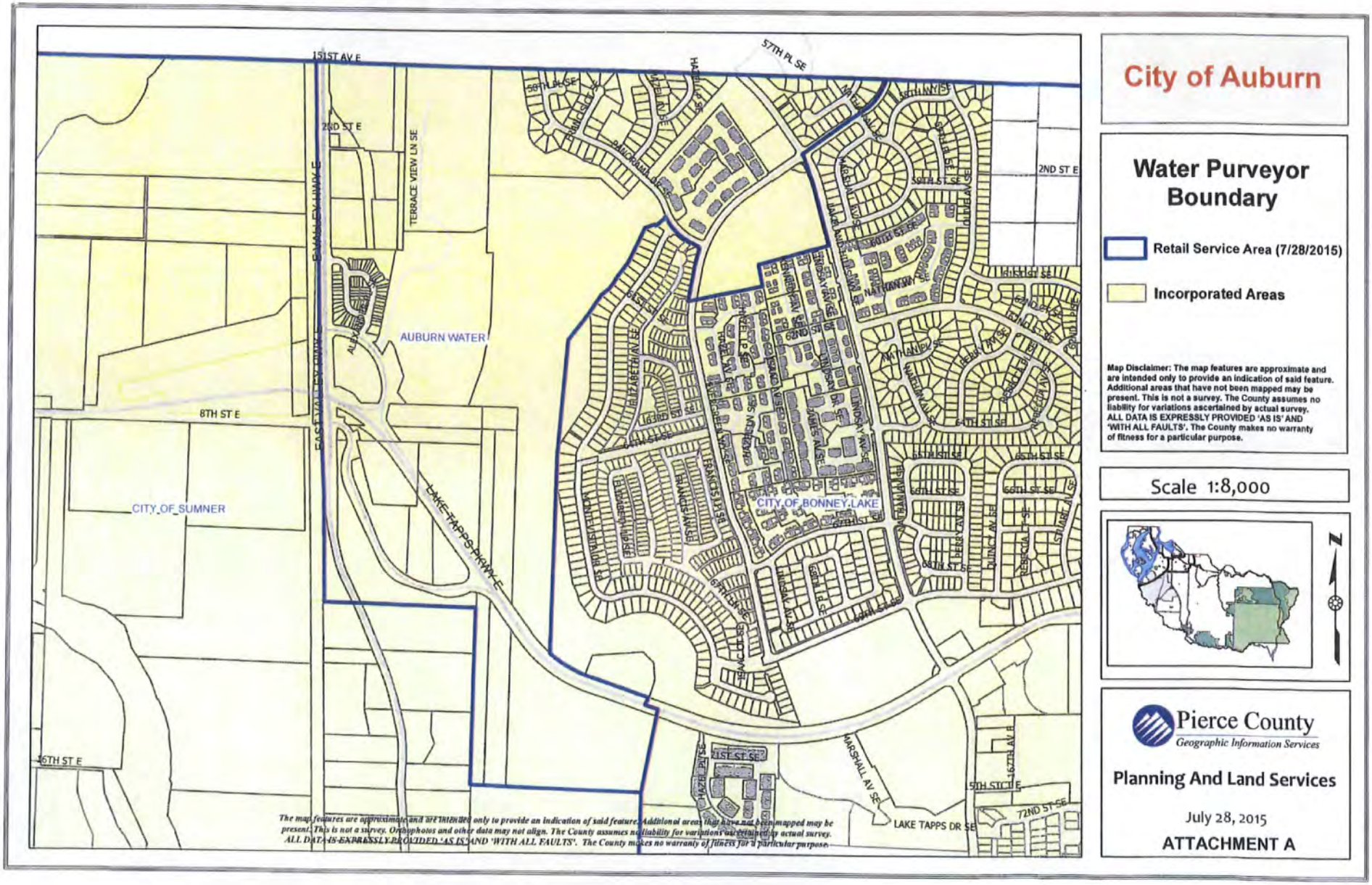
Receipt Acknowledged:

Pierce County Planning and Land Services Department

10/6/2015
Date

STANDARD SERVICE AGREEMENT
ATTACHMENT B

Utility shall include copies of separate agreements, relating to common service areas, transfer arrangements, special working agreements, and/or retail service agreements with adjacent utilities. These agreements will be included by reference in this Interlocal Agreement.



City of Auburn

Water Purveyor Boundary

Retail Service Area (7/28/2015)

Incorporated Areas

Map Disclaimer: The map features are approximate and are intended only to provide an indication of said feature. Additional areas that have not been mapped may be present. This is not a survey. The County assumes no liability for variations ascertained by actual survey. ALL DATA IS EXPRESSLY PROVIDED 'AS IS' AND 'WITH ALL FAULTS'. The County makes no warranty of fitness for a particular purpose.

Scale 1:8,000

N

Pierce County
Geographic Information Services

Planning And Land Services

July 28, 2015

ATTACHMENT A

STANDARD SERVICE AGREEMENT
ATTACHMENT B

Utility shall include copies of separate agreement, relating to common service areas, transfer arrangements, special working agreements, and/or retail service agreements with adjacent utilities. These agreements will be included by reference in this Interlocal Agreement.

Interlocal Agreement Among the Cities of Auburn and Bonney Lake for Revision of Water District Boundaries
Agreement Between the Cities of Pacific and Auburn Relating to Urban Service Area Designation
Agreement Between the Cities of Sumner and Auburn Relating to Potential Annexation Area Designation

INTERLOCAL AGREEMENT AMONG THE CITIES OF AUBURN AND BONNEY LAKE FOR REVISION OF WATER DISTRICT BOUNDARIES

THIS INTERLOCAL AGREEMENT is made and entered into, pursuant to the Interlocal Cooperation Act, Chapter 39.34 of the Revised Code of Washington, on the 14th day of April, 2015, by and among the CITY OF AUBURN ("COA")and the CITY OF BONNEY LAKE, municipal corporations of the State of Washington (collectively, the "Cities").

RECITALS:

1. **WHEREAS,** the Cities each own and operate public water systems pursuant to Chapter 70.119 RCW, are purveyors of potable water, and provide water services within the boundaries of the Cities' respective water service areas; and,

2. **WHEREAS,** the City of Auburn is presently revising and updating its six-year comprehensive water plan, as required by the state Department of Health pursuant to RCW 70.116 and WAC 246-290-100; and

3. **WHEREAS,** the Cities' respective water services areas adjoin and abut one another in the "Lakeland Hills South" area of Pierce County, where the Cities' water service areas are demarcated by an border or boundary line identified and described in service area agreement dated December 10, 1998 (approved by and appended to COA Res. No. 3018) ("Service Area Agreement"); and

4. **WHEREAS,** Cities' respective water rights and obligations had been the subject of litigation which was resolved amicably pursuant to settlement agreement between the Cities dated March 5, 1998 (approved by and appended to COA Res. No. 2925) (the "March 1998 Settlement Agreement"), the terms and conditions of which continue to apply to the Cities and shall be interpreted consistently with the change in boundary lines agreed upon herein; and

5. **WHEREAS,** on February 14, 2005, the Cities executed an addendum to the March 1998 Settlement Agreement, to revise the boundary relating to one tax parcel, which does not otherwise affect the March 1998 Settlement Agreement; and

6. **WHEREAS,** the Cities mutually desire to revise and adjust the border line separating their respective water service areas, presently described in Service Area Agreement, as amended by the February 14, 2005 addendum to the March 1998 Settlement Agreement.

NOW THEREFORE in consideration of their mutual covenants, conditions and promises, **THE CITIES DO HEREBY AGREE** as follows:

1. The boundary line between and separating the Cities' respective water service areas, previously established and described in Service Area Agreement, as amended by the

February 14, 2005 addendum to the March 1998 Settlement Agreement, is hereby revised and adjusted pursuant to the legal descriptions and surveyor's map attached hereto as Exhibit "A" and Exhibit "B", respectively; and

2. This revision of water service area boundary lines shall be effective immediately.

IN WITNESS WHEREOF the parties hereto have executed this Agreement as of the day and year first above written.

CITY OF AUBURN

John Holman, Deputy Mayor
for Nancy Backus 4-7-14
Nancy Backus, Mayor Date

Attest:

City Clerk

Approved as to Form:

4-1-15
Daniel B. Heid, City Attorney Date

CITY OF BONNEY LAKE

5/5/15
Neil Johnson, Mayor Date

Attest:

City Clerk

Approved as to Form:

5/1/15
Kathleen Haggard, City Attorney Date

Exhibit "A"

Legal Description for Water Service Area

Legal description for the updated Auburn/Bonney Lake Water Service Areas of Section 6, Township 20 North, Range 5 East, W.M., in Pierce County, Washington to supersede and replace the description contained in Service Area Agreement dated December 10, 1998 (City of Auburn Resolution 3018);

A Line described as the border between the City of Auburn and Bonney Lake Water Service Areas more fully described as follows (using basis of bearings of Record of Survey recorded under Auditor's File Number 200102265002 and plat of Verona recorded under Auditor's File Number 200310145002 records of Pierce County):

Beginning at the South Quarter Corner of said Section 6, thence N 11°23'51" E a distance of 706.18 feet to the south line of Lot 4 of City of Auburn Short Plat SPL01-0007 recorded under Auditor's File Number 200211145001 records of said county;

Thence S 71°21'43" E along said south line a distance of 290.27 feet to the beginning of a curve to the left having a radius of 1940.00 feet;

Thence southeasterly 284.29 feet along said curve through a central angle of 08°23'46";

Thence S 83°10'43" E along said south line a distance of 73.72 feet to the beginning of a curve to the left having a radius of 1937.00 feet;

Thence easterly 463.31 feet along said curve feet through a central angle of 13°42'17" to the most southeasterly corner of said Lot 4;

Thence N 20°03'29" W along the east line of said Lot 4 a distance of 26.26 feet to the most southerly corner of Lot 62 of the plat of Verona recorded under Auditor's File Number 200310145002, records of said county;

Thence northwesterly and northerly along the southwesterly line of said plat of Verona the following courses and distances:

N 81°07'30" W a distance of 359.40 feet;
N 69°56'06" W a distance of 202.35 feet;
N 67°01'04" W a distance of 214.84 feet;
N 54°28'29" W a distance of 68.34 feet;
N 06°34'57" E a distance of 144.08 feet;
N 00°41'55" E a distance of 125.75 feet;
N 27°10'17" W a distance of 85.46 feet;
N 37°27'03" W a distance of 91.12 feet;
N 52°37'34" W a distance of 191.60 feet;
N 61°56'46" W a distance of 51.06 feet;
N 77°45'32" W a distance of 89.47 feet;
S 87°24'50" W a distance of 96.39 feet;

S 75°52'22" W a distance of 123.67 feet;
S 66°03'17" W a distance of 126.14 feet;
N 70°27'52" W a distance of 122.25 feet;
N 35°32'56" W a distance of 149.01 feet;
N 14°48'47" W a distance of 67.81 feet;
N 24°51'43" W a distance of 82.36 feet;
N 09°22'10" W a distance of 313.13 feet;
N 06°04'45" W a distance of 184.91 feet;
N 12°13'20" W a distance of 198.22 feet;
N 00°12'03" W a distance of 186.02 feet to the southwest corner of Lot 33 of Verona Division 2 recorded under Auditors File Number 200502175007, records of said county;

Thence along the westerly line of said plat of Verona Division 2 the following courses and distances:

N 00°12'03" W a distance of 76.43 feet;
N 11°19'16" E a distance of 94.45 feet;
N 34°03'49" E a distance of 361.98 feet;
N 15°33'17" E a distance of 93.08 feet;
N 00°29'31" E a distance of 443.26 feet;
N 03°22'34" W a distance of 148.01 feet;
N 34°01'25" E a distance of 159.32 feet;
N 49°38'41" E a distance of 74.88 feet;
N 40°40'05" E a distance of 51.82 feet;
N 32°41'03" E a distance of 101.58 feet;
N 38°36'53" E a distance of 82.95 feet;
N 27°59'38" E a distance of 62.43 feet;
N 26°06'34" E a distance of 277.03 feet;
N 73°07'14" E a distance of 30.00 feet;
S 58°56'19" E a distance of 45.00 feet;
N 49°08'11" E a distance of 99.74 feet to the most northerly corner of Tract A of said plat of Verona Division 2 and the southerly margin of Panorama Drive SE as described in Warranty Deed recorded under Auditor's File Number 200105040368, said corner being at a point of non-tangent curve to the left having a radius of 454.00 feet (the radius center bears N61°35'41"E);

Thence southeasterly 311.66 feet along said curve and said southerly margin through a central angle of 39°19'56";

Thence continuing along said southerly margin S 67°44'15" E a distance of 23.06 feet to the beginning of a curve to the right having a radius of 25.00 feet;

Thence southeasterly and southerly 37.96 feet along said curve through a central angle of 86°59'27", an arc length of 37.96 feet to the westerly margin of Evergreen Way SE as described in Warranty Deed recorded under Auditor's File Number 200105040368 and the beginning of a reverse curve to the left having a radius of 927.50 feet;

Thence southerly 140.60 feet along said curve and said westerly margin through a central angle of 08°41'08", an arc length of 140.60 feet;

Thence N 55°00'00" E along said southeasterly margin of Evergreen Way SE a distance of 166.23 feet to the beginning of a curve to the left having a radius of 430.00 feet;

Thence northeasterly 283.27 feet along said curve and said southeasterly margin through a central angle of 37°44'40" to the beginning of a compound curve to the left having a radius of 1030.00 feet;

Thence northeasterly 16.98 feet along said curve and said southeasterly margin through a central angle of 00°56'40" to the most northerly northwest corner of Lot 22 of said plat of Lakeland Division 1, Phase 2, and the north line of Section 6, Township 20 North, Range 5 East, W.M.;

Thence along last said north line S 88°34'43"E a distance of 808.02 feet to the northeast corner of Said Section 6 and the terminus of this line description.

The basis of bearings for this description is Record of Survey for Segregation prepared by Apex Engineering dated February 26, 2001 and recorded under Auditors File Number 200102265002, records of Pierce County, Washington.

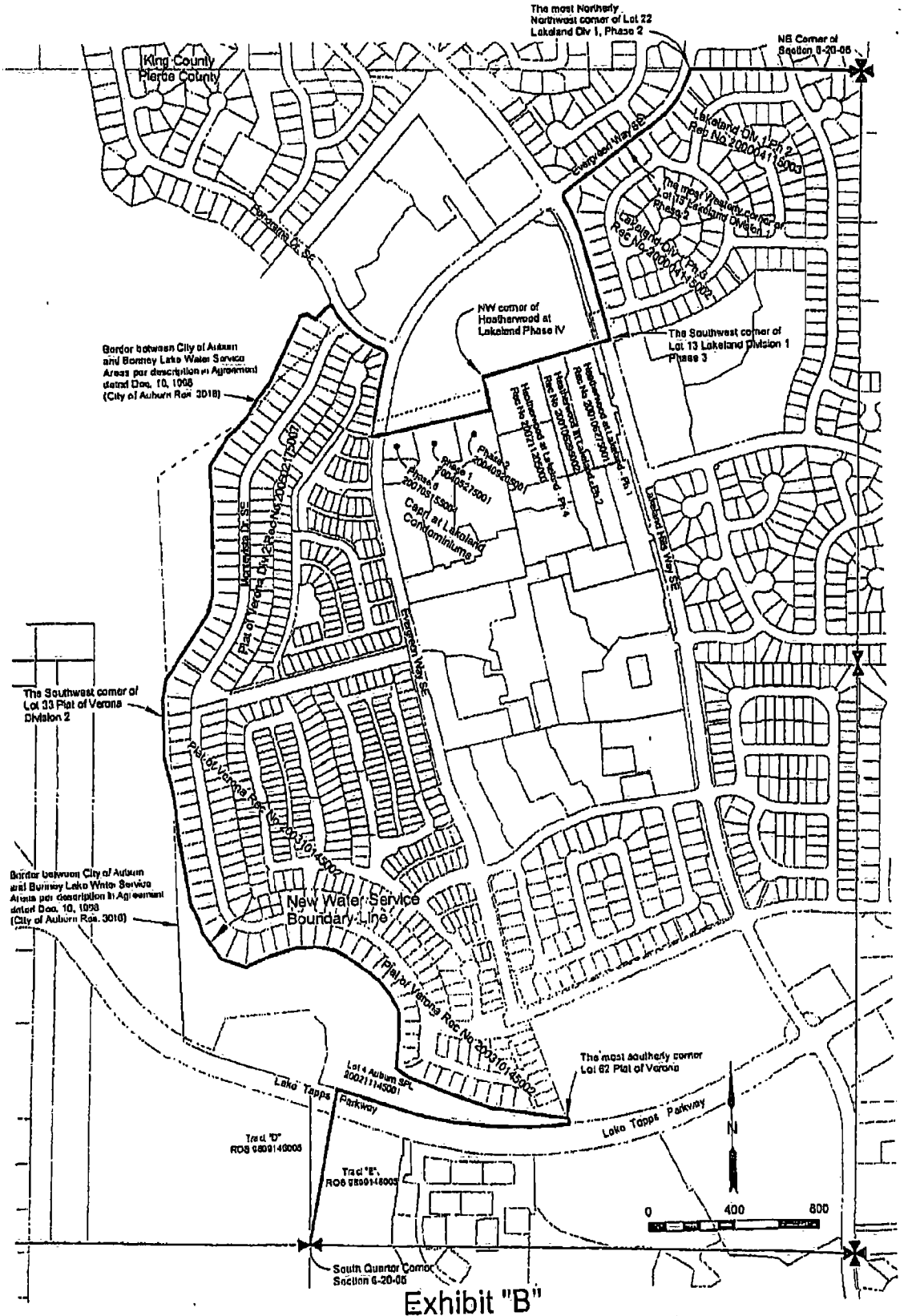


Exhibit "B"

Auburn-Bonney Lake Water Service Boundary

Map updated 01-23-2018

ORIGINAL

AN AGREEMENT BETWEEN THE CITIES OF PACIFIC AND AUBURN RELATING TO URBAN SERVICE AREA DESIGNATION

THIS IS AN AGREEMENT between the Cities of Pacific, a municipal corporation of the State of Washington ("Pacific"), and Auburn, a municipal corporation of the State of Washington ("Auburn"), hereinafter collectively referred to as the "Cities."

RECITALS

A. Pursuant to RCW 36.70A.110(2), the Washington State Growth Management Act of 1990 as amended requires each City within the County to propose the location of an urban growth area, and

B. The Pierce County Countywide Planning Policies adopted and approved by Resolution R92-86 on June 30, 1992 by the County Council and ratified by Cities within the County, establishes rules for designating City urban growth areas within the countywide urban growth boundary, and

C. The Pierce County Comprehensive Plan adopted and approved by Ordinance 94-82S by the County Council identifies an urban growth area overlap between the Cities of Auburn and Pacific.

D. It is in the public interest that the jurisdictions cooperate to designate logical and achievable urban growth area boundaries,

NOW THEREFORE, the Cities hereby agree:

1. PURPOSE.

The purpose of this agreement is to resolve the boundary overlap between the Cities of Auburn and Pacific.

2. DEFINITIONS.

Urban Service Area (USA): The incorporated urban area adjacent to a City, within which urban growth shall be encouraged and phased, and which is expected to annex to the city. Annexation is expected to occur sometime during the next 20 years at which time the city will provide services and utilities. Urban Service Area is another term for a City's Urban Growth Area.

Urban Growth Areas (UGA): Areas designated by the County within which urban growth shall be encouraged and phased and outside of which growth can occur only if it is not urban in nature. A City's Urban Growth Area is another term for its Urban Service Area.

Comprehensive Urban Growth Area Boundary (CUGA Boundary): The boundary marking the limit between the urban growth areas and other areas such as rural and resource area where urban growth is not permitted. The boundary shall be designated by the County in

consultation with the appropriate Cities, under the requirement of the Growth Management Act, as amended.

3. PUBLIC PROCESS.

The designation of USAs in Exhibit A (map) are of interest to a variety of affected parties, including property owners, area residents, the general public, special service districts and the municipalities.

4. RELATIONSHIP TO EXISTING LAWS AND STATUTES.

This Agreement in no way modifies nor supersedes existing laws and statues and is consistent with existing laws and statues. In meeting the commitments encompassed in this Agreement, all parties will comply with the requirements of the annexation statutes, Open Meetings Act, State Environmental Policy Act, Growth Management Act and the Pierce County Countywide Planning Policies.

5. RESPONSIBILITIES.

A. The Cities acknowledge the USA boundary as shown in Exhibit A. The City of Pacific urban service area boundary will not include any area shown in exhibit A.

B. The Cities will only annex territory within their designated USAs.

C. The Cities shall conduct a public involvement process that includes, but is not limited to workshops, surveys, or hearings in areas within the USA, prior to the inclusion of any additional areas within the USA.

6. AMENDMENTS.

A. A city which desires to modify the USA shall contact the other party to this Agreement to begin discussions regarding urban service area boundary amendments. The Cities agree to participate in such discussions when called. Either Party is authorized to call a meeting upon 30 days written notice.

B. The proposed modifications shall be supported by written evidence of a significant change in one of the criteria listed in paragraph 6D. Below. The Cities shall concur that the substantial change warrants an amendment to the original designated urban service area.

C. A public process shall be conducted regarding an amendment to an urban service area.

D. *Criteria for Designation of Potential Annexation Areas*

- Recognition of resident community identification.
- Financial and technical ability to provide municipal services.
- Creation of logical service areas (vehicular accessibility and utility construction).
- Recognition of physical boundaries.

Exhibit "A" Resolution No. 2763
Adopted 12/2/96

Bodies of water
Topographical features
Watersheds
Freeways

- Protection of critical/resource areas significant to a particular jurisdiction.
  Protection of critical areas
  Opportunities for urban separators
- Logical boundaries.
  Elimination of unincoporated islands
  No overlapping potential annexation areas

E. The proposed amended USA agreement shall be submitted to the respective legislative authorities for approval.

7. DURATION AND TERMINATION.

This Agreement is effective upon signature of both parties and shall continue in effect from year to year unless terminated by a six month written notice by one party to the others.

8. SEVERABILITY CLAUSE.

Any provision of this Agreement which is declared invalid or illegal shall in no way affect or invalidate any other provision hereof and such other provisions shall remain in full force and effect.

9. INDEMNIFICATION.

A. The City of Pacific shall indemnify and hold harmless the City of Auburn and its officers, agents and employees, or any of them from any and all claims, actions, suits, liability, loss, costs, expenses and damages of any nature whatsoever, by reason of or arising out of any negligent act or omission of the City of Pacific, its officers, agents and employees, or any of them, in the performance of this Agreement. In the event that any such suit based upon such a claim, action, loss or damage is brought against the City of Auburn, the City of Pacific shall defend the same at its sole cost and expense; provided, that that the City of Auburn reserves the right to participate in such suit if any principle of governmental or public law is involved. If final judgment be rendered against the City of Auburn and its officers, agents and employees, or any of them, the City of Pacific shall satisfy the same, including all chargeable costs and attorney's fees.

B. In executing this Agreement, the City of Pacific does not assume liability or responsibility for, or in any way release, the City of Auburn from any liability or responsibility which arises in whole or in part from the existence or affect City of Auburn ordinances, rules or regulations. If any cause, claim, suit, action or administrative proceedings is commenced in which the enforceability and/or validity of any such City of Auburn ordinance, rule or regulation is at issue, the City of Auburn shall defend the same at its sole expense and if judgment is entered or damages are

awarded against the City of Pacific, the City of Auburn shall satisfy the same. including all chargeable costs and attorney's fees.

C. The City of Auburn shall indemnify and hold harmless the City of Pacific and its officers, agents and employees, or any of them, from any and all claims, actions, suits. liability, loss, costs, expenses and damages of any nature whatsoever, by reason of our arising out of any negligent act or omission of the City of Auburn, its officers, agents or employees or any of them, relating to or arising out of the performance of this Agreement. In the event that any suit based on such a claim, action, loss or damage is brought against the City of Pacific, the City of Auburn shall defend the same at its sole costs and expense; provided by the City of Auburn retains the right to participate in and suit of any principle of government law is involved; and if final judgment be rendered against the City of Pacific, and its officers, agents and employees, or any of them, the City of Auburn shall satisfy the same, including all chargeable costs and attorney's fees.

D. In executing this Agreement, the City of Auburn does not assume liability or responsibility for or in any way release the City of Pacific from any liability or responsibility which arises in whole or in part from the existence or affect City of Pacific ordinances, rules or regulations. If any cause, claim, suit, action or administrative proceedings is commenced in which the enforceability and/or validity of any such City of Pacific ordinance, rule or regulation is at issue, the City of Pacific shall defend the same at its sole expense and if judgment is entered or damages are awarded against the City of Auburn, the City of Pacific shall satisfy the same. including all chargeable costs and attorney's fees.

10. ADMINISTRATION.

This Agreement shall be administered by:

A. The Mayor of Pacific or the Mayor's designee, and

B. The Mayor of Auburn or the Mayor's designee.

Exhibit "A" Resolution No. 2763
Adopted 12/2/96

CITY OF PACIFIC

Cheryl Bertsch

Cheryl Bertsch
Mayor ProTem
Date 11/12/96

Approved as to Form:

City Attorney

CITY OF AUBURN

By Charles A. Booth
Charles A. Booth
Mayor

Date 12/5/96

Approved as to Form:

City Attorney

BHS\AGREEMT1

Exhibit "A" Resolution No. 2763
Adopted 12/2/96

REF: Resolution No. 2873
September 15, 1997

Exhibit "A" Resolution No. 2763
- Adopted 12/2/96

REF: Resolution No. 2873
September 15, 1997

ORIGINAL

AN AGREEMENT BETWEEN THE CITIES OF SUMNER AND AUBURN RELATING TO POTENTIAL ANNEXATION AREA DESIGNATION

THIS AGREEMENT is entered into on this 16th day of JULY, 1996, by and between the City of Sumner, a municipal corporation of the State of Washington (hereinafter referred to as "Sumner") and the City of Auburn, a municipal corporation of the State of Washington (hereinafter referred to as "Auburn").

WHEREAS, pursuant to RCW 36.70A.110(2), the Washington State Growth Management Act of 1990 as amended, requires each city within Pierce County to propose the location of an urban growth area; and

WHEREAS, the King Countywide Planning Policies adopted and approved by Ordinance 10450 on July 6, 1992, by the King County Council and amended by Ordinance 11446 on July 19, 1994 and ratified by cities within King County, establish rules for designating potential annexation areas for cities within the countywide urban growth boundary; and

WHEREAS, King Countywide Planning Policy LU-31 states that each city shall designate a Potential Annexation Area (PAA) in collaboration with adjacent counties and cities and King County, and in consultation with residential groups in affected areas; and

WHEREAS, Pierce Countywide Planning Policies adopted and approved by Resolution No. R92-86 on June 30, 1992 by the Pierce County Council reestablish rules for designating urban growth areas for cities within Pierce County; and

WHEREAS, Pierce Countywide Planning Policy No. 1 on Urban Growth areas states "The County shall designate urban growth areas for the County and each municipality in the County based on consultations between the County and each municipality"; and

WHEREAS, the Pierce County Comprehensive Plan approved November 29, 1994 by the Pierce County Council establishes procedures for the adoption of Urban Service Areas (USA's) as a part of a Comprehensive Urban Growth Area (CUGA). The plan also adopts Urban Service Areas for the jurisdictions within Pierce County. The plan indicates an overlap of the USA's for the Cities of Auburn and Sumner in the general vicinity of an approved private development called Lakeland; and

WHEREAS, it is of mutual interest to Sumner and Auburn to resolve the overlaps between the Potential Annexation Areas in order to allow for continued land use and capital facility planning without threat of litigation or appeals; and

WHEREAS, in the spirit of cooperation and mutual understanding, Sumner and Auburn desire to address mutual interests, work together on issues of mutual benefit, and enter into agreements to work constructively on issues of concern; NOW THEREFORE,

Exhibit A Resolution No. 2762
August 5, 1996

In consideration of the mutual benefits, Sumner and Auburn hereby agree to the terms and conditions as set forth below:

SECTION 1. PURPOSE.

The purpose of this agreement is to confirm the decision made between Sumner and Auburn for the identification of Potential Annexation Area boundaries and Urban Service Areas.

SECTION 2. DEFINITIONS.

A. Potential Annexation Area (PAA): is a term used in the King Countywide Planning Polices meaning the incorporated urban area adjacent to a city, within which urban growth shall be encouraged and phased, and which is expected to annex to the city. Annexation is expected to occur sometime during the next twenty (20) years at which time the city will provide services and utilities. For purposes of this agreement, the term Potential Annexation Area is the same as Urban Service Area (USA) as applied in the Pierce County Comprehensive Plan.

B. Urban Growth Areas: means areas proposed by the Sumner and Auburn and designated by the county within which urban growth shall be encouraged and passed and outside of which growth can occur only if it is not urban in nature.

C. Urban Growth Boundary: means the boundary marking the limit between the urban growth areas and other areas such as rural and resource area where urban growth is not permitted. The boundary shall be designated by the county in consultation with Sumner and Auburn, under the requirements of the Growth Management Act.

SECTION 3. PUBLIC PROCESS.

The designation of PAAs in Exhibit A (map) attached hereto and by this reference made a part of this agreement are of interest to a variety of affected parties, including property owners, area residents, the general public, special service districts and the municipalities.

SECTION 4. RELATIONSHIP TO EXISTING LAWS AND STATUES.

This Agreement shall in no way modify nor supersede existing laws and statutes and is consistent with existing laws and statutes. In meeting the commitments encompassed in this Agreement, all parties shall comply with the requirements of the annexation statutes, Open Public Meetings Act, State Environmental Policy Act, Growth Management Act and Countywide Planning Policies for King and Pierce Counties.

SECTION 5. RESPONSIBILITIES.

A. Sumner and Auburn acknowledge the PAA boundary described in Exhibit A.

B. Sumner and Auburn shall only annex territory within their designated PAAs.

C. Sumner and Auburn shall conduct a public involvement process that includes, but is not limited to, workshops, surveys, or hearings in areas within the PAA prior to the inclusion of any additional areas within the PAA.

SECTION 6. JOINT PLANNING

Sumner and Auburn shall work cooperatively together in the planning and delivery of services to the respective PAA to the extent feasible as described below:

A. Sumner and Auburn shall initiate discussions between staff to review the feasibility of sharing the costs associated with the construction and operation of a water storage facility. Both cities shall also explore the possibility of shared water resources.

B. Sumner and Auburn shall work cooperatively on other issues of mutual concern which may arise including:
   1. Design, funding, and construction of the 8th Street Corridor from Lake Tapps to SR 167;
   2. Railroad traffic and the mitigation of increased rail activity on transportation;
   3. Mitigation of stormwater impacts to the valley;
   4. Modifications to the Mud Mountain Dam to reduce base flood levels;
   5. Joint fire services and operations such as training, hazardous spill response, mutual aide, and special operations;
   6. Bicycle and pedestrian trails connecting the Sumner and Auburn;
   7. Watershed planning and management related to the Stuck (White) River and its tributaries; and
   8. Joint planning and participation with Pierce County.

SECTION 7. AMENDMENTS.

A. A city which desires to modify the Potential Annexation Area shall contact the other party to this Agreement to begin discussions regarding potential annexation or boundary amendments. Sumner and Auburn agree to participate in such discussions when called. Either city is authorized to call a meeting upon providing the other city has at least a thirty (30) day written notice.

B. The proposed amendments shall be supported by written evidence of a significant change in one of the criteria listed in paragraph 7D below. Sumner and Auburn shall concur that the substantial change warrants an amendment to the original designated PAA.

C. A public process shall be conducted regarding an amendment to a potential annexation area as described in 5(c) above.

D. Criteria for Designation of Potential Annexation Areas

1. Recognition of resident community identification.
2. Financial and technical ability to provide municipal services.
3. Creation of logical service areas (vehicular accessibility and availability of utility service).
4. Recognition of physical boundaries.
   -bodies of water
   -topographical features
   -watersheds
   -freeways
5. Protection of critical/resource areas significant to a particular jurisdiction.
   -protection of critical areas
   -opportunities for urban separators
6. Logical boundaries.
   -elimination of unincorporated islands
   -no overlapping potential annexation areas

E. The proposed amended PAA agreement shall be submitted to the respective legislative authorities for approval.

SECTION 8. DURATION AND TERMINATION.

This Agreement shall be in effect upon signature of both parties and shall continue in effect from year to year unless terminated by a six month written notice by one party to the others.

SECTION 9. SEVERABILITY CLAUSE.

Any provision of this Agreement which is declared invalid or illegal shall in no way affect or invalidate any other provision hereof and such other provisions shall remain in full force and effect.

SECTION 10 ADMINISTRATION.

This Agreement shall be administered by the Mayor of the City of Sumner and the City of Auburn, or their designees.

CITY OF SUMNER

Robert A. Moltke, Mayor

7-16-96
Date

Attest:

City Clerk

Approved as to form:

City Attorney

CITY OF AUBURN

Charles A. Booth, Mayor

August 5, 1996
Date

Attest:

City Clerk

Approved as to form:

City Attorney

REF: Resolution No. 2873
September 15, 1997

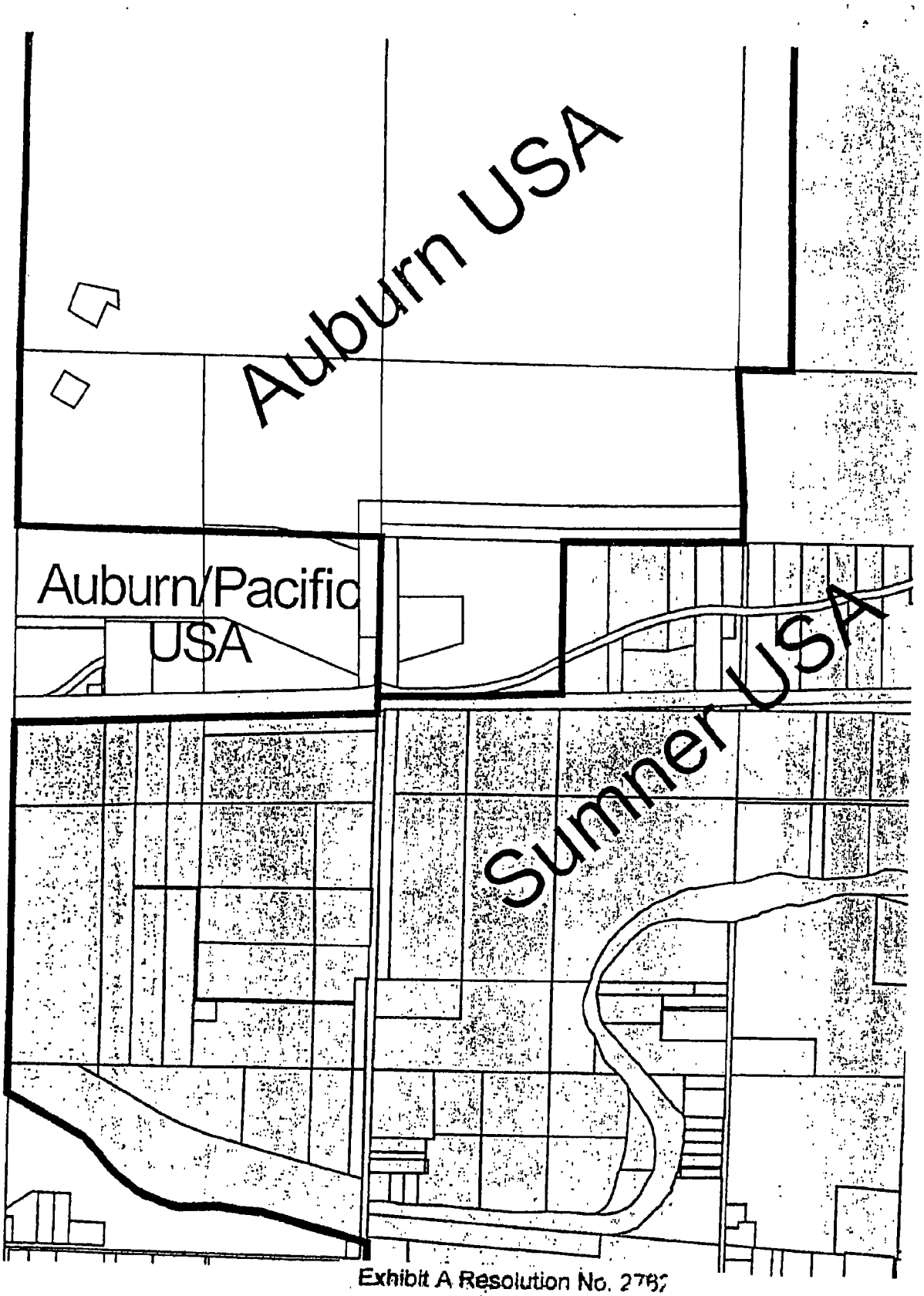


Exhibit "A" - Potential Annexation Areas

Exhibit A Resolution No. 2787
August 5, 1996

November 19, 2015

Chad Williams, Senior Planner
Pierce County Department of Planning and Land Services
2401 South 35th Street
Tacoma, WA 98409

RE: Service Area Agreement

Dear Chad Williams

On November 16, 2015 the City of Auburn City Council passed Resolution 5182 authorizing a water service area agreement between the City of Auburn and Pierce County. I have included a fully signed original. Please send me a recorded copy of the agreement at your earliest convenience. Thank you.

City of Auburn
Attn: Shawn Campbell
25 West Main Street
Auburn, WA 98001

Sincerely,

Shawn Campbell
Deputy City Clerk

ORDINANCE NO. 6624

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, RATIFYING THE FRANCHISE AGREEMENT WITH LAKEHAVEN UTILITY DISTRICT ADOPTED BY RESOLUTION NO. 3650

WHEREAS, the Lakehaven Utility District currently owns, operates, and maintains a water system within the City of Auburn's public rights-of-way within the City of Auburn corporate boundary; and

WHEREAS, in 2004, the City and Lakehaven Utility District negotiated a franchise agreement that was approved by the City Council through Resolution Number 3650; and

WHEREAS, Revised Code of Washington 35A.47.040 includes certain procedural requirements not typically followed when adopting a resolution; and

WHEREAS, the City wishes to ensure that the benefits and obligations inured to Lakehaven Utility District through Resolution Number 3650 are not invalidated by any procedural deficiency; and

WHEREAS, ratification of Resolution Number 3650 by this Ordinance will resolve any omission in the procedural requirements of RCW 35A.47.040 and conform to the City's standard practice of franchise adoption by ordinance; and

WHEREAS, following proper notice, the City Council held a public hearing on ratification of Resolution Number 3650; at which time interested citizens were heard in a full public proceeding affording opportunity for comment by any and all persons desiring to be heard; and

WHEREAS, from information presented at such public hearing, and from facts and circumstances developed or discovered through independent study and investigation, the City Council now deems it appropriate and in the best interest of the City and its inhabitants that Resolution Number 3650 be ratified.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, DO ORDAIN as follows:

Section 1. Grant of Franchise The provisions of Resolution Number 3650, attached hereto as Exhibit A and incorporated herein by this reference, are hereby adopted as if fully set forth herein.

Section 2. Implementation. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directions of this legislation.

Section 3. Severability. The provisions of this ordinance are declared to be separate and severable. The invalidity of any clause, sentence, paragraph, subdivision, section or portion of this ordinance, or the invalidity of the application thereof to any person or circumstance shall not affect the validity of the remainder of this ordinance, or the validity of its application to other persons or circumstances.

Section 4. Effective date. This Ordinance shall take effect and be in force five days from and after its passage, approval and publication as provided by law.

INTRODUCED: NOV 21 2016

PASSED: NOV 21 2016

APPROVED: NOV 21 2016

CITY OF AUBURN

Nancy Backus
NANCY BACKUS, MAYOR

ATTEST:

Danielle E. Daskam, City Clerk

APPROVED AS TO FORM:

Daniel B. Heid, City Attorney

Published: November 25, 2016 in The Seattle Times

RESOLUTION NO. 3650

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR TO EXECUTE A FRANCHISE AGREEMENT BETWEEN THE LAKEHAVEN UTILITY DISTRICT AND THE CITY OF AUBURN, ALLOWING THE LAKEHAVEN UTILITY DISTRICT TO CONNECT, INSTALL, OPERATE, MAINTAIN AND REPAIR WATER SYSTEM, FACILITIES, AND APPURTENANCES IN, OVER, ALONG, ACROSS AND UNDER THE FRANCHISE AREA FOR THE PURPOSE OF PROVIDING WATER SERVICE

WHEREAS, the Lakehaven Utility District currently owns, operates, and maintains a water system within Auburn's public right of way located in the franchise area; and

WHEREAS, the Lakehaven Utility District is seeking a new comprehensive franchise with Auburn for public water facilities installed within Auburn's current and future public right of way; and

WHEREAS, in order to maintain control over the use of City of Auburn right-of-ways by utilities operating within the City of Auburn, it is appropriate to enter into franchise agreements with such utilities; and

WHEREAS, Lakehaven Utility District is such a utility, and has negotiated this franchise agreement with the City of Auburn acceptable to both parties; and

WHEREAS, the City of Auburn has determined that it is in the best interests of the public to grant the Lakehaven Utility District a water franchise on the terms and conditions set for in this Agreement.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, HEREBY RESOLVES as follows:

Section 1. The Mayor of the City of Auburn is herewith authorized to execute a Franchise Agreement between the Lakehaven Utility District and the City of Auburn in substantial conformity with the Agreement attached hereto, marked as Exhibit "A" and incorporated herein by this reference.

Section 2. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

Section 3. This resolution shall be in full force and effect upon passage and signatures hereon.

DATED this 2nd day of February, 2004.

CITY OF AUBURN

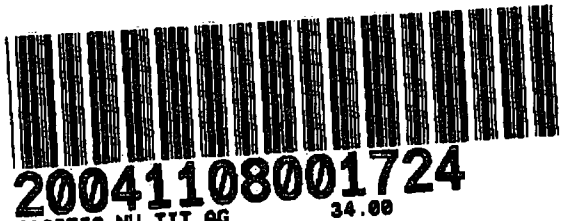
PETER B. LEWIS
MAYOR

ATTEST:

Danielle E. Daskam,
City Clerk

APPROVED AS TO FORM:

Daniel B. Heid,
City Attorney



Return Address:
Auburn City Clerk
City of Auburn
25 West Main St.
Auburn, WA 98001

RECORDER'S COVER SHEET

Document Title(s) (or transactions contained therein):

Franchise Agreement (Resolution No. 3650)

16/34 PNWT
W 9249-12

Reference Number(s) of Documents assigned or released:

☐ Additional reference #'s on page _____ of document

Grantor(s)/Borrower(s) (Last name first, then first name and initials)

Auburn, City of

Grantee/Assignee/Beneficiary: (Last name first)

1. Lakehaven Utility District

Legal Description (abbreviated: i.e. lot, block, plat or section, township, range)

PER RCW 39.34

☐ Additional legal is on page of document.

Assessor's Property Tax Parcel/Account Number

N/A

☐ Assessor Tax # not yet assigned

EXHIBIT "A"

CITY OF AUBURN, WASHINGTON
WATER FRANCHISE AGREEMENT
WITH THE LAKEHAVEN UTILITY DISTRICT

THIS FRANCHISE AGREEMENT, made and entered into this 23rd day of September, 2004, by and between the CITY OF AUBURN, Washington and the LAKEHAVEN UTILITY DISTRICT:

WITNESSETH:

WHEREAS, the Lakehaven Utility District currently owns, operates, and maintains a water system within Auburn's public right-of-way located in the franchise area; and

WHEREAS the Lakehaven Utility District is seeking to establish a comprehensive franchise with the City of Auburn for water system lines within Auburn's current and future public right-of-way; and

WHEREAS, in order to maintain control over the use of City of Auburn rights-of-way by utilities operating within the City of Auburn, it is appropriate to enter into franchise agreements with such utilities; and

WHEREAS, Lakehaven Utility District is such a utility, and has negotiated this franchise agreement with the City of Auburn acceptable to both parties; and

WHEREAS, the City of Auburn has determined that it is in the best interests of the public to grant the Lakehaven Utility District a franchise on the terms and conditions set forth in this franchise agreement.

NOW, THEREFORE THE CITY OF AUBURN AND THE LAKEHAVEN UTILITY DISTRICT AGREE AS FOLLOWS:

SECTION 1 DEFINITIONS

Where used in this franchise agreement ("Franchise"), the following definitions shall apply:

1.1 "Franchisee" means the Lakehaven Utility District, a Washington municipal corporation, and its respective successors and assigns.

1.2 "City" means the City of Auburn, a Washington municipal corporation.

1.3 "Franchise Area" means all of the public roads, streets, avenues, alleys, highways, and other rights-of-way of the City as now laid out, platted, dedicated or improved; and any and all public City roads, streets, avenues, alleys, highways, and other rights-of-way that may hereafter be laid out, platted, dedicated or improved within the area in which the City has jurisdiction, as described in Attachment 1 and as depicted in

Attachment 2, both attachments attached hereto, which is by this reference incorporated as if fully set forth herein; provided, that the Franchise Area shall not include or convey any right to the Franchisee to install facilities on, or to otherwise use, City owned or leased properties; and provided that the terms of this franchise (i.e., permitting and enforcement) shall not apply to those public roads, streets, avenues, alleys, highways, and other rights-of-way that may hereafter be laid out, platted, dedicated or improved within the area as described in Attachment 1 and depicted in Attachment 2 until such time that the City has assumed jurisdiction thereof.

1.4 "Facilities" means the Franchisee's water system, lines, mains, pump stations, appurtenances, and all other necessary or convenient appurtenances for the purpose of providing water service.

SECTION 2 FRANCHISE GRANT

Subject to the terms and conditions set forth in this Franchise, the City grants to the Franchisee the right to construct, own and maintain its Facilities, including, but not limited to, water pipelines, pump stations, and appurtenances within the City's public right-of-way and the Franchisee's water service area. In exercising authority to construct and install its Facilities and to excavate trenches in City roads for the purposes of constructing, installing, operating, maintaining, removing, and replacing its Facilities, and making connections between the same to the dwellings and other buildings of the consumers, the Franchisee shall be governed by and conform to the general rules adopted by the Public Works Department of the City, and the Franchisee, at no expense to the City, shall complete all work and shall replace and restore the City roads to the condition of the City roads existing immediately prior to such disturbance; PROVIDED, HOWEVER, that no such work shall be done prior to the obtaining of a permit therefor issued by the City's Public Works Director (hereinafter "Director"), which permit shall set forth conditions pertaining to the work to be done and specifications for the restoration of the roads to the same condition as they were immediately prior to such work. If the Franchisee does not repair the City roads to the satisfaction of the Director, the City may, at its sole discretion, repair such City roads, or cause them to be repaired, and the Franchisee hereby agrees to reimburse the City for the cost of such work, including reasonable overhead costs.

SECTION 3 FRANCHISE TERM

This Franchise shall take full force and effect five calendar days after being approved by the City, and shall be valid for a period of 25 years, expiring in 2029; provided, that this Franchise shall not take effect and the Franchisee shall have no rights under this Franchise unless the Franchisee files a written acceptance of this Franchise with the City pursuant to Section 4 of this Franchise.

SECTION 4 ACCEPTANCE BY FRANCHISEE OF TERMS AND CONDITIONS

The full acceptance of this Franchise and all of its terms and conditions shall be filed with the City Clerk within forty-five (45) days from the date of the resolution approving this Franchise by the Franchisee's duly elected Board of Commissioners. Full acceptance of this Franchise is a condition precedent to its taking effect, and unless this Franchise is

accepted within the time specified, this grant will be null and void and have no force or effect.

SECTION 5 NON-EXCLUSIVE FRANCHISE

This Franchise is not exclusive. It does not prohibit the City from granting franchises for other public or private utilities in, over, along, across, and under any City property, including the Franchise Area. This Franchise does not prevent or prohibit the City from constructing, altering, maintaining or using any of the Franchise Area. The City retains full power to make all changes, relocations; repair, maintenance or other work to or in the Franchise Area as the City deems fit.

SECTION 6 JURISDICTION

This Franchise is intended to convey limited rights and interest only as to those roads and rights-of-way in which the City has an actual interest within the Franchise Area. It is not a warranty of title or of interest in City road rights-of-way. None of the rights granted to the Franchisee shall affect the jurisdiction of the City over City road rights-of-way or the City's power to perform work upon its roadways, rights-of-way or appurtenant drainage facilities including by constructing, altering, renewing, paving, widening, grading, blasting or excavating. The parties shall comply with all applicable rules and regulations pertaining to them in connection with the matters covered herein.

SECTION 7 REGULATION OF USE AND CONTROL

This Franchise does not deprive the City of any powers, rights, or privileges it now has or may later acquire in the future to regulate the use of and to control the City road rights-of-way covered by this Franchise. The City reserves the right and power at all times to exercise its police powers with respect to the time, manner and location of the placement of the Franchisee's Facilities.

SECTION 8 EMINENT DOMAIN

This Franchise and the limited rights and interests granted by this Franchise are subject to the exercise of eminent domain. In the event of an exercise of eminent domain by the City, the value to be attributed to all the rights and interests granted under this Franchise shall not exceed the actual amount the Franchisee paid to the City in obtaining this Franchise.

SECTION 9 VACATION

If at any time the City vacates any City rights-of-way covered by this Franchise, the City will not be held liable for any damages or loss to the Franchisee by reason of such vacation. The City may, after giving thirty (30) days written notice to the Franchisee, terminate this Franchise with respect to any City road or rights-of-way vacated. However, should Franchisee notify the City that an easement is required for existing or proposed facilities within the proposed vacation area, the City shall withhold approval of such vacation until the Franchisee has notified the City that the necessary easement(s) have been secured, or provisions otherwise made to maintain the viability and use of existing Facilities.

SECTION 10 ENFORCEMENT

The City's failure to enforce any provision of this Franchise does not constitute a waiver of its right to enforce that provision or any other provision of this Franchise.

SECTION 11 INDEMNITY AND HOLD HARMLESS

11.1 The Franchisee shall defend, indemnify and hold harmless the City, its appointed and elected officials, and its employees and agents from and against liability for all claims, actions, injuries, demands, liabilities, losses, costs, damages and judgments, including costs of defense thereof, (collectively referred to as "damages") for injury to persons, death or property damage caused by, arising out of, or incidental to the Franchisee's exercise of the rights and privileges granted by this Franchise, except for damages caused by or arising out of the City's sole negligence. In the event that any such claim or demand for damages is presented to or filed with the City, or if any suit or action is initiated against the City based on such claims or demands for damages, the City shall promptly notify the Franchisee of the claim, demand, suit or action and the Franchisee shall have the right, at its election and its sole cost and expense, to settle and compromise such claim, demand, suit or action, or defend the same at the Franchisee's sole cost and expense.

11.2 If it is determined that RCW 4.24.115 applies to this Franchise, the Franchisee agrees to defend, hold harmless and indemnify the City to the maximum extent permitted under that statute, and specifically for the Franchisee's negligence concurrent with that of the City to the full extent of the Franchisee's negligence.

SECTION 12 INSURANCE

12.1 The Franchisee shall keep a policy of insurance in force with a minimum limit of five million dollars ($5,000,000.00). Verification of insurance coverage is a condition precedent to the effectiveness of this Franchise.

12.2 The insurance shall be maintained in full force and effect at the Franchisee's sole expense throughout the term of the Franchise, and, should such insurance be terminated, this Franchise shall terminate as of the date of the termination of insurance coverage.

12.3 The coverage provided by the Franchisee's insurance policies shall be primary to any insurance maintained by the City, except as to losses or damages attributable to the sole negligence of the City. Any insurance maintained by the City that might relate to this Franchise shall be in excess to the Franchisee's insurance and shall not contribute with or to it. The City has no obligation to report occurrences to the insurance companies unless a claim is filed with the City's City Council; and the City has no obligations to pay the Franchisee's premiums.

12.4 The Franchisee shall be solely and completely responsible to perform all work related to this Franchise in compliance with all applicable federal, state, county and city statutes, rules, regulations, ordinances, orders and codes. The Franchisee's attention is directed to the requirements of the Washington Industrial Safety and Health Act, Chapter 49.17 RCW. The Franchisee shall be solely and completely responsible for

safety and safety conditions on its job sites and for its work within the Franchise Area, including the safety of all persons and property during performance of any works therein. The services of the City or City's consultant personnel in conducting construction review of the Franchisee's work relating to the Franchise is not intended to include review of the adequacy of the Franchisee's work methods, equipment, scaffolding, or trenching, or safety measures in, on or near such Franchise Area or job site. The Franchisee shall provide safe access for the City and its inspectors to adequately inspect the work and its conformance with applicable statutes, ordinances, rules, regulations, and the Franchise.

SECTION 13 INSTALLATION, REPAIR, REMOVAL OR RELOCATION

13.1 The Franchisee shall, at no expense to the City, expeditiously repair all existing Facilities that it owns within the Franchise Area, including any damage caused directly or indirectly by its Facilities, all appurtenant Facilities and service lines connecting its system to users, if the City requires such repair for any reasonable purpose.

13.2 The Franchisee shall, at no expense to the City, adjust, remove or relocate existing Facilities within the Franchise Area, including all appurtenant Facilities and service lines connecting its system to users, if the City determines such adjustment, removal or relocation is reasonably necessary to allow for an improvement or alteration planned by the City. The City shall give the Franchisee written notice of such requirement as soon as practicable. The written notice shall include all available information, such as plans and specifications, as is reasonably necessary for the Franchisee to plan for such adjustment, removal or relocation.

13.3 Franchisee's Facilities shall be constructed, installed, maintained and repaired within the Franchise Area so as to provide safety of persons and property, and not interfere with the free passage of traffic, all in accordance with the laws of the State of Washington, and the ordinances, resolutions, rules and regulations of the City.

13.4 For projects that are a part of the City's capital improvement program, in addition to any other notice given to the Franchisee, the City shall provide a copy of the capital improvement plan and six (6) year transportation improvement plan when requested. Further, the City shall provide a horizontal plan and vertical profile of the roadway and drainage facilities within it, both existing and as proposed by the City, and the proposed construction schedule. The initial design information shall be given at least one hundred and eighty (180) days before construction is scheduled to begin, except in cases of urgent construction or emergencies. The Franchisee shall respond to this notice, and to any later notices of revised designs, within twenty (20) days of the date of the notice, by providing to the City the Franchisee's best available information as to the location of all the Franchisee's Facilities, including all appurtenant Facilities and service lines connecting its system to users, and all Facilities that it has abandoned, within the area proposed for the project.

13.5 The City shall offer the Franchisee the opportunity to participate in the preparation of bid documents for the selection of a contractor to perform the public works project as well as all required adjustments, removals or relocations of the Franchisee's Facilities. The City shall have sole authority to choose the contractor to perform such

work. Such bid documents shall provide for an appropriate cost allocation between the parties. In addition to the Franchisee's allocation of contractor costs, the Franchisee shall reimburse the City for all costs, to include but not be limited to legal, engineering, inspections, administration and/or soils testing, related to the Franchisee's work and reasonably incurred by the City in the administration of such joint construction contracts. Such costs shall include the direct salary cost of the time of City professional and technical personnel, including the City's consultants, spent productively engaged in such work, plus overhead costs at the standard rate charged by the City on other similar projects. The specific terms of the joint participation on any public work shall be as set forth in a written agreement between the parties.

13.6 It is understood that emergency situations may arise that could threaten public health and/or continued operation of the Franchisee's utility system and the Franchisee may be unable to notify the City in the manner prescribed in Section 14 of this Franchise. In such a situation the Franchisee shall immediately correct the hazardous situation and continue to use best efforts to contact the City staff. The Emergency Phone Number for the City of Auburn is (253) 931-3048, and that for the Lakehaven Utility District is (253) 941-1516. Dialing 911 is advised for emergency situations that may result in imminent threats to life and/or property.

SECTION 14 REQUIREMENT OF CONSTRUCTION PERMITS

14.1 The Franchisee has the right, privilege and authority to enter the City road rights-of-way for the purpose of constructing, installing, operating, maintaining, replacing or repairing its Facilities on the condition that it obtains construction, excavation, and right-of-way use permits issued by the City. Any work performed, whether by Franchisee, its contractors, or third parties, shall include necessary paving, patching, grading and any other reasonably necessary repair or restoration to the City rights-of-way. All work shall be done to the City's satisfaction.

14.2 All equipment, pipelines and appurtenances which are used in the construction, installation, operation, maintenance or repair of the Franchisee's Facilities and which are located within the City road rights-of-way and owned by the Franchisee shall be considered to be part of the Franchisee's system and shall be the responsibility of the Franchisee. All permits for the construction, installation, operation, maintenance or repair of the Franchisee's system shall be applied for and given in the name of the Franchisee, who will be responsible for all work done under the permit. The Franchisee remains responsible whether the work is performed by the Franchisee, its contractors, or by third parties.

14.3 When required by the City's Public Works Director, the Franchisee shall post a bond to the City in the amount sufficient for any road repair or restoration. The amount of the bond shall be set by the City and must be filed with the City before a permit will be issued.

SECTION 15 PERFORMANCE OF WORK

15.1 Any work performed by the Franchisee in the Franchise Area shall conform to all City ordinances and requirements including, but not limited to, Auburn City Code and the City's Design and Construction Standards in force when the work is performed. All traffic control shall conform to the current edition of the Manual of Uniform Traffic Control Devices in force when the work is performed.

15.2 If work performed under this Franchise makes it necessary to turn off or diminish water pressure or potential flow to any fire hydrant, the Franchisee shall notify the City's Fire Department by telephone and by written notice, that water pressure or fire flow conditions have been affected. Except in the case of an emergency, the notice shall be provided at least 48 hours prior to the water pressure or potential flow being suspended or diminished. If more than one fire hydrant will be affected, the Franchisee shall provide a map of the affected area to the Fire Department. Out-of-service fire hydrants must be identified as not operational by covering with a properly secured burlap or plastic bag. Fire hydrants should be returned to full service as soon as reasonably possible or no longer than two working days from the date service was suspended or diminished. The Franchisee shall notify the City's Fire Department when the hydrant(s) is/are returned to full service.

SECTION 16 RESTORATION OF CITY RIGHTS-OF-WAY

After performing work on, under or adjacent to City road rights-of-way, the Franchisee is responsible for and shall leave all City road rights-of-way in the condition of the City road rights-of-way existing immediately prior to such disturbance. If the Franchisee, its contractors, or third parties working under permit should fail to diligently restore City road rights-of-way to the satisfaction of the City, the City may make such repairs or restorations as are necessary to return the City road rights-of-way to a condition reasonably comparable to the condition of the City road rights-of-way existing immediately prior to such disturbance. Upon presentation of an itemized invoice for repairs or restorations, including all applicable costs, both direct and indirect, to include, but not be limited to, the cost of labor, tools, materials and equipment, the Franchisee shall pay the invoice within sixty-five (65) days of its receipt and approval.

SECTION 17 INFORMATION ON LOCATION OF FACILITIES

The Franchisee shall provide the City with all information requested by the City regarding the location of the Franchisee's current Facilities, including, but not limited to, copies of all record drawings for such Facilities. If the Franchisee performs any work to install, repair, reconstruct, or replace Facilities in the Franchise Area after this Franchise's effective date, the Franchisee shall provide the City with all information requested by the City regarding the location of those Facilities, including, but not limited to, copies of record drawings.

SECTION 18 COORDINATION OF WORK IN FRANCHISE AREA

To facilitate the coordination of work in City rights-of-way, if either the Franchisee or the City plans to make excavations in the Franchise Area, the party planning such excavation shall provide written notice to the other of the planned excavation, affording the other party the opportunity to share in the excavation; provided, that (1) such joint use shall not unreasonably delay the work of the party causing the excavation to be made, (2) such joint use shall be arranged and accomplished on terms and conditions satisfactory to both parties, and (3) either party may deny such request for safety reasons.

SECTION 19 BLASTING REQUIREMENTS

The Franchisee's right to construct, install, operate, maintain and repair Facilities does not preclude the City, its agents or contractors from blasting, grading, or doing other road work contiguous to the Franchisee's Facilities. When practical, the City shall give the Franchisee forty-eight (48) hours notice of blasting or excavating.

SECTION 20 SURVEY MARKERS AND MONUMENTS

Before any work is performed under this Franchise, the Franchisee shall establish two or more reference marks to all monuments and markers of every nature relating to subdivisions, plats, rights-of-way, and all other surveys. The reference points shall be located so that they will not be disturbed during any of Franchisee's operations under this Franchise. The method of referencing monuments or other markers or points shall be approved by the City before placement. The replacement of all markers or monuments disturbed during any construction of the Franchisee shall be made as promptly as conditions permit. The cost of monuments or markers lost, destroyed, or disturbed and the expense or replacement with approved markers or monuments shall be borne by the Franchisee.

SECTION 21 RESERVATION OF RIGHTS

21.1 The City reserves the right to impose, to the extent authorized by law, a utility tax on the Franchisee and/or to charge the Franchisee a reasonable fee for services provided or rights granted under this Franchise.

21.2 The Franchisee agrees that it shall be subject to all authority now or later possessed by the City or any other governing body having competent jurisdiction to fix just, reasonable and compensatory rates for services under this Franchise.

21.3 The City reserves the right, upon thirty (30) days written notice to the Franchisee, to amend or modify the provisions or conditions of this Franchise to conform to any state, county, federal, or City statute, ordinance, rule or regulation. The City may terminate this Franchise upon thirty (30) days written notice to the Franchisee if the Franchisee fails or refuses to comply with such amendment or modification.

SECTION 22 ASSIGNMENT

The Franchisee shall not have the right to assign this Franchise without the written consent of the City. No assignment shall be effective unless an acceptance by the assignee of all rights, conditions, terms, provisions and responsibilities contained within the Franchise, as well as surety bonds which the City deems necessary to be posted, are received as allowed by law. The City's approval of the assignment may be made subject to the assignee's acceptance of new or modified terms of the Franchise.

SECTION 23 PENALTY FOR VIOLATION OF CONDITIONS

If the Franchisee fails to comply with any material term, condition or responsibility under this Franchise, the City may provide the Franchisee with written notice of the City's intent to revoke the Franchise if the Franchisee's failure is not cured within thirty (30) days of the date of the notice. During the thirty (30) days following the date of the notice, the Franchisee shall have the opportunity to remedy the failure to comply. A public hearing shall be scheduled before the Auburn City Council at least thirty (30) days following the notification on the issue of the revocation. If at the hearing, the City Council finds that grounds exist to revoke the Franchise under this paragraph and that the revocation is in the public interest, the City Council may by resolution revoke the Franchise. The revocation shall be effective ninety (90) days after the public hearing.

SECTION 24 EXPIRATION AND RENEWAL

24.1 If the Franchisee requests a renewal of this Franchise prior to its expiration date, which renewal shall be granted, on terms reasonable to the parties, unless the City can demonstrate, in good faith, that such renewal would be contrary to its operation of the right of way, the City may, at the City's sole discretion, extend the term of this Franchise for up to one year beyond the expiration date to allow for processing of the renewal. If the City elects to extend the term of this Franchise, written notice of the extension shall be provided to the Franchisee prior to the Franchise expiration date.

24.2 If the Franchisee has not requested a renewal of this Franchise prior to its expiration date, the City has the right, upon thirty (30) day's prior notice to the Franchisee, to remove or relocate any of the Franchisee's Facilities as is reasonably necessary for the public's health, welfare or safety, or for the construction, alteration, or improvement of the Franchise Area, or for the construction or installation of lines or facilities of other franchise holders. The Franchisee shall be liable for costs incurred in any removal or relocation of the Franchisee's Facilities under this section.

24.3 Upon the expiration of this Franchise, the Franchisee shall continue to be responsible for the operation and maintenance of the Franchisee's existing facilities in the Franchise Area, but shall not have the right to provide additional services. This Section and Sections 11, 13, 14, 15, 16, 18, and 20 of this Franchise shall continue in force until such time as the Franchisee's Facilities are abandoned to the City's satisfaction.

SECTION 25 COMPLIANCE WITH LAWS
The Franchisee shall conform to all applicable federal, state and local laws and regulations including, but not limited to, the State Environmental Policy Act and the City's Environmental Standards and Ordinances.

SECTION 26 NON-DISCRIMINATION CLAUSE
In all hiring or employment made possible or resulting from this Franchise, there shall be no discrimination against any employee or applicant for employment because of sex, sexual orientation, age, race, color, national origin, marital status or the presence of any sensory, mental, or physical handicap, unless based upon a bona fide occupation qualification. No person shall be denied or subjected to discrimination in receipt of the benefit of any services or activities made possible by or resulting from this Franchise on the grounds of sex, sexual orientation, race, color, national origin, age, except minimum age and retirement provisions, marital status, or the presence of any sensory, mental or physical handicap.

SECTION 27 NOTICE
All notices between the two agencies hereunder may be delivered or mailed. If mailed, they shall be sent to the following respective addresses:

City of Auburn:
City Engineer
25 West Main Street
Auburn, WA 98001-4998
Tel: 253-931-3010

Lakehaven Utility District:
General Manager
31627 1st Ave South
PO Box 4249
Federal Way, WA 98063-4249
Tel: 253-941-1516

or to such other representative addresses as either party may hereafter from time to time designate in writing. All notices and payments mailed by regular post (including first class) shall be deemed to have been given on the second business day following the date of mailing, if properly mailed and addressed. Notices and payments sent by certified or registered mail shall be deemed to have been given on the day next following the date of mailing, if properly mailed and addressed. For all types of mail, the postmark affixed by the United States Postal Service shall be conclusive evidence of the date of mailing.
If an emergency situation develops, it is recommended that the City or the Franchisee call 911 to solicit an emergency response.

SECTION 28 ATTORNEYS' FEES
If either party shall be required to bring any action to enforce any provision of this Franchise, or shall be required to defend any action brought by the other party with respect to this Franchise, and in the further event that one party shall substantially prevail in such action, the losing party shall, in addition to all other payments required therein, pay all of the prevailing party's reasonable costs in connection with such action, including such sums as the court or courts may adjudge reasonable as attorney's fees in trial court and in appellate courts.

SECTION 29 SEVERANCE
If any term, provision, condition or portion of this Franchise is held to be invalid, such invalidity shall not affect the validity of the remaining portions of this Franchise which shall continue in full force and effect, unless the dominant purpose of the Franchise would be prevented or the public interest would no longer be served, as determined by the City.

SECTION 30 EFFECTIVE DATE
The resolution approving the Franchise, having been introduced at least five days prior to its date of passage and submitted to the city attorney, and being approved by at least a majority of the entire city council at a regular city council meeting, shall take effect and be in force five calendar days after its passage and approval by both parties to this Franchise.

SECTION 31 EXISTING UTILITIES
This Franchise shall govern existing and future water system facilities currently owned, operated and maintained by Lakehaven Utility District within the City of Auburn.

SECTION 32 DISPUTE RESOLUTION
In the event that a dispute arises with regard to the terms of this Franchise Agreement, either party may request that the dispute be submitted to non-binding mediation or arbitration prior to court action. Such request for non-binding mediation or arbitration shall be made in writing and mailed by first class, U.S. Mail to the other party. The mediator or arbitrator shall be chosen by agreement of the parties. Either party may refuse to submit to the dispute resolution process. Refusal to engage in the dispute resolution process shall not prejudice the refusing party in any way.

IN WITNESS WHEREOF the parties hereto have executed this Franchise Agreement as of the day and year first above written.

LAKEHAVEN UTILITY DISTRICT

Approved by Resolution No. 2004-1006 of the Lakehaven Utility District, Federal Way, Washington, at its regular meeting held on the 8th day of January, 2004.

By:

Donald T. Perry, General Manager
Lakehaven Utility District

Approved as to form:

Steven H. Pritchett, General Counsel
Lakehaven Utility District

CITY OF AUBURN

By:

Peter B. Lewis, Mayor
City of Auburn

Attest:

Danielle Daskam, City Clerk

Approved as to form:

Daniel B. Heid, City Attorney

AUBURN RESOLUTION NO: 3650

LAKEHAVEN REFERENCE NUMBER: 2004-1006

Attachment 1

Auburn Ordinance No. 3650

Description of Lakehaven Utility District's Water Franchise Area

BEGINNING AT THE SOUTHWEST CORNER OF SECTION 23, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M.;

THENCE NORTH ALONG THE WEST LINE OF SAID SECTION 23 TO THE NORTHWEST CORNER OF SAID SECTION 23 AND THE SOUTHEAST CORNER OF SECTION 15, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M.;

THENCE WESTERLY ALONG THE SOUTH LINE OF SAID SECTION 15 TO THE SOUTHWEST CORNER OF THE SOUTHEAST QUARTER OF SAID SECTION 15;

THENCE NORTHERLY ALONG THE NORTH-SOUTH CENTERLINE OF SAID SECTION 15 TO THE SOUTHWEST CORNER OF THE SOUTHEAST QUARTER OF SECTION 10, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M.;

THENCE NORTHERLY ALONG THE NORTH-SOUTH CENTERLINE OF SAID SECTION 10 TO THE SOUTHWEST CORNER OF THE SOUTHEAST QUARTER OF SECTION 3, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M.;

THENCE NORTHERLY ALONG THE NORTH-SOUTH CENTERLINE OF SAID SECTION 3 TO THE SOUTHWEST CORNER OF THE SOUTHEAST QUARTER OF SECTION 34, TOWNSHIP 22 NORTH, RANGE 4 EAST, W.M.;

THENCE NORTHERLY ALONG THE WEST LINE OF THE SOUTHEAST QUARTER OF SAID SECTION 34 TO THE NORTHWEST CORNER OF SAID SOUTHEAST QUARTER OF SAID SECTION 34;

THENCE EASTERLY ALONG THE NORTHERLY LINE OF SAID SOUTHEAST QUARTER OF SAID SECTION 34 TO THE NORTHWEST CORNER OF THE SOUTHWEST QUARTER OF SECTION 35, TOWNSHIP 22 NORTH, RANGE 4 EAST, W.M.;

THENCE EASTERLY ALONG THE EAST-WEST CENTERLINE OF SAID SECTION 35 TO THE NORTHWEST CORNER OF THE SOUTHWEST QUARTER OF SECTION 36, TOWNSHIP 22 NORTH, RANGE 4 EAST, W.M.;

THENCE EASTERLY ALONG THE NORTH LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 36 TO THE NORTHEAST CORNER OF SAID SOUTHWEST QUARTER OF SAID SECTION 36;

THENCE SOUTHERLY ALONG THE NORTH-SOUTH CENTERLINE OF SAID SECTION 36 TO THE NORTHWEST CORNER OF THE NORTHEAST QUARTER OF SECTION 1, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M.;

THENCE SOUTHERLY ALONG THE NORTH-SOUTH CENTERLINE OF SAID SECTION 1 TO THE SOUTHEAST CORNER OF THE SOUTHWEST QUARTER OF SAID SECTION 1;

THENCE WESTERLY ALONG THE SOUTH LINE OF SAID SECTION 1 TO THE NORTHEAST CORNER OF SECTION 11, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M.;

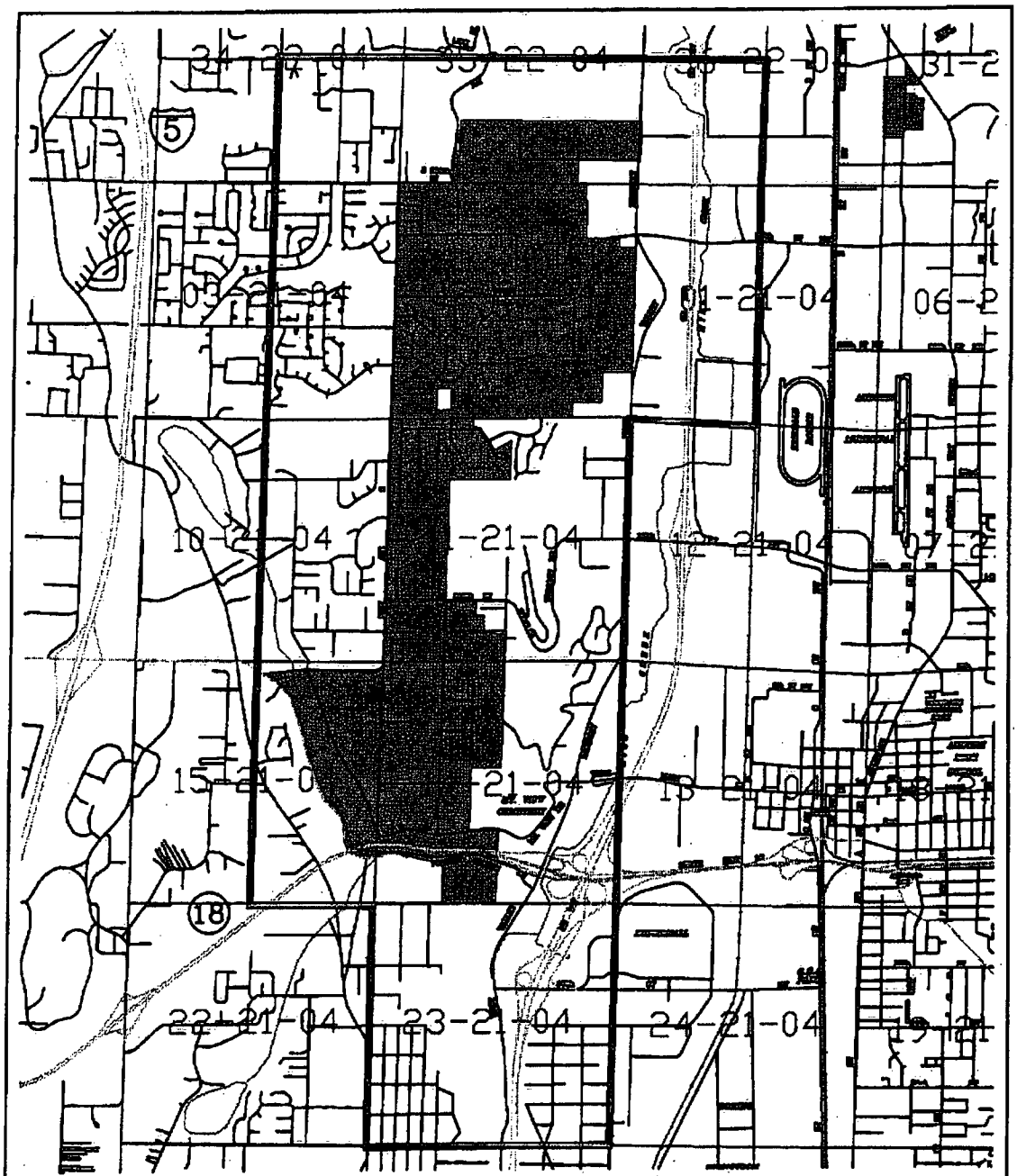
THENCE SOUTHERLY ALONG THE EAST LINE OF SAID SECTION 11 TO THE NORTHEAST CORNER OF THE NORTHEAST QUARTER OF SECTION 14, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M.;

THENCE SOUTHERLY ALONG THE EAST LINE OF SAID SECTION 14 TO THE NORTHEAST CORNER OF THE NORTHEAST QUARTER OF SECTION 23, TOWNSHIP 21 NORTH, RANGE 4 EAST, W.M.;

THENCE SOUTHERLY ALONG THE EAST LINE OF SAID SECTION 23 TO THE SOUTHEAST CORNER OF SAID SECTION 23;

THENCE WESTERLY ALONG THE SOUTH LINE OF SAID SECTION 23 TO THE POINT OF BEGINNING.

SITUATE IN KING COUNTY, WASHINGTON.



Legend:

Water Franchise Area

City of Auburn

Potential Annexation Area

Attachment 2
Auburn Ordinance
No. 3650

RESOLUTION NO. 5 3 3 2

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR TO EXECUTE A FIRST AMENDMENT TO INTERLOCAL AGREEMENT 2 FOR THE LEA HILL INTERTIE PROJECT BETWEEN COVINGTON WATER DISTRICT, KING COUNTY WATER DISTRICT NO. 111 AND THE CITY OF AUBURN

WHEREAS, in 1996, the City of Auburn, Covington Water District and King County Water District No. 111, entered into an Interlocal Agreement (IA2) for the Lea Hill Intertie Project, which provided, in part, for the construction and operation of certain water facilities to be jointly funded by the parties and owned and operated by the City; and

WHEREAS, IA2 also provided for the City to make water supply available to the Districts in an interruptible basis, until and unless the City were to acquire additional firm water rights, in which case, the City's supply of water to its IA2 partners would have increased; and

WHEREAS, the City was not yet successful in acquiring additional water rights; and

WHEREAS, in accordance with changes since IA2 was negotiated, the Parties recognize that some changes in circumstances require the clarification of the terms and conditions of the Interlocal Agreement, including that Covington no longer desires to be a party to the Agreement; and

WHEREAS, King County Water District No. 111 and the City would like to make certain clarifications and modifications, including further definition of the duration of the Agreement.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, HEREBY RESOLVES as follows:

Section 1. That the Mayor is hereby authorized to execute the First Amendment to IA2 for the Lea Hill Intertie Project Between Covington Water District, King County Water District No. 111 and the City of Auburn, which amendment shall be in substantial conformity with the amendment attached hereto as Exhibit A and incorporated herein by this reference.

Section 2. That the Mayor is authorized to implement such administrative procedures as may be necessary to carry out the directives of this legislation.

Section 3. That this Resolution shall take effect and be in full force upon passage and signatures hereon.

Dated and Signed this 4th day of December, 2017.

CITY OF AUBURN

Nancy Backus
NANCY BACKUS, MAYOR

ATTEST:

Danielle E. Daskam
Danielle E. Daskam, City Clerk

APPROVED AS TO FORM:

Daniel B. Heid, City Attorney

FIRST AMENDMENT TO INTERLOCAL AGREEMENT 2 FOR THE LEA HILL INTERTIE PROJECT BETWEEN COVINGTON WATER DISTRICT, KING COUNTY WATER DISTRICT NO. 111, AND THE CITY OF AUBURN

THIS FIRST AMENDMENT TO INTERLOCAL AGREEMENT 2 ("**First Amendment**"), is made and entered into by and between Covington Water District, a Washington municipal corporation ("Covington"), King County Water District No. 111, a Washington municipal corporation ("WD 111") (Covington and WD 111 are referred to collectively as the "Districts"), and the City of Auburn, a Washington municipal corporation ("City"), (individually a "Party" and collectively the "Parties") for the purposes set forth below.

1. RECITALS.

1.1. The Parties entered into Interlocal Agreement 2 for the Lea Hill Project ("IA2") in 1996 providing, in part, for the construction and operation of certain water facilities to be jointly funded by the Parties and owned and operated by the City ("Project"). IA2 provided for the City to make water supply available to the Districts.

1.2. The Parties recognize that some changes in circumstances require the clarification of the terms and conditions of IA2, including that Covington no longer desires to be a party to IA2 and therefore desires to terminate any rights and obligations it may have with respect to IA2. WD 111 and the City also desire to make certain clarifications and modifications to IA2, including the further definition of the duration of IA2.

1.3. The Parties are authorized by chapter 39.34 RCW, the Interlocal Cooperation Act, to enter into interlocal agreements for joint action.

Now, therefore, in consideration of the following terms and conditions, the Parties agree as follows:

2. AGREEMENT.

2.1. The recitals set forth above are incorporated herein in full by this reference.

2.2 As of the Effective Date of this First Amendment, Covington shall no longer be a party to IA2 and shall have no further rights or obligations with respect to IA2 or this First Amendment.

2.3 Section IX. "Term of Duration of Agreement" of IA2 is hereby modified and amended to read as follows:

> IX. Term of Duration of Agreement: Unless terminated sooner by mutual agreement of the Parties, this IA2 shall have a term of sixty (60) years commencing from the Effective Date of this First Amendment.

2.4 Section VIII.A. "Conditions of Service" of IA2 is hereby modified and amended to read as follows:

VIII.A. Auburn will continue to honor the provisions of IA2 with respect to providing water supply to WD 111 on an interruptible basis upon request from WD 111 for such service, subject to the availability of Auburn's water supply to provide water service as reasonably determined by Auburn. Auburn does not presently have the necessary capacity (i.e., water supply and/or water rights) to guarantee delivery of firm uninterruptible water. It is acknowledged and agreed that in the event Auburn experiences any failure or decreased capacity for any reason or increased demand within its retail service area as it currently exists or may exist in the future, the supply to WD 111 may be immediately reduced or stopped under such conditions at the reasonable discretion of Auburn. WD 111 agrees that Auburn may take such action irrespective of any costs, investment in capacity, or other reliance which may have been placed upon the intertie facilities and interruptible water supply referenced in this IA2.

2.5 Section VI.A. "Service Charges" 2.8.1 of the Agreement is hereby modified and amended to read as follows:

VI.A. Auburn retail water customers and wholesale water customers are treated differently. Retail customers for Auburn include all citizens and properties within Auburn's retail service area as it currently exists or may exist in the future. Auburn has created a customer classification for wholesale customers, and rates for service charges for wholesale customers shall be based on a rate study for the wholesale customer classification. Auburn will charge WD 111 a wholesale rate based on a rate study regularly done in Auburn's normal course of business and as approved and adopted by the City of Auburn's City Council. Wholesale water rates shall be based on costs of providing the service.

2.6 A new subsection F. is added to Section III. "Description of Project" as follows:

III.F. Auburn agrees to continue to operate and configure its water system to make wholesale water service available to WD 111 through the present WD 111 connection to Auburn's water system on 132nd Avenue NE south of SE 299th Street (referred to as the "DuBerry Intertie") or through such other connection point(s) as may be mutually agreed to by Auburn and WD 111.

2.7 Except as expressly set forth in this First Amendment, all other provisions of IA2 shall remain unchanged, and in full force and effect. Each reference in IA2 to itself shall be deemed also to refer to this First Amendment.

2.8 Auburn will work with WD 111 to further review the language of IA2 to determine whether other updates or amendments are appropriate.

2.9 This First Amendment to IA2 is contingent on final approval by the Auburn City Council, the WD 111 Board of Commissioners, and the Covington Board of Commissioners. Staff and counsel of the Parties recommend the approval of this First Amendment to their respective City Council and Board of Commissioners.

2.10 All capitalized terms used but not defined in this First Amendment shall have the same meanings as defined in IA2.

2.11 This First Amendment shall be effective on the date whereby it has been executed by all of the Parties ("Effective Date").

2.12 Pursuant to RCW 39.34.040, this First Amendment shall be filed with the King County Auditor upon full execution or listed on the City's and WD 111's respective web sites listed by subject matter.

KING COUNTY WATER DISTRICT NO. 111

By: _____
Its: _____
Dated: _____

COVINGTON WATER DISTRICT

By: _____
Its: _____
Dated: _____

CITY OF AUBURN

By: _____
Nancy Backus, Mayor
Dated: _____

Attest:

By: _____
City Clerk

Approved as to form:

By: _____
City Attorney

FIRST AMENDMENT TO INTERLOCAL AGREEMENT 2 FOR THE LEA HILL INTERTIE PROJECT BETWEEN COVINGTON WATER DISTRICT, KING COUNTY WATER DISTRICT NO. 111, AND THE CITY OF AUBURN

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2.11 This First Amendment shall be effective on the date whereby it has been executed by all of the Parties ("Effective Date").

2.12 Pursuant to RCW 39.34.040, this First Amendment shall be filed with the King County Auditor upon full execution or listed on the City's, Covington's and WD 111's respective web sites listed by subject matter.

KING COUNTY WATER DISTRICT NO. 111
By: _____ Patrick M. Hanis
Its: Board President
Dated: 11/22/2017

COVINGTON WATER DISTRICT
By: _____
Its: General Manager
Dated: DEC 04 2017

CITY OF AUBURN
By: Nancy Backus
Nancy Backus, Mayor
Dated: DEC 04 2017

Attest:

By: _____

Approved as to form:

_____

RESOLUTION NO. 5357

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF AUBURN, WASHINGTON, AUTHORIZING THE MAYOR TO SIGN AN INTERLOCAL AGREEMENT WITH OTHER WASHINGTON AGENCIES FOR THE PURPOSE OF RECEIVING AND PROVIDING WATER/WASTEWATER MUTUAL AID IN THE EVENT OF AN EMERGENCY

WHEREAS, pursuant to RCW 35.A.11.040, Auburn has the legal authority to exercise its powers and perform any of its functions as set forth in RCW 39.34; and

WHEREAS, local governments throughout the State of Washington have signed on to an interlocal agreement for the provision of water/wastewater mutual aid in the event of an emergency, identified as the Water/Wastewater Agency Response Network (WARN); and

WHEREAS, mutual aid agreements improve City response to emergencies and disasters; and

WHEREAS, the City Council finds that joining WARN will benefit public health safety and welfare.

NOW, THEREFORE, THE COUNCIL OF THE CITY OF AUBURN, WASHINGTON, RESOLVES as follows:

Section 1. The Mayor is hereby authorized to sign on to the interlocal agreement for the Water/Wastewater Agency Response Network, in substantial conformity with the agreement attached hereto, marked as Exhibit A and incorporated herein by this reference.

Section 2. The Mayor is hereby authorized to implement such administrative procedures as may be necessary to carry out the directions of this legislation.

Section 3. This Resolution shall take effect and be in force upon passage and signatures thereon.

DATED and SIGNED on this 2nd day of April, 2018.

CITY OF AUBURN

Nancy Backus

NANCY BACKUS, MAYOR

ATTEST:

Danielle E. Daskam, City Clerk

APPROVED AS TO FORM:

Daniel B. Heid, City Attorney

Mutual Aid and Assistance Agreement for Washington State for Intrastate Water/Wastewater Agency Response Network (WARN)
As of: 04/13/09

This Agreement ("Agreement") is made and entered into by public water and wastewater utilities that have executed this Agreement.

ARTICLE I
PURPOSE

Recognizing that emergencies may require aid or assistance in the form of personnel, equipment, and supplies from outside the area of impact, the signatories hereby establish an Intrastate Network for Mutual Aid and Assistance (the "Network"). Through the Network, Members (as further defined in this Agreement) may coordinate response activities and share resources during emergencies.

ARTICLE II
DEFINITIONS

A. Authorized Official – An employee or officer of a Member agency that is authorized to:

1. Request assistance;
2. Offer assistance;
3. Decline to offer assistance;
4. Decline to accept offers of assistance, and
5. Withdraw assistance under this Agreement.

B. Emergency – A natural or human-caused event or circumstance causing, or imminently threatening to cause, loss of life, injury to person or property, human suffering, significant financial loss, or damage to environment. For example, Emergencies may include fire, explosion, flood, severe weather, drought, earthquake, volcanic activity, spills or releases of oil or hazardous material, contamination, utility or transportation emergencies, disease, blight, infestation, civil disturbance, riot, intentional acts, sabotage and war that are, or could reasonably be beyond the capability of the services, personnel, equipment, and facilities of a Member to fully manage and mitigate by itself.

C. Member – Any public agency which provides supply, transmission or distribution of water; or collection, conveyance or treatment services of storm water or waste water that executes this Agreement (individually a "Member" and collectively the "Members"). The Members are further classified as follows:

1. Requesting Member – A Member who requests aid or assistance under the Network.
2. Responding Member – A Member that responds to a request for aid or assistance under the Network.

D. Period of Assistance – The period of time when a Responding Member

assists a Requesting Member in response to a Request for Assistance. The Period of Assistance commences when personnel, equipment, or supplies depart from Responding Member's facility and ends when all of the resources return to the Responding Member's facility (*i.e.*, portal to portal).

E. National Incident Management System (NIMS): The national, standardized system for incident management and response that sets uniform processes and procedures for emergency response operations.

F. Associate – Any non-utility participant approved by the Statewide Committee that provides a support role for the Network (such as the State Department of Health). An Associate does not execute this Agreement.

ARTICLE III
ADMINISTRATION

The Network is administered through Regional Committees and a Statewide Committee.

A. Regional Committees. The State is divided into regions that are geographically the same as the existing Department of Health Office of Drinking Water regions of the state, with the exception that the eastern region is divided to create a central region. Each region has a Regional Committee. Each Member within a region may appoint one person to be a member of its Regional Committee. Only those Regional Committee members appointed by Members are entitled to vote on matters before the Regional Committee. An Associate may be a non-voting member of a Regional Committee. Each Regional Committee shall elect a Chair by majority vote of the voting members of that Regional Committee and shall meet annually to review the operations and procedures of the Network.

B. Statewide Committee. The Chairs of the Regional Committees are the voting members of the Statewide Committee. An Associate may be a non-voting member of the Statewide Committee. Further, the Statewide Committee also may include as non-voting members representatives from the Washington State Department of Health Office of Drinking Water, Washington State Department of Ecology, Washington State Emergency Management Division, Rural Community Assistance Corporation, Evergreen Rural Water of Washington, Washington State Public Health Laboratory, EPA Region 10, Washington Association of Sewer and Water Districts, and the Washington PUD Association. Under the leadership of a Statewide Committee Chair elected by majority vote of the voting members of the Statewide Committee, the Statewide Committee shall plan and coordinate emergency planning and response activities for the Network.

C. Members' administrative activities shall be voluntary and members shall not be required to finance the administration of the Network, nor shall the Network hold real or personal property.

ARTICLE IV
PROCEDURES

In coordination with the Regional Committees, and emergency management and public health systems of the State, the Statewide Committee shall develop and adopt operational and planning procedures for the Network that are consistent with this Agreement. The Statewide Committee shall review these procedures at least annually and shall update them as needed.

ARTICLE V
REQUESTS FOR ASSISTANCE

A. Member Information: Promptly after executing this Agreement, the signatory Member shall deliver the following to the Statewide Committee: (1) a certified copy of the action of Member's governing body that authorized the signing of this Agreement and (2) an original signed Agreement. Each Member shall identify an Authorized Official and one alternate Authorized Official. Each Member shall provide current 24-hour contact information for its Authorized Officials to the Statewide Committee, which shall maintain a current list of all Members and the contact information for their Authorized Officials. The Statewide Committee shall provide to all Members an updated version of this list annually and whenever there is an addition or withdrawal of a Member and whenever there is a change of Authorized Officials' contact information.

B. Request for Assistance. In the event of an Emergency, a Member's Authorized Official may request mutual aid and assistance from Members ("Request for Assistance"). Requests for Assistance may be made orally or in writing, provided that when a Request for Assistance is made orally, the Requesting Member shall, as soon as practicable, identify and transmit in writing the personnel, equipment and supplies requested. Requesting Members shall direct Requests for Assistance to Authorized Officials. The Statewide Committee shall provide specific protocols for Requests for Assistance as part of the procedures created pursuant to Article IV of this Agreement.

C. Response to a Request for Assistance – Members are not obligated to respond to a Request for Assistance. After a Member receives a Request for Assistance, the receiving Member's Authorized Official shall evaluate whether to respond to the Request for Assistance, whether resources are available to respond, or if other circumstances would hinder response. Following the evaluation, the Authorized Official shall inform, as soon as possible, the Requesting Member whether the Member will respond to the Request for Assistance. If the Member is willing and able to provide assistance, the Member shall inform the Requesting Member of the type of available resources and the approximate arrival time of such assistance.

D. Discretion of Responding Member's Authorized Official – No Member has any duty to respond to a Request for Assistance. When a Member receives a Request for Assistance, the Authorized Official shall have sole and absolute discretion

as to whether or not to respond to the Request for Assistance, and if responding in the affirmative, to determine the availability of resources to be made available to the Requesting Member. The response of a Member's Authorized Official regarding the availability of resources to a Requesting Member shall be final.

E. No Liability for Failure to Respond – No Member will be liable to any other Member for deciding not to respond to a Request for Assistance or otherwise failing to respond to a Request for Assistance. All Members hereby waive all claims against all other Members arising from or relating to any Member's decision to not respond to a Request for Assistance or to any Member's failure to respond to a Request for Assistance.

ARTICLE VI
RESPONDING MEMBER PERSONNEL

A. National Incident Management System-When providing assistance under this Agreement, the Requesting Member and Responding Member are encouraged (but are not obligated) to be organized and function under NIMS.

B. Coordination and Records – Employees of the Responding Member will remain under the direction and control of the Responding Member to the fullest extent possible. The Responding Member is an independent contractor at all times. The Requesting Member's Authorized Official shall coordinate response activities with the designated supervisor(s) of the Responding Member(s). The Responding Member's designated supervisor(s) shall keep accurate records of work performed by personnel during the Period of Assistance and for the equipment and supplies provided during work.

C. Food and Shelter – Whenever practical, Responding Member personnel must be self sufficient for up to seventy-two (72) hours. Whenever practical, the Requesting Member shall supply adequate food and shelter for Responding Member personnel. If the Requesting Member is unable to provide food and shelter for Responding Member personnel, the Responding Member's designated supervisor is authorized to secure the food and shelter necessary to meet the needs of its personnel.

D. Communication – The Requesting Member shall provide Responding Member personnel with communications equipment as available, radio frequency information to program existing radios if appropriate, or telephone contact numbers, in order to facilitate communications with local responders and utility personnel. Each Requesting Member shall provide contact information for an individual with whom Responding Member's personnel may coordinate while en-route for access, staging instructions and other logistical requirements.

E. Status - Unless otherwise provided by law, the Responding Member's officers and employees shall have the same powers, duties, rights, privileges, and immunities as if they were performing their duties in the jurisdiction in which they are

normally employed.

F. Licenses and Permits – To the extent permitted by law, Responding Member personnel that hold licenses, certificates, or permits evidencing professional, mechanical, or other skills shall be allowed to carry out activities and tasks relevant and related to their respective credentials during a Period of Assistance.

ARTICLE VII
RIGHT TO WITHDRAW RESOURCES

A. Right to Withdraw - A Responding Member may withdraw some or all of its resources at any time for any reason, as determined in the Responding Member's sole and absolute discretion. The Responding Member shall communicate written or oral notice of intention to withdraw all or some of a Responding Member's resources to the Requesting Member's Authorized Official as soon as practicable under the circumstances. To the greatest extent possible, but without limiting in any way a Responding Member's sole and absolute discretion, a Responding Member's determination to withdraw some or all of its resources provided to a Requesting Member should consider the status of the incident and incident stability, to minimize any adverse impacts from the withdrawal of resources by a Responding Member.

B. No Liability for Withdrawal - No Member will be liable to any other Member for first responding to a Request for Assistance by providing resources (such as personnel, materials, and equipment) and later withdrawing or refusing to continue to provide some or all of those resources. All Members hereby waive all claims against all Members arising from or relating to such a withdrawal or refusal.

ARTICLE VIII
COST- REIMBURSEMENT

The Requesting Member shall reimburse the Responding Member for all costs incurred by the Responding Member during a Period of Assistance, unless otherwise agreed in writing by both Members.

A. Personnel – The Requesting Member shall reimburse the Responding Member for personnel costs incurred for work performed during a Period of Assistance. Responding Member personnel costs will be calculated according to the terms provided in their employment contracts, hourly rate schedules or other conditions of employment. The Responding Member's designated supervisor(s) shall keep accurate records of work performed by personnel during a Period of Assistance. The Requesting Member shall include in its reimbursement of the Responding Member all personnel costs, including salaries or hourly wages, costs for fringe benefits, and indirect costs.

Unless otherwise agreed in writing, the Requesting Member shall reimburse the Responding Member for all reasonable and necessary costs associated with providing food and shelter for the Responding Member's personnel, if the food and shelter are

not provided by the Requesting Member. The Requesting Member is not required to reimburse the Responding Member for food and shelter costs in excess of State per diem rates unless the Responding Member demonstrates in writing that the excess costs were reasonable and necessary under the circumstances.

B. Equipment – The Requesting Member shall reimburse the Responding Member for the use of equipment during a Period of Assistance, including, but not limited to, reasonable rental rates, all fuel, lubrication, maintenance, transportation, and loading/unloading of loaned equipment. The Requesting Member shall return all equipment to the Responding Member in good working order as soon as is practicable and reasonable under the circumstances. If equipment cannot be returned in good working order, then Requesting Member shall either provide in-kind replacement equipment to Responding Member at no cost to Responding Member or pay to Responding Member the actual replacement cost of the equipment. Reimbursement rates for equipment use will be no less than the Federal Emergency Management Agency's (FEMA) Schedule of Equipment Rates. If a Responding Member uses rates different from those in the FEMA Schedule of Equipment Rates, the Responding Member shall provide such rates orally or in writing to the Requesting Member prior to supplying the equipment. If reimbursement rates are to be different than those in the FEMA Schedule of Equipment rates, Responding Member and Requesting Member shall agree in writing on which rates will be used prior to dispatch of the equipment to the Requesting Member. Requesting Member shall reimburse for equipment not referenced on the FEMA Schedule of Equipment Rates based on actual recovery of costs. If a Responding Member is required to lease equipment while its equipment is being repaired because of damage due to use during a Period of Assistance, Requesting Member shall reimburse Responding Member for such rental costs.

C. Materials and Supplies – The Requesting Member shall reimburse the Responding Member in kind or at actual replacement cost, plus handling charges, for use of expendable or non-returnable supplies by the Responding Member during a Period of Assistance. The Responding Member shall not charge direct fees or rental charges to the Requesting Member for other supplies and reusable items that are returned to the Responding Member in a clean, damage-free condition. Reusable supplies that are returned to the Responding Member with damage will be treated as expendable supplies for purposes of cost reimbursement.

D. Payment Period – In order to be reimbursed, the Responding Member shall provide an itemized bill to the Requesting Member no later than ninety (90) days following the end of the Period of Assistance for all expenses incurred by the Responding Member while providing assistance to a Requesting Member under this Agreement. The Responding Member may request additional time to submit the itemized bill, and Requesting Member shall not unreasonably withhold consent to such a request. The Requesting Member shall pay the itemized bill in full on or before the forty-fifth (45^{th}) day following the billing date. The Requesting Member may request additional time to pay the itemized bill, and Responding Member shall not unreasonably withhold consent to such a request, but in no event will payment in full occur later than one year after the date a final itemized bill is submitted to the

Requesting Member. If a Responding Member disputes a portion of an itemized bill, the Requesting Member shall promptly pay those portions of the bill not under dispute, pending the resolution of the payment of the disputed portion of the bill.

E. Records - Where a Responding Member provides assistance to a Requesting Member under this Agreement, both Members shall provide the other Member access to the books, documents, notes, reports, papers and other records relevant to this Agreement for the purposes of reviewing the accuracy of a cost bill or making or undergoing a financial, maintenance or regulatory audit. Both Members shall maintain these records for at least three (3) years or longer where required by law.

ARTICLE IX
DISPUTES
NEGOTIATION

Members shall first attempt to resolve any controversy, claim or other dispute arising out of or relating to this Agreement by direct negotiation.

MEDIATION

To the extent not resolved by direct negotiation, Members shall mediate any controversy, claim or other dispute arising out of or relating to this Agreement. Mediation is a condition precedent to arbitration. Unless the disputing Members agree otherwise, the mediation will be administered by the American Arbitration Association (AAA) under its Construction Industry Mediation Procedures. The disputing Members shall pay in equal shares the mediator's fee and any filing fees. Unless otherwise agreed by the disputing Members, the disputing Members shall (1) hold the mediation no later than thirty (30) days after a disputing Member delivers a request for mediation to the other disputing Members and (2) hold the mediation at the location of the Requesting Member. Agreements reached in mediation will be enforceable as settlement agreements.

ARBITRATION

To the extent not resolved by mediation, Members shall arbitrate all controversies, claims and other disputes arising out of or relating to this Agreement. Unless the disputing Members agree otherwise, the arbitration will be administered by the AAA in accordance with its Construction Industry Arbitration Rules in effect on the date a disputing Member makes a demand for arbitration. A disputing Member may make a demand for arbitration before negotiation or mediation if it appears that a claim might be barred by a statute of limitations if the demand were made after the negotiation or mediation. However, in such a case the arbitration will be stayed until the conclusion of negotiation and mediation. The decision and award rendered by the arbitrator(s) shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

ARTICLE X
DUTY TO INDEMNIFY

To the extent of its fault, a Member shall defend, indemnify, and hold harmless all other Members, their elected officials, Authorized Officials, officers, employees and agents from any and all costs, claims, judgments, losses, awards of damage, injury, death and liability of every kind, nature and description, including the reasonable cost of defense and attorneys' fees, directly or indirectly arising from or relating to this Agreement (collectively, "Indemnified Claims"). This indemnity obligation extends to all Indemnified Claims against a Member by an employee or former employee of another Member, and for this purpose, by mutual negotiation, each Member hereby expressly waives, with respect to each other Member only, all immunity and limitation under any applicable industrial insurance act, including Title 51 of the Revised Code of Washington, other worker compensation acts, disability benefit acts or other employee benefit act of any jurisdiction which would otherwise be applicable in the case of Indemnified Claims.

ARTICLE XI
WORKER'S COMPENSATION AND SITE CONDITIONS

The Responding Member is responsible for providing worker's compensation benefits and administering worker's compensation for its employees. The Requesting Member is responsible for providing worker's compensation benefits and administering worker's compensation for its employees.

Each Member shall promptly identify to the other Members concerns about site safety, environmental concerns, and other working conditions. The Safety Officer appointed within the Incident Command System during the Period of Assistance shall address specific safety conditions and mitigations.

ARTICLE XII
NOTICE

Unless otherwise provided in this Agreement, all notices must be in writing. Notice to a Member must be delivered to the Member's Authorized Official.

ARTICLE XIII
EFFECTIVE DATE

This Agreement shall be effective with respect to each Member when that Member's authorized representative executes the Agreement. The Statewide Committee shall maintain a master list of all Members.

ARTICLE XIV
WITHDRAWAL

A Member may withdraw from this Agreement at any time by providing to the Statewide Committee Chair written notice of withdrawal signed by the withdrawing Member's Authorized Official or other person authorized by the withdrawing Member's governing body. Any withdrawal will be effective upon receipt by the Statewide Committee Chair of the notice of intent to withdraw. If there is no Statewide Committee Chair, the withdrawing Member shall provide written notice to each Member in its region, and the withdrawal will be effective upon delivery of those notices. Once withdrawal from this Agreement is effective, the withdrawing Member will have no further obligations under this Agreement, except that withdrawal from this Agreement will not affect any indemnification or reimbursement obligation under this Agreement that arises prior to the effective date of the withdrawal.

ARTICLE XV
TERMINATION

This Agreement shall terminate in its entirety when there are less than two Members. Termination of this Agreement will not affect any indemnification or reimbursement obligation under this Agreement arising prior to the termination. The Statewide Committee Chair shall provide written notice of termination to all remaining Members of the Agreement.

ARTICLE XVI
AMENDMENT

This Agreement may be amended if, after written notice of a proposed amendment to all Members, the proposed amendment is approved by a majority of Members in each region. The Statewide Committee Chair shall provide written notice to all Members of approved amendments. Approved amendments will take effect sixty (60) days after the date the notice is sent to the Members.

ARTICLE XVII
SEVERABILITY

The parties agree that if any term or provision of this Agreement is declared by a court of competent jurisdiction to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the Agreement did not contain the particular term or provision held to be invalid.

ARTICLE XVIII
PROHIBITION ON THIRD PARTIES AND ASSIGNMENT OF RIGHTS/DUTIES

Notwithstanding rights of subrogation asserted by a Member's insurance provider, this Agreement is for the sole benefit of the Members and no other person or entity shall have any rights under this Agreement as a third party beneficiary nor shall any Member owe duty to a third party not a signatory of this Agreement by virtue of this Agreement. Assignments of benefits and delegations of duties created by this

Agreement are prohibited and of no effect.

ARTICLE XIX
GOVERNING LAW

This Agreement is governed by the law of the State of Washington, specifically RCW 39.34, Interlocal Cooperation Act.

ARTICLE XX
EXECUTION IN COUNTERPARTS

This Agreement may be executed in any number of counterparts and by different parties in separate counterparts. Each counterpart when so executed shall be deemed to be an original and all of which together shall constitute one and the same Agreement.

The water and wastewater utility listed below executed this Agreement on this 2nd day of April 2018

Water/Wastewater Utility: City of Auburn

By: _____

Title: Acting Public Works Director

Ingrid Gaub
Please Print Name

By: Nancy Backus

Title MAYOR

NANCY BACKUS
Please Print Name

Approved as to form

By: _____
Attorney for Member

Daniel B. Heid
Please Print Name

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

WATER FACILITIES INVENTORY (WFI) FORM

ONE FORM PER SYSTEM

Quarter: 1
Updated: 12/15/2023
Printed: 2/27/2024
WFI Printed For: On-Demand
Submission Reason: Pop/Connect Update

RETURN TO: Central Services - WFI, PO Box 47822, Olympia, WA, 98504-7822 or email wfi@doh.wa.gov

1. SYSTEM ID NO.	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
03350 V	AUBURN CITY OF	KING	A	Comm

6. PRIMARY CONTACT NAME & MAILING ADDRESS

JOSHUA A. FLANDERS [WATER MANAGER]
25 W MAIN
AUBURN, WA 98001

7. OWNER NAME & MAILING ADDRESS

AUBURN, CITY OF
SENAIT GEBREEYESUS — WATER UTILITY ENGINEER
25 W MAIN
AUBURN, WA 98001

STREET ADDRESS IF DIFFERENT FROM ABOVE

ATTN
ADDRESS
CITY STATE ZIP

STREET ADDRESS IF DIFFERENT FROM ABOVE

ATTN
ADDRESS
CITY STATE ZIP

9. 24 HOUR PRIMARY CONTACT INFORMATION		10. OWNER CONTACT INFORMATION	
Primary Contact Daytime Phone: (253) 876-1998		Owner Daytime Phone: (253) 804-5061	
Primary Contact Mobile/Cell Phone: (253) 261-1689		Owner Mobile/Cell Phone: (253) 261-9109	
Primary Contact Evening Phone: (xxx)-xxx-xxxx		Owner Evening Phone: (xxx)-xxx-xxxx	
Fax:	E-mail: jxxxxxxs@auburnwa.gov	Fax: (253) 288-7406	E-mail: sxxxxxxs@auburnwa.gov

11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)

- [x] Not applicable (Skip to #12)
- [ ] Owned and Managed
- [ ] Managed Only
- [ ] Owned Only

SMA NAME: _____ SMA Number:

12. WATER SYSTEM CHARACTERISTICS (mark all that apply)

- [x] Agricultural
- [x] Commercial / Business
- [x] Day Care
- [x] Food Service/Food Permit
- [ ] 1,000 or more person event for 2 or more days per year
- [x] Hospital/Clinic
- [x] Industrial
- [x] Licensed Residential Facility
- [x] Lodging
- [x] Recreational / RV Park
- [x] Residential
- [x] School
- [ ] Temporary Farm Worker
- [x] Other (church, fire station, etc.): _____

13. WATER SYSTEM OWNERSHIP (mark only one)

- [ ] Association
- [x] City / Town
- [ ] County
- [ ] Federal
- [ ] Investor
- [ ] Private
- [ ] Special District
- [ ] State

14. STORAGE CAPACITY (gallons)

15,700,000

- SEE NEXT PAGE FOR A COMPLETE LIST OF SOURCES -

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO.	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
03350 V	AUBURN CITY OF	KING	A	Comm

15	16	17	18									19			20	21						22	23	24			
	SOURCE NAME	INTERTIE	SOURCE CATEGORY									USE				TREATMENT						DEPTH		SOURCE LOCATION			
Source Number	LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456 IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE SYSTEM ID NUMBER	WELL	WELL FIELD	WELL IN A WELL FIELD	SPRING	SPRING FIELD	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN INTERVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
S01	SPRING #1-COAL CREEK					X						X			Y		X				X		3500	SE SW	28	21N	05E
S02	SPRING #2-WEST HILL					X						X			Y		X						600	SW NE	11	21N	04E
S03	WELL #1		X									X			Y		X				X	125	2100	NE NE	19	21N	05E
S04	WELL #2				X							X			Y		X				X	242	2000	NW NE	18	21N	05E
S05	WELL #3A		X											X	Y	X						285	0	NE SW	30	21N	05E
S06	WELL #5		X									X			Y	X						320	650	SW SE	31	21N	05E
S07	WELL #4		X									X			Y		X					296	2600	NW NE	30	21N	05E
S08	WELL #3B		X											X	Y	X						309	0	NE SW	30	21N	05E
S10	WELL 5A		X									X			Y		X					510	180	SE SE	31	21N	05E
S11	WELL #7				X							X			Y		X				X	234	0	NW NW	18	21N	05E
S12	WELL #6				X							X			Y		X				X	237	2200	NW NE	18	21N	05E
S13	WELL 5B (ACJ529)		X											X	Y		X	X				710	0	SW NE	06	20N	05E
S14	WELLS 2, 6 & 7			X								X			Y		X				X	234	4200	NW NE	18	21N	05E
S15	38150/Kent	38150 1												X	Y	X							0			00N	00E
S16	07650/Bonney Lake	07650 H												X	Y	X							0			00N	00E
S17	41997/Lakehaven	41997 9												X	Y	X							0			00N	00E
S18	86800 Tacoma/B Street	86800 N												X	Y	X							0	SE NW	18	21N	05E
S19	Tacoma/132nd Ave SE	86800 N												X	Y	X							0	SE NW	18	21N	05E

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO.	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
03350 V	AUBURN CITY OF	KING	A	Comm

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE CONNECTIONS	DOH USE ONLY! APPROVED CONNECTIONS
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)		22338	Unspecified
A. Full Time Single Family Residences (Occupied 180 days or more per year)	11818		
B. Part Time Single Family Residences (Occupied less than 180 days per year)	0		
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)			
A. Apartment Buildings, condos, duplexes, barracks, dorms	1052		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied more than 180 days/year	10520		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied less than 180 days/year	0		
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	1946	1946	
28. TOTAL SERVICE CONNECTIONS		24284	

29. FULL-TIME RESIDENTIAL POPULATION

A. How many residents are served by this system 180 or more days per year? 61455

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?	408660	408660	408660	408660	408660	408660	408660	408660	408660	408660	408660	408660
B. How many days per month is water accessible to the public?	31	28	31	30	31	30	30	31	31	30	30	31

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students, daycare children and/or employees are present each month that are NOT already included in the residential population?	37871	37871	37871	37871	37871	37871	37871	37871	37871	37871	37871	37871
B. How many days per month are they present?	31	28	31	30	31	30	30	31	31	30	30	31

33. ROUTINE COLIFORM SCHEDULE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	100	100	100	100	100	100	100	100	100	100	100	100

34. NITRATE SCHEDULE	QUARTERLY	ANNUALLY	ONCE EVERY 3 YEARS
(One Sample per source by time period)			

35. Reason for Submitting WFI:

☐ Update - Change ☐ Update - No Change ☐ Inactivate ☐ Re-Activate ☐ Name Change ☐ New System ☐ Other _____

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: _____ **DATE:** _____

PRINT NAME: _____ **TITLE:** _____

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

Water Facilities Inventory (WFI)

Report Create Date:	2/27/2024		
Water System Id(s):	03350		
Print Data on Distribution Page:	ALL		
Print Copies For:	DOH Copy		
Water System Name:	ALL		
County:	-- Any --		
Region:	ALL		
Group:	ALL		
Type:	ALL		
Permit Renewal Quarter:	ALL		
Water System Is New:	ALL		
Water System Status:	ALL		
Water Status Date From:	ALL	**To**	ALL
Water System Update Date	ALL	**To**	ALL
Owner Number:	ALL		
SMA Number:	ALL		
SMA Name:	ALL		
Active Connection Count From:	ALL	**To:**	ALL
Approved Connection Count	ALL	**To:**	ALL
Full-Time Population From:	ALL	**To:**	ALL
Water System Expanding	ALL		
Source Type:	ALL		
Source Use:	ALL		
WFI Printed For:	On-Demand		

WATER FACILITIES INVENTORY (WFI) FORM

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

ONE FORM PER SYSTEM

Quarter: 2
Updated: 02/22/2024
Printed: 2/27/2024
WFI Printed For: On-Demand
Submission Reason: Contact Update

RETURN TO: Central Services - WFI, PO Box 47822, Olympia, WA, 98504-7822 or email wfi@doh.wa.gov

1. SYSTEM ID NO.	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
03336 E	BRAUNWOOD ESTATES	KING	A	Comm

6. PRIMARY CONTACT NAME & MAILING ADDRESS

JOSHUA A. FLANDERS [WATER MANAGER]
25 W MAIN
AUBURN, WA 98001

STREET ADDRESS IF DIFFERENT FROM ABOVE

ATTN
ADDRESS
CITY STATE ZIP

7. OWNER NAME & MAILING ADDRESS

AUBURN, CITY OF
SENAIT GEBREEYESUS — WATER UTILITY ENGINEER
25 W MAIN
AUBURN, WA 98001

STREET ADDRESS IF DIFFERENT FROM ABOVE

ATTN
ADDRESS
CITY STATE ZIP

9. 24 HOUR PRIMARY CONTACT INFORMATION		10. OWNER CONTACT INFORMATION	
Primary Contact Daytime Phone: (253) 876-1998		Owner Daytime Phone: (253) 804-5061	
Primary Contact Mobile/Cell Phone: (253) 261-1689		Owner Mobile/Cell Phone: (253) 261-9109	
Primary Contact Evening Phone: (xxx)-xxx-xxxx		Owner Evening Phone: (xxx)-xxx-xxxx	
Fax:	E-mail: jxxxxxxxs@auburnwa.gov	Fax: (253) 288-7406	E-mail: sxxxxxxs@auburnwa.gov

11. SATELLITE MANAGEMENT AGENCY - SMA (check only one)

- [x] Not applicable (Skip to #12)
- [ ] Owned and Managed
- [ ] Managed Only
- [ ] Owned Only

SMA NAME: _____ SMA Number:

12. WATER SYSTEM CHARACTERISTICS (mark all that apply)

- [ ] Agricultural
- [ ] Commercial / Business
- [ ] Day Care
- [ ] Food Service/Food Permit
- [ ] 1,000 or more person event for 2 or more days per year
- [ ] Hospital/Clinic
- [ ] Industrial
- [ ] Licensed Residential Facility
- [ ] Lodging
- [ ] Recreational / RV Park
- [x] Residential
- [ ] School
- [ ] Temporary Farm Worker
- [ ] Other (church, fire station, etc.): _____

13. WATER SYSTEM OWNERSHIP (mark only one)

- [ ] Association
- [x] City / Town
- [ ] County
- [ ] Federal
- [ ] Investor
- [ ] Private
- [ ] Special District
- [ ] State

14. STORAGE CAPACITY (gallons)

33,000

15	16	17	18 SOURCE CATEGORY									19 USE			20	21 TREATMENT						22	23	24 SOURCE LOCATION			
Source Number	LIST UTILITY'S NAME FOR SOURCE AND WELL TAG ID NUMBER. Example: WELL #1 XYZ456 IF SOURCE IS PURCHASED OR INTERTIED, LIST SELLER'S NAME Example: SEATTLE	INTERTIE SYSTEM ID NUMBER	WELL	WELL FIELD	WELL IN A WELL FIELD	SPRING	SPRING FIELD	SPRING IN SPRINGFIELD	SEA WATER	SURFACE WATER	RANNEY / INF. GALLERY	OTHER	PERMANENT	SEASONAL	EMERGENCY	SOURCE METERED	NONE	CHLORINATION	FILTRATION	FLUORIDATION	IRRADIATION (UV)	OTHER	DEPTH TO FIRST OPEN TERVAL IN FEET	CAPACITY (GALLONS PER MINUTE)	1/4, 1/4 SECTION	SECTION NUMBER	TOWNSHIP	RANGE
S01	Hidden Valley Well		X										X			Y		X					352	20	SE NE	33	21N	05E

WATER FACILITIES INVENTORY (WFI) FORM - Continued

1. SYSTEM ID NO.	2. SYSTEM NAME	3. COUNTY	4. GROUP	5. TYPE
03336 E	BRAUNWOOD ESTATES	KING	A	Comm

	ACTIVE SERVICE CONNECTIONS	DOH USE ONLY! CALCULATED ACTIVE CONNECTIONS	DOH USE ONLY! APPROVED CONNECTIONS
25. SINGLE FAMILY RESIDENCES (How many of the following do you have?)		12	13
A. Full Time Single Family Residences (Occupied 180 days or more per year)	12		
B. Part Time Single Family Residences (Occupied less than 180 days per year)	0		
26. MULTI-FAMILY RESIDENTIAL BUILDINGS (How many of the following do you have?)			
A. Apartment Buildings, condos, duplexes, barracks, dorms	0		
B. Full Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied more than 180 days/year	0		
C. Part Time Residential Units in the Apartments, Condos, Duplexes, Dorms that are occupied less than 180 days/year	0		
27. NON-RESIDENTIAL CONNECTIONS (How many of the following do you have?)			
A. Recreational Services and/or Transient Accommodations (Campsites, RV sites, hotel/motel/overnight units)	0	0	0
B. Institutional, Commercial/Business, School, Day Care, Industrial Services, etc.	0	0	0
28. TOTAL SERVICE CONNECTIONS		12	13

29. FULL-TIME RESIDENTIAL POPULATION

A. How many residents are served by this system 180 or more days per year? 30

30. PART-TIME RESIDENTIAL POPULATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many part-time residents are present each month?												
B. How many days per month are they present?												

31. TEMPORARY & TRANSIENT USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. How many total visitors, attendees, travelers, campers, patients or customers have access to the water system each month?												
B. How many days per month is water accessible to the public?												

32. REGULAR NON-RESIDENTIAL USERS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A. If you have schools, daycares, or businesses connected to your water system, how many students, daycare children and/or employees are present each month that are NOT already included in the residential population?												
B. How many days per month are they present?												

33. ROUTINE COLIFORM SCHEDULE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	1	1	1	1	1	1	1	1	1	1	1	1

34. NITRATE SCHEDULE	QUARTERLY	ANNUALLY	ONCE EVERY 3 YEARS
(One Sample per source by time period)			

35. Reason for Submitting WFI:

☐ Update - Change ☐ Update - No Change ☐ Inactivate ☐ Re-Activate ☐ Name Change ☐ New System ☐ Other _____

36. I certify that the information stated on this WFI form is correct to the best of my knowledge.

SIGNATURE: _____ **DATE:** _____

PRINT NAME: _____ **TITLE:** _____

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

Water Facilities Inventory (WFI)

Report Create Date:	2/27/2024		
Water System Id(s):	03336		
Print Data on Distribution Page:	ALL		
Print Copies For:	DOH Copy		
Water System Name:	ALL		
County:	-- Any --		
Region:	ALL		
Group:	ALL		
Type:	ALL		
Permit Renewal Quarter:	ALL		
Water System Is New:	ALL		
Water System Status:	ALL		
Water Status Date From:	ALL	**To**	ALL
Water System Update Date	ALL	**To**	ALL
Owner Number:	ALL		
SMA Number:	ALL		
SMA Name:	ALL		
Active Connection Count From:	ALL	**To:**	ALL
Approved Connection Count	ALL	**To:**	ALL
Full-Time Population From:	ALL	**To:**	ALL
Water System Expanding	ALL		
Source Type:	ALL		
Source Use:	ALL		
WFI Printed For:	On-Demand		

Water Right Self-Assessment Form for Water System Plans

331-372 • 1/13/2017

All water right permits, claims, and certificates must be evaluated in a water right self-assessment for all sources used to supply the water system. The self-assessment compares the parameters and other limitations of existing water rights against current and forecasted water production, as described in your water system plan, to determine whether the rights are adequate to serve your system's current and future water needs.

You must account for all sources of supply and total quantities of water withdrawn from the source. If you purchase water from another purveyor through a non-emergency intertie, you must complete the INTERTIES section of the self-assessment.

A Note on Exempt Wells

If you're seeking DOH approval of a new Group A or Group B water system using an exempt well, you must complete the self-assessment, although certain fields will not apply. Talk to your DOH regional planner about using the Water Right Self-Assessment form for a Small Water System Management Program instead of this version.

Local governments must ensure that an adequate potable water supply is available from the exempt well before issuing a building permit. Before developing a permit exempt well, check with your local authorities on their criteria for establishing an adequate potable water supply for your planned public water system.

Water Right Parameters

Below is a brief description of the parameters associated with a typical water right. For the self-assessment, you only need to describe the last two bulleted items if they apply to your water rights.

Source Type – this refers to whether the source is surface water, groundwater or a spring.

Source Location – this refers to the location of points of groundwater withdrawal or surface water diversion for each right.

Purpose of Use – this refers to the type of use, such as municipal water supply, community domestic, industrial or agricultural purposes.

Place of Use – this describes where water can be put to beneficial use under the right. Under the 2003 Municipal Water Law, RCW 90.03.386, the place of use for a water right held for municipal water supply purposes may be the system's service area as identified in an approved water system plan or small water system management program. See Ecology Policy 2030 for information on how Ecology administers the Municipal Water Law.

Washington State Department of Health

If you need this publication in an alternative format, call 800.525.0127 (TDD/TTY call 711). This and other publications are available at www.doh.wa.gov/drinkingwater.

Period of Use – this refers to time-of-year limitations in which the water right may be put to use. If any water right has a time-of-year limitation, please include this information in the INTERRUPTIBLE WATER RIGHTS section.

Provisions or Limiting Conditions – this refers to any provisions or conditions placed on the water right. If a water right has a limiting condition or other provision, such as a collection and reporting requirement, other than a time-of year limitation, include this information in the ADDITIONAL COMMENTS section at the bottom of the self-assessment and in the water system plan narrative.

See Ecology Policy 1040 for more information on water right terminology. If you have questions about your water rights, please contact the Ecology regional office in your area.

Completing the Water Right Self-Assessment Form

The self-assessment is a Word document to allow users to make changes or to expand the document. You may use another format, if preferred, as long as all required information is included. Below is a description of all fields and how to complete them. This form is divided into four different sections. Each section is described in the headings below.

See the column identifiers (A, B, C, etc) at the bottom of each column for guidance in completing the necessary calculations.

Water Right Permit, Certificate, or Claim Number: This number is assigned by Ecology when a permit application is filed. It's listed at the top of the permit or certificate. For water right claims, this is the registration number stamped in the lower left hand corner of the claim form.

WFI Source #: Identify the individual sources (e.g. well #1, well #2) as defined on the DOH Water Facilities Inventory form. If a water right is associated with multiple sources, list all sources in the same row in this column. If a source is associated with multiple water rights, identify each water right on a separate row.

If you have any source(s) that is not currently being used (categorized as standby, back-up, or emergency), and the source has an associated water right that is not listed in column #1, please include the source and water right information in the ADDITIONAL COMMENTS section. This will identify that the source is still intended for a beneficial use under RCW 90.03.015(4). See Ecology Policy 1040.

EXISTING WATER RIGHTS SECTION *(olive green color, top section)*

This section refers to existing water rights. It does not include any water right applications that have been submitted to Ecology.

Primary Qi (Instantaneous Quantity): This is also known as instantaneous flow rate. It's the amount of water allowed to be taken under the right from the source during a period of peak operation. For surface water, this is generally expressed in terms of cubic feet per

second (cfs). For groundwater, this is generally expressed in terms of gallons per minute (gpm). One cfs equals 448.8 gpm. Please indicate the units of measurement you are using for each source. If there are situations where the flow rate will be limited (e.g. limitations established on the source when other sources are utilized), please note them in the ADDITIONAL COMMENTS section in the form and in the WSP narrative.

Non-Additive Qi: This term was formally known as "supplemental." Your water rights may use the old terminology. See Ecology Policy 1040 for more information. Not all water rights have non-additive quantities. If a water right has non-additive Qi quantities, include the non-additive quantity in this field. This is generally listed in the "quantity, type of use, period of use" section on both permits and certificates. *Non-additive quantities should not be included in the primary Qi totals.*

Primary Qa (Annual Quantity): This is the amount of water that can be taken from the source under the right on an annual basis. It's usually expressed in terms of acre-feet. An acre-foot is the amount of water necessary to submerge an acre of land to a depth of one foot. One acre-foot equals 43,560 cubic feet or 325,851 gallons of water.

Non-Additive Qa: This term was formerly known as "supplemental." Your water rights may use the old terminology. See Ecology Policy 1040 for more information. Not all water rights have non-additive quantities. If a water right has non-additive Qa quantities, include the non-additive quantity in this field. This is generally listed in the "quantity, type of use, period of use" section on both permits and certificates. *Non-additive quantities should not be included in the primary Qa totals.*

CURRENT SOURCE PRODUCTION SECTION *(light green color, top section)*

This section refers to how much water is withdrawn from the source under each water right for the most recent full calendar year. You will need to determine any excess or deficiency for each water right after calculating how much water was withdrawn compared to how much water is allowed under each water right. If demand has decreased over past years, you may wish to include historic maximum production information in the ADDITIONAL COMMENTS section. This will provide a more complete picture of the use of your water rights.

Use the water use data and demand projections from your water system plan to define current and projected water needs. You can determine if you'll need additional water rights based on the comparison of existing water rights, current water production, and projected 10- and 20-year needs.

Total Qi (Instantaneous Quantity): This refers to the total maximum instantaneous flow rate withdrawn from the source under each water right during the most recent calendar year. For surface water, this is expressed in terms of cubic feet per second (cfs). For groundwater, this is expressed in terms of gallons per minute (gpm). One cfs equals 448.8 gpm.

Current Excess or Deficiency (Qi): Please calculate the excess or deficiency for each water right after comparing the total amount withdrawn against each water right. Please use parentheses for deficient amounts.

Total Qa (Annual Quantity): This refers to the total volume of water withdrawn from each source under each water right during the most recent calendar year. It's usually expressed in acre-feet.

Current Excess or Deficiency (Qa): Please calculate the excess or deficiency for each water right after comparing the total amount withdrawn against each water right. Please use parentheses for deficient amounts.

10-YEAR FORECASTED SOURCE PRODUCTION SECTION *(light blue color, top section)*

This section refers to how much water you project to withdraw from each source in ten years as determined in your water system plan. Please complete this section in the same manner (using the same units of measurement) as the current source production section using your 10-year forecasted amounts.

20-YEAR FORECASTED SOURCE PRODUCTION SECTION *(darker blue color, top section)*

This section refers to how much water you project to withdraw from each source in twenty years as determined in your water system plan. Please complete this section in the same manner (using the same units of measurement) as the current source production section using your 20-year forecasted amounts. If you are unable to provide 20-year forecasts for each source, you may choose to include the combined 20-year total at the bottom.

PENDING WATER RIGHTS SECTION *(second section of form)*

Please complete this section for any water right applications that have been submitted to Ecology. Please include the application number, whether it's a new or a change application, the date submitted, and the total quantities requested.

INTERTIES SECTION *(third section of form)*

This section must be completed by purveyors who purchase any amount of wholesale water. If your system sells water to another public water system, include the quantity sold in the CURRENT SOURCE PRODUCTION section.

Purchasers of wholesale water must account for all water obtained through the intertie for non-emergency supply purposes. This is to ensure that all sources of supply are considered when evaluating whether new water rights are needed within 20 years.

Please identify the maximum quantity of water, expressed in the same manner as the above sections, allowed under each intertie contract. If there are limiting conditions or temporary

agreements that effect the long-term use of the intertie, you must account for such limiting conditions when evaluating the current and forecasted water supply needs in your water system plan.

Finally, purchasers of wholesale water are responsible for ensuring that the underlying water right (held by the purveyor selling water) are adequate for such use. You should confirm that the selling system has accounted for the wholesale area in their water system plan to ensure that the water right authorizes the distribution of water through the intertie.

INTERRUPTIBLE WATER RIGHTS SECTION *(bottom section of form)*

This section refers to water rights that have an annual time-of-year interruption. Please complete this section for any water right listed in the above fields that has a time-of-year interruption. Please include the water right number, describe the limitation, and the time period of interruption. Purveyors with interruptible rights should develop a water shortage response plan as part of their water system plan to describe how demand will be met during periods of interruption through aggressive demand-side conservation, fixing leaks or other means.

ADDITIONAL COMMENTS SECTION *(bottom section of form)*

If the system has any source that is not currently being used on a regular basis (such a source may be categorized as stand-by, back-up, emergency), you should identify the source in this section if the source has an associated water right that is not listed in the above sections. The purpose is to identify that such water rights are still intended for a future beneficial use as required under RCW 90.03.015(4). See Page 2, Item 9 (b) in ECY Policy 2030. For these water rights, please briefly describe the future intended use of the source and when you expect to utilize the water right. This does not refer to sources categorized as seasonal sources.

You should also include any other comments in this section that will explain aspects of your water right portfolio that are not identified above.

Water Right Self-Assessment Form for Water System Plan

Mouse-over any link for more information. Click on any link for more detailed instructions.

Water Right Permit, Certificate, or Claim # *If water right is interruptible, identify limitation in yellow section below	WFI Source # If a source has multiple water rights, list each water right on separate line	Existing Water Rights Qi= Instantaneous Flow Rate Allowed (GPM) Qa= Annual Volume Allowed (Acre-Feet/Year) This includes wholesale water sold				Current Source Production – Most Recent Calendar Year Qi = Max Instantaneous Flow Rate Withdrawn (GPM or CFS) Qa = Annual Volume Withdrawn (Acre-Feet/Year) This includes wholesale water sold				10-Year Forecasted Source Production (determined from WSP) This includes wholesale water sold				20-Year Forecasted Source Production (determined from WSP) This includes wholesale water sold			
		Primary Qi Maximum Rate Allowed	Non-Additive Qi Maximum Rate Allowed	Primary Qa Maximum Volume Allowed	Non-Additive Qa Maximum Volume Allowed	Total Qi Maximum Instantaneous Flow Rate Withdrawn	Current Excess or (Deficiency) Qi	Total Qa Maximum Annual Volume Withdrawn	Current Excess or (Deficiency) Qa	Total Qi Maximum Instantaneous Flow Rate in 10 Years	10-Year Forecasted Excess or (Deficiency) Qi	Total Qa Maximum Annual Volume in 10 Years	10-Year Forecasted Excess or (Deficiency) Qa	Total Qi Maximum Instantaneous Flow Rate in 20 Years	20-Year Forecasted Excess or (Deficiency) Qi	Total Qa Maximum Annual Volume in 20 Years	20-Year Forecasted Excess or (Deficiency) Qa
00857 S1*01304 C	Coal Creek Springs	6,732		9,410		4,383	2,349	3,758	5,652	5,715	1,017	8,097	1,313	6,685	47	8,781	629
03560 G1*04731C	Well 1, 6, & 7	2,200		1,120		2,100	100	786	334	2,200	0	1,120	0	2,200	0	1,120	0
G1-00277C	Well 2, 6, & 7	2,400		1,360	2,480	2,062	338	1,360	0	2,400	0	1,360	0	2,400	0	1,360	0
G1-23629C	Well 3A & 3B, 6, & 7	2,800		3,600		592	2,208	0	3,600	2,022	778	574	3,026	2,800	0	717	2,883
G1-20391C	Well 4, 6, and 7	2,800		3,600		2,388	412	681	2,919	2,800	0	3,038	562	2,800	0	3,409	191
G1-23633C	Wells 5, 5A, 5B, &5C	1,000		720		730	270	191	529	952	48	437	283	1,000	0	560	160
G1-25518	Well 5A	167		0	187	90	77	0	0	117	50	0	0	167	0	0	0
G1-22769 C	Algona Well	500		175		0	500	0	175	0	500	0	175	0	500	0	175
S1-049354CL	West Hill Springs	625		1,010		563	62	481	529	625	0	1,010	0	625	0	1,010	0
	TOTALS =	19,224		20,995		12,909	6,315	7,257	13,738	16,831	2,393	15,636	5,359	18,677	547	16,957	4,038
Column Identifiers for Calculations:		A		B		C	=A-C	D	=B-D	E	= A-E	F	=B-F	G	=A-G	H	=B-H

PENDING WATER RIGHT APPLICATIONS: Identify any water right applications that have been submitted to Ecology.

Application Number	New or Change Application?	Date Submitted	Quantities Requested			
			Primary Qi	Non-Additive Qi	Primary Qa	Non-Additive Qa
G1-28404	New	1/5/2006	12,500		13,443	

INTERTIES: Systems receiving wholesale water complete this section. Wholesaling systems must include water sold through intertie in the current and forecasted source production columns above.

Name of Wholesaling System Providing Water	Quantities Allowed In Contract		Expiration Date of Contract	Currently Purchased Current quantity purchased through intertie				10-Year Forecasted Purchase Forecasted quantity purchased through intertie				20-Year Forecasted Purchase Forecasted quantity purchased through intertie			
	Maximum Qi Instantaneous Flow Rate	Maximum Qa Annual Volume		Maximum Qi Instantaneous Flow Rate	Current Excess or (Deficiency) Qi	Maximum Qa Annual Volume	Current Excess or (Deficiency) Qa	Maximum Qi 10-Year Forecast	Future Excess or (Deficiency) Qi	Maximum Qa 10-Year Forecast	Future Excess or (Deficiency) Qa	Maximum Qi 20-Year Forecast	Future Excess or (Deficiency) Qi	Maximum Qa 20-Year Forecast	Future Excess or (Deficiency) Qa
Tacoma Public Utilities	**3,560**	**3,920**		**0**	**3,560**	**0**	**3,920**	**0**	**3,560**	**0**	**3,920**	**1,253**	**2,307**	**0**	**3,920**
TOTALS =	3,560	3,920		0	3,560	0	3,920	0	3,560	0	3,920	0	3,560	0	3,920
Column Identifiers for Calculations:	A	B		C	=A-C	D	=B-D	E	=A-E	F	=B-F	G	=A-G	H	=B-H

INTERRUPTIBLE WATER RIGHTS: Identify limitations on any water rights listed above that are interruptible.

Water Right #	Conditions of Interruption	Time Period of Interruption
1		
2		
3		

ADDITIONAL COMMENTS:

Current and proposed Qi and Qa quantities for Well 5A (G1-25518) are included with G1-23633C.
Current Well 6 Qa = 1,435 AF which was distributed between G1*04731C, G1-00277C, and G1-20391C.
Current Well 7 Qa = 0 AF.
10-year and 20-year forecasted Qi and Qa includes providing an annual average of 2.5 MGD from Coal Creek Springs to the Muckleshoot Indian Tribe (MIT) for a hatchery.
The Department of Ecology considers G1-25173C to be a non-municipal water right issued to serve the Braunwood satellite system, so it is not listed.
S1-049354CL (West Hill Springs) is a claim filed under RCW 90.14.061; quantities can only be validated per RCW 90.14.081.

RECEIVED
SEP 18 1997
KING COUNTY
RECORDER

City of Auburn
Public Works Department
25 West Main Street
Auburn, WA 98001

WASHINGTON STATE DEPARTMENT OF ECOLOGY

STATE OF WASHINGTON
SUPERSEDING CERTIFICATE OF WATER RIGHT

Replaces Certificate of Water Right issued on March 11, 1935
and Certificate of Change issued on November 18, 1964

Document Title: Certificate of Water Right

Agency: Department of Ecology
Northwest Regional Office
3190 160th Avenue Southeast
Bellevue, WA 98008-5452

Applicant: City of Auburn/Public Works
25 West Main Street
Auburn, WA 98001

Reference Number: N/A

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
April 22, 1925	1304	549	857

This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown, but is limited to an amount actually beneficially used.

PUBLIC WATERS TO BE APPROPRIATED

SOURCE	TRIBUTARY OF (IF SURFACE WATERS)
Coal Creek Springs	Stuck River

MAX. CUBIC FEET PER SECOND	MAX. GALLONS PER MINUTE	MAX. ACRE-FEET PER YEAR
15.0	N/A	9410

QUANTITY	TYPE OF USE	PERIOD OF USE
N/A	Municipal	Continuously

LEGAL DESCRIPTION OF LOCATION OF DIVERSION/WITHDRAWAL

1/4 1/4	SECTION	TOWNSHIP N.	RANGE (E. OR W.) W.M.	W.R.I.A.	COUNTY
SE SW	28	21	5E	10	King

PARCEL # N/A

ADDITIONAL LEGAL IS ON PAGE 2

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

1/4 1/4	SECTION	TOWNSHIP N.	RANGE (E. OR W.) W.M.	W.R.I.A.	COUNTY
N/A	N/A	N/A	N/A	N/A	King

PARCEL # N/A

ADDITIONAL LEGAL IS ON PAGE 2

970926-0227 09:27:00 AM KING COUNTY RECORDS 002 THS 9.00

9709260272

LEGAL DESCRIPTION FOR LOCATION OF DIVERSION/WITHDRAWAL

256 feet north and 2548 feet west of the SE corner of Section 28.

LEGAL DESCRIPTION FOR PROPERTY ON WHICH WATER IS TO BE USED

Area served by the City of Auburn as identified in their latest approved water system plan and periodic updates consistant with coordinated water supply plans, including interties for wholesale water delivery to the service areas of any water purveyors that have approved interlocal agreements with the City of Auburn.

PROVISIONS

All conditions and requirements contained in reports of examination or permits previously issued apply to this certificate unless specifically noted below.

Issuance of this water right may be subject to implementation of the minimum requirements established in the Conservation Planning Requirements, Guidelines and Requirements for Public Water Systems Regarding Water Use Reporting, Demand Forecasting Methodology, and Conservation Programs, July 1994, and as revised.

Under RCW 90.03.005 and 90.54.020(6), conservation and improved water use efficiency must be emphasized in the management of the State's water resources, and must be considered as a potential new source of water. Accordingly, as part of the terms of this water right, the applicant may be required to prepare and implement a water conservation plan approved by Department of Health. The standards for such a plan may be obtained from either the Department of Health or the Department of Ecology.

The right to use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in RCW 90.03.380, 90.03.390, and 90.44.020.

This certificate of water right is specifically subject to relinquishment for non-use of water as provided in RCW 90.14.180.

Given under my hand and the seal of this office at Bellevue, Washington, this 16th *day of* Sept. *1997.*

STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

ENGINEERING DATA
OK

ECY 040-1-2 (Rev. 8-97)

Tom Fitzsimmons
Department of Ecology

By _____
Ray Hellwig, Section Supervisor

CERTIFICATE RECORD NO. — 2 — PAGE NO. — 857 —

STATE OF WASHINGTON, COUNTY OF — King —

CERTIFICATE OF WATER RIGHT

(For rights perfected under original, supplemental or secondary permits)

(In accordance with the provisions of Chapter 117, Laws of Washington for 1917, and the regulations of the State Supervisor of Hydraulics thereunder)

This is to certify, that — City of Auburn — of — Auburn —, State of — Washington — has made application to the State Supervisor of Hydraulics of Washington, for a right to the use of the waters of — Coal Creek Springs —, a tributary of — Stuck River — for the purpose of — Municipal purposes and power — and Appropriation Permit No. — 549 — issued by the State Supervisor of Hydraulics, and the right to the use of said waters has been perfected in accordance with the laws of Washington, and is hereby confirmed by the State Supervisor of Hydraulics of Washington and entered of record in Vol. — 2 — at Page — 857 — on the — 11th — day of — March — 19 35, that the hereby confirmed dates from — April 22nd, 1935 — ; that the amount of water to which such right is entitled and hereby confirmed, for the purposes aforesaid, is limited to an amount actually beneficially used for said purposes, and shall not exceed — 15.0 — cubic feet per second. A description of the lands under such right, and to which the water hereby confirmed is appurtenant, or for other purposes, the place where such water is put to beneficial use, is as follows:

PLACE OF USE					
Section	Township	Range			
— 20 —	21 N. —	5 E.W.M. — $N\frac{1}{2}$ of $SW\frac{1}{4}$ of $SW\frac{1}{4}$ —			
— 13 —	21 N. —	4 E.W.M. — S 7/8 of $E\frac{1}{2}$			
— 18 —	21 N. —	5 E.W.M. — South 7/8			
— 19 —	21 N. —	5 E.W.M. — North $\frac{1}{2}$			
— 24 —	21 N. —	4 E.W.M. — North $\frac{1}{2}$ of East $\frac{1}{2}$			

The right to the use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in Section 39, Chapter 117, Session Laws 1917.

Witness my hand and official seal this — 11th — day of — March — A.D. 19 35 —

State Supervisor of Hydraulics

5812517

FILE
VOL
AC-
LID-
IMPV.-
SUBJT.
Coal Creek

CERTIFICATE OF CHANGE OF PURPOSE OF USE OF WATER

In accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto and rules thereunder of the State Supervisor of the Division of Water Resources.

THIS IS TO CERTIFY That the City of Auburn of Auburn, Washington, has complied with all of the requirements of Section 90.03.380 Revised Code of Washington, and is hereby granted a permit to change the purpose of use of waters of Coal Creek Springs in the amount of 15 cubic feet per second as granted in water right certificate No. 857; That such water had been used for the purpose of municipal water supply and power.

That the purpose of use of said waters has been changed to municipal water supply.

WITNESS THE SEAL and SIGNATURE of the Supervisor of the Division of Water Resources of the State of Washington, affixed this 13 day of November, 1964.

M. G. WALKER, SUPERVISOR
DIVISION OF WATER RESOURCES

RECORDED:
Volume 2, Page 826
Records of Change
of Purpose of Use
of Water
ENGINEERING DATA

O.K. J.W.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION

WATER RIGHT CLAIM

RECEIVED
JAN 28 1974
CITY OF AUBURN
DEPT. OF PUBLIC WORKS

RECEIVED
DEPARTMENT OF ECOLOGY
DEC 17 1973
CASH OTHER NONE
G 082285

1. NAME City of Auburn

ADDRESS 20 "A" St. N. W.

Auburn, WA ZIP CODE 98002

2. SOURCE FROM WHICH THE RIGHT TO TAKE AND MAKE USE OF WATER IS CLAIMED: Surface (SURFACE OR GROUND WATER)

W.R.I.A. 09 (LEAVE BLANK)

A. IF GROUND WATER, THE SOURCE IS N/A

B. IF SURFACE WATER, THE SOURCE IS Springs

3. THE QUANTITIES OF WATER AND TIMES OF USE CLAIMED:

A. QUANTITY OF WATER CLAIMED 625 G.P.M. PRESENTLY USED 625 G.P.M.
(CUBIC FEET PER SECOND OR GALLONS PER MINUTE)

B. ANNUAL QUANTITY CLAIMED 1010 PRESENTLY USED 1010
(ACRE FEET PER YEAR)

C. IF FOR IRRIGATION, ACRES CLAIMED N/A PRESENTLY IRRIGATED N/A

D. TIME(S) DURING EACH YEAR WHEN WATER IS USED: Continually - January through December

4. DATE OF FIRST PUTTING WATER TO USE: MONTH Prior to 1907 See Attached Ordinance No. 123 YEAR

5. LOCATION OF THE POINT(S) OF DIVERSION/~~WITHDRAWAL~~: 500 FEET North AND 150 FEET East FROM THE Center of Section 11 CORNER OF SECTION N/A

BEING WITHIN The SE 1/4 of the NW 1/4 and the SW 1/4 of the NE 1/4 and OF SECTION 11 T. 21 N., R. 4 (E.OR W.) W.M.
the NE 1/4 of the SW 1/4 LESS the SW 1/4 of the NE 1/4 of the SW 1/4

THIS IS WITHIN THE LIMITS OF A RECORDED PLATTED PROPERTY, LOT N/A BLOCK N/A OF N/A
(GIVE NAME OF PLAT OR ADDITION)

6. LEGAL DESCRIPTION OF LANDS ON WHICH THE WATER IS USED: Corporate limits of the City of Auburn.

COUNTY King

7. PURPOSE(S) FOR WHICH WATER IS USED: Municipal Supply

8. THE LEGAL DOCTRINE(S) UPON WHICH THE RIGHT OF CLAIM IS BASED: Vested Right (Continuous use since prior to 1907)

THE FILING OF A STATEMENT OF CLAIM DOES NOT CONSTITUTE AN ADJUDICATION OF ANY CLAIM TO THE RIGHT TO USE OF WATERS AS BETWEEN THE WATER USE CLAIMANT AND THE STATE OR AS BETWEEN ONE OR MORE WATER USE CLAIMANTS AND ANOTHER OR OTHERS. THIS ACKNOWLEDGEMENT CONSTITUTES RECEIPT FOR THE FILING FEE.

DATE RETURNED THIS HAS BEEN ASSIGNED WATER RIGHT CLAIM REGISTRY NO.
WA 7 [illegible] 354

I HEREBY SWEAR THAT THE ABOVE INFORMATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

X CITY OF AUBURN By [signature]

DATE December 7, 1973

IF CLAIM FILED BY DESIGNATED REPRESENTATIVE, PRINT OR TYPE FULL NAME AND MAILING ADDRESS OF AGENT BELOW.

Pat Nevins, P.E., Director of Public Works
City of Auburn
20 "A" St. N. W., Auburn, WA 98002

☐ ADDITIONAL INFORMATION RELATING TO WATER QUALITY AND/OR WELL CONSTRUCTION IS AVAILABLE.

WHITE - DEPARTMENT OF ECOLOGY

RETURN ALL THREE COPIES WITH CARBONS INTACT, ALONG WITH YOUR FEE TO:
DEPARTMENT OF ECOLOGY
WATER RIGHT CLAIMS REGISTRATION
OLYMPIA, WASHINGTON 98504

City of Auburn
Public Works Department
25 West Main Street
Auburn, WA 98001

STATE OF WASHINGTON
SUPERSEDING CERTIFICATE OF WATER RIGHT
Replaces Certificate of Water Right issued on February 5, 1960

Document Title: Certificate of Water Right

Agency: Department of Ecology
Northwest Regional Office
3190 160th Avenue Southeast
Bellevue, WA 98008-5452

Applicant: City of Auburn
Public Works Dept.
25 West Main Street
Auburn, WA 98001

Reference Number: N/A

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
November 12, 1957	4731	4592	3560-A

This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown, but is limited to an amount actually beneficially used.

PUBLIC WATERS TO BE APPROPRIATED

SOURCE	TRIBUTARY OF (IF SURFACE WATERS)
Well #1	N/A

MAX. CUBIC FEET PER SECOND	MAX. GALLONS PER MINUTE	MAX. ACRE-FEET PER YEAR
N/A	2200	1120

QUANTITY	TYPE OF USE	PERIOD OF USE
N/A	Municipal	Continuously

LEGAL DESCRIPTION OF LOCATION OF DIVERSION/WITHDRAWAL

1/4 1/4	SECTION	TOWNSHIP N.	RANGE (E. OR W.) W.M.	W.R.I.A.	COUNTY
NE NE	19	21	5E	9	King

PARCEL # N/A

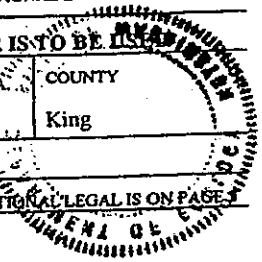
ADDITIONAL LEGAL IS ON PAGE 2

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

1/4 1/4	SECTION	TOWNSHIP N.	RANGE (E. OR W.) W.M.	W.R.I.A.	COUNTY
N/A	N/A	N/A	N/A	N/A	King

PARCEL # N/A

ADDITIONAL LEGAL IS ON PAGE 2



9709260278

9709260278 09:27:00 AM KING COUNTY RECORDS 002 TMS
9.00

LEGAL DESCRIPTION FOR LOCATION OF DIVERSION/WITHDRAWAL

...th and 125 feet east of SW corner of NE quarter NE quarter Section 19.

LEGAL DESCRIPTION FOR PROPERTY ON WHICH WATER IS TO BE USED

...d by the City of Auburn as identified in their latest approved water system plan and periodic ...sistent with coordinated water supply plans, including interties for wholesale water delivery to ...areas of any water purveyors that have approved interlocal agreements with the City of Auburn.

PROVISIONS

...ions and requirements contained in reports of examination or permits previously issued apply to ...this unless specifically noted below.

...of this water right is subject to the implementation of the minimum requirements established in ...rvation Planning Requirements, Guideline and Requirements for Public Water Systems ...Water Use Reporting, Demand Forecasting Methodology, and Conservation Programs, July ...as revised.

...W 90.03.005 and 90.54.020(6), conservation and improved water use efficiency must be ...ed in the management of the states water resources, and must be considered as a potential new ...water. Accordingly, as part of the terms of this water right, the applicant shall prepare and ...a water conservation plan approved by Department of Health. The standards for such a plan ...obtained from either the Department of Health or the Department of Ecology.

...to monitor the resource, static water level (SWL) shall be measured at least once each month. ...ments shall be taken after the pump has been shut off and the water level in the well has been ...d. The data shall be maintained and made available to Ecology upon request. However, ...Water Resources Section (NWRO) shall be notified if the SWL is determined to be below the ...ously recorded at that time of year.

...use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided ...RCW 90.03.390, and 90.44.020.

...ficate of water right is specifically subject to relinquishment for non-use of water as ...in RCW 90.14.180.

Given under my hand and the seal of this office at Bellevue, Washington, this 16 day of Sept., 1997.

Tom Fitzsimmons
Department of Ecology

By _____
Ray Hellwig, Section Supervisor

...(Rev. 8-97)

Well

S. F. No. 7361—1-57—3M. 47578.

5130217
NE 19-21-5

VOL 7 PAGE 13
AC 12

A 3-13.13

CERTIFICATE RECORD NO. 8 PAGE NO. 3560-A

STATE OF WASHINGTON, COUNTY OF King

Certificate of Ground Water Right

Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the State Supervisor of Water Resources thereunder.

THIS IS TO CERTIFY *That* CITY OF AUBURN WATER DEPARTMENT

of Auburn, Washington, *has made proof to the satisfaction of the State Supervisor of Water Resources of Washington, of a right to the use of the ground waters of a* well

located within (NE¼NE¼) Government Lot 8

Sec. 19, *Twp.* 21 *N., R.* 5 E. *W. M.,*

for the purpose of municipal supply

under and subject to provisions contained in Ground Water Permit No. 4592 *issued by the State Supervisor of Water Resources and that said right to the use of said ground waters has been perfected in accordance with the laws of Washington, and is hereby confirmed by the State Supervisor of Water Resources of Washington and entered of record in Volume* 8 *at page* 3560-A; *that the right hereby confirmed dates from* November 12, 1957; *that the quantity of ground water under the right hereby confirmed for the purposes aforesaid, is limited to an amount actually beneficially used for said purposes, and shall not exceed* 2200 gallons per minute; 1120 acre-feet per year for municipal supply.

A description of the lands to which such ground water right is appurtenant, and the place where such water is put to beneficial use, is as follows:

City of Auburn, King County, Washington.

The right to the use of the ground water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in Sections 6 and 7, Chapter 122, Laws of 1929.

WITNESS the seal and signature of the State Supervisor of Water Resources affixed this 5th *day of* February, 1960.

ENGINEERING DATA

O.K. SL

M. B. Walker
State Supervisor of Water Resources.

City of Auburn
Public Works Department
25 West Main Street
Auburn, WA 98001

STATE OF WASHINGTON
SUPERSEDING CERTIFICATE OF WATER RIGHT
Replaces Certificate of Water Right issued on November 14, 1972

RECEIVED
SEP 18 1997
KING COUNTY RECORDER

Document Title: Certificate of Water Right

Agency: Department of Ecology
Northwest Regional Office
3190 160th Avenue Southeast
Bellevue, WA 98008-5452

Applicant: City of Auburn
Public Works Dept.
25 West Main Street
Auburn, WA 98001

Reference Number: N/A

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
February 26, 1968	9229	8732	G1-00277C

This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown, but is limited to an amount actually beneficially used.

PUBLIC WATERS TO BE APPROPRIATED

SOURCE	TRIBUTARY OF (IF SURFACE WATERS)
Well #2	N/A

MAX. CUBIC FEET PER SECOND	MAX. GALLONS PER MINUTE	MAX. ACRE-FEET PER YEAR
N/A	2400	3840

QUANTITY	TYPE OF USE	PERIOD OF USE
N/A	Municipal	Continuously

LEGAL DESCRIPTION OF LOCATION OF DIVERSION/WITHDRAWAL

1/4 1/4	SECTION	TOWNSHIP N.	RANGE (E. OR W.) W.M.	W.R.I.A.	COUNTY
N/A	18	21	5E	9	King

PARCEL # N/A

ADDITIONAL LEGAL IS ON PAGE 2

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

1/4 1/4	SECTION	TOWNSHIP N.	RANGE (E. OR W.) W.M.	W.R.I.A.	COUNTY
N/A	N/A	N/A	N/A	N/A	King

PARCEL # N/A

ADDITIONAL LEGAL IS ON PAGE 2

RECEIVED
SEP 10 1997
DEPARTMENT OF ECOLOGY

9709260279

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9709260279

LEGAL DESCRIPTION FOR LOCATION OF DIVERSION/WITHDRAWAL

685 feet south and 610 feet east from North quarter of Section 18.

Within Government Lots 9 & 10

LEGAL DESCRIPTION FOR PROPERTY ON WHICH WATER IS TO BE USED

Area served by City of Auburn as identified in their latest approved water system plan and periodic updates consistant with coordinated water supply plans, including interties for wholesale water delivery to the service areas of any water purveyors that have approved interlocal agreements with the City of Auburn.

PROVISIONS

All conditions and requirements contained in reports of examination or permits previously issued apply to this certificate unless specifically noted below.

Issuance of this water right is subject to the implementation of the minimum requirements established in the Conservation Planning Requirements, Guideline and Requirements for Public Water Systems Regarding Water Use Reporting, Demand Forecasting Methodology, and Conservation Programs, July 1994, and as revised.

Under RCW 90.03.005 and 90.54.020(6), conservation and improved water use efficiency must be emphasized in the management of the states water resources, and must be considered as a potential new source of water. Accordingly, as part of the terms of this water right, the applicant shall prepare and implement a water conservation plan approved by Department of Health. The standards for such a plan may be obtained from either the Department of Health or the Department of Ecology.

In order to monitor the resource, static water level (SWL) shall be measured at least once each month. Measurements shall be taken after the pump has been shut off and the water level in the well has been stabilized. The data shall be maintained and made available to Ecology upon request. However, Ecology's Water Resources Section (NWRO) shall be notified if the SWL is determined to be below the level normally recorded at that time of year.

The right to use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in RCW 90.03.380, 90.03.390, and 90.44.020.

This certificate of water right is specifically subject to relinquishment for non-use of water as provided in RCW 90.14.180.

Given under my hand and the seal of this office at Bellevue, Washington, this 16th *day of* Sept., *1997.*

STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

ENGINEERING DATA
OK W
ECY 040-1-2 (Rev. 8-97)

Tom Fitzsimmons
Department of Ecology

By _____
Ray Hellwig, Section Supervisor

S. F. No. 7361—(Rev. 6-70).

CERTIFICATE RECORD NO. - , PAGE NO. G1-00277C

STATE OF WASHINGTON, COUNTY OF King

CERTIFICATE OF GROUND WATER RIGHT

(Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology thereunder.)

7211300429

THIS IS TO CERTIFY *That* CITY OF AUBURN

of Auburn, Washington, *has made proof to the satisfaction of the Department of Ecology of a right to the use of the public ground waters of the State of Washington from* a well

located within abandoned White River bed, in the City of Auburn, between Government Lots 9 and 10.
Sec. 18, *Twp.* 21 *N.*, *R.* 5 E *W.M.*,

for the purpose(s) of municipal supply

under and specifically subject to provisions contained in Ground Water Permit No. 8732 *issued by the Department of Ecology and that said right to the use of said ground waters has been perfected in accordance with the laws of Washington, and is hereby confirmed by the Department of Ecology and entered of record in Volume* - *at page* G1-00277C; *that the priority of the right hereby confirmed dates from* February 26, 1968; *that the quantity of ground water under the right hereby confirmed for the aforesaid purposes, is limited to an amount actually beneficially used for said purposes, and shall not exceed* 2400 gallons per minute; 3840 acre-feet per year, to supply a projected population of 40,000 by 1980 continuously each year

A description of the lands to which such ground water right is appurtenant is as follows:

Area served by the City of Auburn.

The right to use of water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in RCW 90.03.380, 90.03.390 and 90.44.020.

This certificate of ground water right is specifically subject to relinquishment for nonuse of water as provided in RCW 90.14.180.

Witness my hand and seal of this office at Olympia, Washington, this 14th *day of* November, 19 72.

Engineering Data
OK

JOHN A. BIGGS, *Director*
Department of Ecology

by R. Jerry Bolles

NOV-30-72 00107 7211300129 ——RF 2.00 Wea d

Ground Water Permit No. 8732

Certificate of Ground Water Right

Recorded in the Department of Ecology, Olympia, Washington, in Book No. ——— of Ground Water Right Certificates, on page GI-00277C, on the 14th day of November 19 72

STATE OF WASHINGTON, County of ——— } ss.

I certify that the within was received and duly recorded by me in Volume ——— of Book of Water Right Certificates, at page ——— on the ——— day of ———, 19——

———

STATE PRINTING PLANT, OLYMPIA, WASHINGTON

Filed for Record at Request of
City of Ruston
Address 2214 N. Pearl St.
Ruston, Wash. 98402

1972 NOV 30 AM 11 11

AUDITOR
RECORDING & ELECTIONS
PIERCE COUNTY, WASH.

City of Auburn
Public Works Department
25 West Main Street
Auburn, WA 98001

WASHINGTON STATE DEPARTMENT OF ECOLOGY

STATE OF WASHINGTON
SUPERSEDING CERTIFICATE OF WATER RIGHT
Replaces Certificate of Water Right issued on September 15, 1988

RECEIVED
SEP 18 1997
KING COUNTY RECORDER

Document Title: Certificate of Water Right

Agency: Department of Ecology
Northwest Regional Office
3190 160th Avenue Southeast
Bellevue, WA 98008-5452

Applicant: City of Auburn
Public Works Dept.
25 West Main Street
Auburn, WA 98001

Reference Number: N/A

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
July 8, 1980	G1-23629	G1-23629 P	G1-23629 C

This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown, but is limited to an amount actually beneficially used.

9709260281

PUBLIC WATERS TO BE APPROPRIATED

SOURCE	TRIBUTARY OF (IF SURFACE WATERS)
Wells (3A & 3B)	N/A

MAX. CUBIC FEET PER SECOND	MAX. GALLONS PER MINUTE	MAX. ACRE-FEET PER YEAR
N/A	2800	3600

QUANTITY	TYPE OF USE	PERIOD OF USE
N/A	Municipal	Continuously

LEGAL DESCRIPTION OF LOCATION OF DIVERSION/WITHDRAWAL

1/4 1/4	SECTION	TOWNSHIP N.	RANGE (E. OR W.) W.M.	W.R.I.A.	COUNTY
NE SW	30	21	5E	9	King

PARCEL # N/A

ADDITIONAL LEGAL IS ON PAGE 2

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

1/4 1/4	SECTION	TOWNSHIP N.	RANGE (E. OR W.) W.M.	W.R.I.A.	COUNTY
N/A	N/A	N/A	N/A	N/A	King

PARCEL # N/A

ADDITIONAL LEGAL IS ON PAGE 2

9709260281 09:27:00 AM KING COUNTY RECORDS 002 THS

LEGAL DESCRIPTION FOR LOCATION OF DIVERSION/WITHDRAWAL

Well 3A: 853 feet west and 326 feet south of center of Section 30.

Well 3B: 812 feet west and 326 feet south of center of Section 30.

LEGAL DESCRIPTION FOR PROPERTY ON WHICH WATER IS TO BE USED

Area served by City of Auburn as identified in their latest approved water system plan and periodic updates consistent with coordinated water supply plans, including interties for wholesale water delivery to the service areas of any water purveyors that have approved interlocal agreements with the City of Auburn.

PROVISIONS

9709260281

All conditions and requirements contained in reports of examination or permits previously issued apply to this certificate unless specifically noted below.

All water wells constructed within the State shall meet the minimum standards for well construction and maintenance as provided under RCW 18.104, Washington Water Well Construction Act of 1972, and Chapter 173-160 WAC, Minimum Standards for Construction and Maintenance of Wells.

An approved metering device shall be installed and maintained in accordance with RCW 90.03.360, WAC 508-64-020 through -040. Meter readings shall be recorded at least monthly.

The well or wells under this appropriation right shall not be screened, perforated or open to water bearing materials shallower than 180 feet below ground surface at the well site.

Issuance of this water right is subject to the implementation of the minimum requirements established in the Conservation Planning Requirements, Guideline and Requirements for Public Water Systems Regarding Water Use Reporting, Demand Forecasting Methodology, and Conservation Programs, July 1994, and as revised.

Under RCW 90.03.005 and 90.54.020(6), conservation and improved water use efficiency must be emphasized in the management of the states water resources, and must be considered as a potential new source of water. Accordingly, as part of the terms of this water right, the applicant shall prepare and implement a water conservation plan approved by Department of Health. The standards for such a plan may be obtained from either the Department of Health or the Department of Ecology.

In order to monitor the resource, static water level (SWL) shall be measured at least once each month. Measurements shall be taken after the pump has been shut off and the water level in the well has been stablilized. The data shall be maintained and made available to Ecology upon request. However, Ecology's Water Resources Section (NWRO) shall be notified if the SWL is determined to be below the level normally recorded at that time of year.

The right to use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in RCW 90.03.380, 90.03.390, and 90.44.020.

This certificate of water right is specifically subject to relinquishment for non-use of water as provided in RCW 90.14.180.

Given under my hand and the seal of this office at Bellevue, Washington, this 16th *day of* April, *1997.*

STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

ENGINEERING REVIEW
OK JJ
ECY 040-1-2 (Rev. 8-97)

Tom Fitzsimmons
Department of Ecology

By _____
Ray Hellwig, Section Supervisor

Well #3 Ab

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

CERTIFICATE OF WATER RIGHT

☐ Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

☒ Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

8809190660

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
July 8, 1980	G1-23629	G1-23629P	G1-23629C

NAME
City of Auburn

ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
25 West Main Street	Auburn	Washington	98002

This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown, but is limited to an amount actually beneficially used.

PUBLIC WATER TO BE APPROPRIATED

SOURCE
Well

TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
—	2,800	3,600.0

QUANTITY, TYPE OF USE, PERIOD OF USE
Municipal Water Supply - continuously

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION—WITHDRAWAL
762' West and 267' South of center of Section 30.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE, (E. OR W.) W.M.	W.R.I.A.	COUNTY
NE¼ SW¼	30	21	5E	9	King

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

Area served by City of Auburn, situated within King County, Washington.

—

88/09/19 #0665
RECD F 6.00
CASHSL

SEP 19 2 00 PM '88
BY THE [illegible]
RECORDS & [illegible]
KING COUNTY

FILED for Record at Request of
Name City of Auburn
Address 25 West Main St
Auburn, WA 98001

PROVISIONS

All water wells constructed within the state shall meet the minimum standards for construction and maintenance as provided under RCW 18.104 (Washington Water Well Construction Act of 1971) and Chapter 173-160 WAC (Minimum Standards for Construction and Maintenance of Water Wells).

An approved measuring device shall be installed and maintained in accordance with RCW 90.03.360, WAC 508-64-020 through WAC 508-64-040 (Installation, operation and maintenance requirements attached hereto).

The well or wells under this appropriation right shall not be screened, perforated or open to water bearing materials shallower thant 180' below ground surface at the well site.

8809190660

The right to the use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in RCW 90.03.380, 90.03.390, and 90.44.020.

This certificate of water right is specifically subject to relinquishment for nonuse of water as provided in RCW 90.14.180.

Given under my hand and the seal of this office at Redmond *Washington, this* 15th *day of* September, *19* 88

Department of Ecology

ENGINEERING DATA OK

by Nancy Ellison

Nancy Ellison, Regional Manager

FOR COUNTY USE ONLY

City of Auburn
Public Works Department
25 West Main Street
Auburn, WA 98001

WASHINGTON STATE DEPARTMENT OF ECOLOGY

STATE OF WASHINGTON
SUPERSEDING CERTIFICATE OF WATER RIGHT
Replaces Certificate of Water Right issued on September 15, 1988

RECEIVED
SEP 18 1997
KING COUNTY RECORDER

Document Title: Certificate of Water Right

Agency: Department of Ecology
Northwest Regional Office
3190 160th Avenue Southeast
Bellevue, WA 98008-5452

Applicant: City of Auburn
Public Works Dept.
25 West Main Street
Auburn, WA 98001

Reference Number: N/A

9709260280

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
December 29, 1972	G1-20391	G1-20391 P	G1-20391 C

This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown, but is limited to an amount actually beneficially used.

PUBLIC WATERS TO BE APPROPRIATED

SOURCE	TRIBUTARY OF (IF SURFACE WATERS)
Well #4	N/A

MAX. CUBIC FEET PER SECOND	MAX. GALLONS PER MINUTE	MAX. ACRE-FEET PER YEAR
N/A	2800	3600

QUANTITY	TYPE OF USE	PERIOD OF USE
N/A	Municipal	Continuously

LEGAL DESCRIPTION OF LOCATION OF DIVERSION/WITHDRAWAL

1/4 1/4	SECTION	TOWNSHIP N.	RANGE (E. OR W.) W.M.	W.R.I.A.	COUNTY
NW NE	30	21	5E	9	King

PARCEL # N/A

ADDITIONAL LEGAL IS ON PAGE 2

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

1/4 1/4	SECTION	TOWNSHIP N.	RANGE (E. OR W.) W.M.	W.R.I.A.	COUNTY
N/A	N/A	N/A	N/A	N/A	King

PARCEL # N/A

ADDITIONAL LEGAL IS ON PAGE 2

9709260280 09:27:00 AM KING COUNTY RECORDS 002 IHS

9709260280

LEGAL DESCRIPTION FOR LOCATION OF DIVERSION/WITHDRAWAL

900 feet east and 500 feet south of North quarter corner of Section 30.

LEGAL DESCRIPTION FOR PROPERTY ON WHICH WATER IS TO BE USED

Area served by City of Auburn as identified in their latest approved water system plan and periodic updates consistent with coordinated water supply plans, including interties for wholesale water delivery to the service areas of any water purveyors that have approved interlocal agreements with the City of Auburn.

PROVISIONS

All conditions and requirements contained in reports of examination or permits previously issued apply to this certificate unless specifically noted below.

The well or wells under this appropriation right shall not be screened, perforated or open to water bearing materials shallower than 180 feet below ground surface at the well site.

All water wells constructed within the State shall meet the minimum standards for well construction and maintenance as provided under RCW 18.104, Washington Water Well Construction Act of 1972, and Chapter 173-160 WAC, Minimum Standards for Construction and Maintenance of Wells.

An approved metering device shall be installed and maintained in accordance with RCW 90.03.360, WAC 508-64-020 through -040. Meter readings shall be recorded at least monthly.

Issuance of this water right is subject to the implementation of the minimum requirements established in the Conservation Planning Requirements, Guideline and Requirements for Public Water Systems Regarding Water Use Reporting, Demand Forecasting Methodology, and Conservation Programs, July 1994, and as revised.

Under RCW 90.03.005 and 90.54.020(6), conservation and improved water use efficiency must be emphasized in the management of the states water resources, and must be considered as a potential new source of water. Accordingly, as part of the terms of this water right, the applicant shall prepare and implement a water conservation plan approved by Department of Health. The standards for such a plan may be obtained from either the Department of Health or the Department of Ecology.

In order to monitor the resource, static water level (SWL) shall be measured at least once each month. Measurements shall be taken after the pump has been shut off and the water level in the well has been stabilized. The data shall be maintained and made available to Ecology upon request. However, Ecology's Water Resources Section (NWRO) shall be notified if the SWL is determined to be below the level normally recorded at that time of year.

The right to use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in RCW 90.03.380, 90.03.390, and 90.44.020.

This certificate of water right is specifically subject to relinquishment for non-use of water as provided in RCW 90.14.180.

Given under my hand and the seal of this office at Bellevue, Washington, this 16th *day of* Sept., *1997.*

STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

ENGINEERING OK

ECY 040-1-2 (Rev. 8-97)

Tom Fitzsimmons
Department of Ecology

By _____
Ray Hellwig, Section Supervisor

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

CERTIFICATE OF WATER RIGHT

☐ Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

☒ Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

8809190659

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
December 29, 1972	G1-20391	G1-20391P	G1-20391C

NAME
City of Auburn

ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
25 West Main Street	Auburn	Washington	98001-4998

This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown, but is limited to an amount actually beneficially used.

PUBLIC WATER TO BE APPROPRIATED

SOURCE
Well #4

TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
—	2,800	3,600.0

QUANTITY, TYPE OF USE, PERIOD OF USE
Municipal Water Supply - continuously

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION—WITHDRAWAL
900' East and 500' South of N¼ corner of Section 30.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE, (E. OR W.) W.M.	W.R.I.A.	COUNTY
NW¼ NE¼	30	21	5	9	King

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

Area served by City of Auburn, situated within King County, Washington.

—

88/09/19 #0659
RECD F 6.00
CASHSL ****6.0
11

FILED for Record at Request of
Name City of Auburn
Address 25 West Main St.
Auburn, WA. 98001

SEP 19 2 04 PM '88
BY THE DIVISION OF RECORDS & ELECTIONS
KING COUNTY

RECEIVED

8809190659

The well or wells under this appropriation right shall not be screened, perforated or open to water bearing materials shallower than 180' below ground surface at the well site.

All water wells constructed within the state shall meet the minimum standards for construction and maintenance as provided under RCW 18.104 (Washington Water Well Construction Act of 1971) and Chapter 173-160 WAC (Minimum Standards for Construction and Maintenance of Water Wells).

An approved measuring device shall be installed and maintained in accordance with RCW 90.03.360, WAC 508-64-020 through WAC 508-64-040 (Installation, operation and maintenance requirements attached hereto).

The right to the use of the water aforesaid hereby confirmed is restricted to the lands or place of use here described, except as provided in RCW 90.03.380, 90.03.390, and 90.44.020.

This certificate of water right is specifically subject to relinquishment for nonuse of water as provided in RCW 90.14.180.

Given under my hand and the seal of this office at Redmond *Washington, this* 15th *day of* September, *19* 88

Department of Ecology

ENGINEERING DATA OK

by Nancy Ellison, Regional Manager

FOR COUNTY USE ONLY

200403050011 81
AUBURN CITY OF CERT 20.00
PAGE001 OF 002
03/05/2004 12.14
KING COUNTY, WA

City of Auburn
25 West Main Street
Auburn, WA 98001

WASHINGTON STATE DEPARTMENT OF ECOLOGY

STATE OF WASHINGTON
SUPERSEDING CERTIFICATE OF WATER RIGHT

Document Title: Certificate of Water Right

Agency: Department of Ecology
Northwest Regional Office
3190 160th Avenue Southeast
Bellevue, WA 98008-5452

Applicant:
City of Auburn
25 West Main Street
Auburn, WA 98001

Reference Number:

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
June 23, 1980	G1-23633	G1-23633P	G1-23633C

This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown, but is limited to an amount actually beneficially used

PUBLIC WATERS TO BE APPROPRIATED

SOURCE	TRIBUTARY OF (IF SURFACE WATERS)
Wells 5, 5A, 5B, & 5C	N/A

MAX CUBIC FEET PER SECOND	MAX GALLONS PER MINUTE	MAX ACRE-FEET PER YEAR
N/A	1000	720

QUANTITY/TYPE OF USE/PERIOD OF USE

720 Acre-feet per year | Municipal supply | Year-round, as needed

LEGAL DESCRIPTION OF LOCATION OF DIVERSION/WITHDRAWAL

Parcel # 1421049093

Well 5: SW¼ SE¼ of Section 31, T. 21 N., R. 5 E.W.M., located 556 feet East, 328 feet North of the South quarter corner of Section 31; King County

Well 5A: SE¼ SE¼ of Section 31, T. 21 N., R. 5 E W.M., located 880 feet North, 1050 feet west of the Southeast corner of Section 31,

Well 5B: SW¼ NE¼ of Section 6, T. 20 N., R 5 E.W.M., located approximately 1450 feet West, 2250 feet South of the Northeast corner of Section 6; Pierce County

Well 5C: SW¼ NE¼ of Section 6, T. 20 N , R. 5 E.W.M., located approximately 1525 feet West and 2400 feet South of the Northeast corner of Section 6, Pierce County.

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

The area served by the City of Auburn as identified in their latest approved water system plan and periodic updates consistent with coordinated water supply plans, including interties for wholesale water delivery to the service areas of any water purveyors that have approved inter local agreements with the City of Auburn

PROVISIONS

"The total instantaneous withdrawal rate for Well 5, Well 5A, Well 5B, and Well 5C authorized by this certificate shall not exceed 1,000 gpm The total annual withdrawal rate for Well 5, Well 5A, Well 5B, and Well 5C shall not exceed 720 acre-feet per year "

An approved measuring device shall be installed and maintained for each of the sources identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use," Chapter 173-173 WAC

Water use data shall be recorded monthly The maximum rate of diversion/withdrawal and the annual total volume shall be submitted to Ecology by January 31 of each calendar year

The following information shall be included with each submittal of water use data owner, contact name if different, mailing address, daytime phone number, WRIA, Permit/Certificate/Claim No , source name, annual quantity used including units, maximum rate of diversion including units,

1 monthly meter readings including units,
2 peak monthly flow including units,
3 Department of Health WFI water system number and source number(s),

and period of use In the future, Ecology may require additional parameters to be reported or more frequent reporting Ecology prefers web based data entry, but does accept hard copies Ecology will provide forms and electronic data entry information

Chapter 173-173 WAC describes the requirements for data accuracy, device installation and operation, and information reporting It also allows a water user to petition Ecology for modifications to some of the requirements Installation, operation and maintenance requirements are contained in the document entitled "Water Measurement Device Installation and Operation Requirements "

Department of Ecology personnel, upon presentation of proper credentials, shall have access at reasonable times, to the records of water use that are kept to meet the above conditions, and to inspect at reasonable times any measuring device used to meet the above conditions

Issuance of this water right is subject to the implementation of the minimum requirements established in the Conservation Planning Requirements, Guideline and Requirements for Public Water Systems Regarding Water Use Reporting, Demand Forecasting Methodology, and Conservation Programs, July 1994 and as revised

Under RCW 90 03 005 and 90 54 020(6), conservation and improved water use efficiency must be emphasized in the management of the State's water resources, and must be considered as a potential new source of water Accordingly, as part of the terms of this water right, the applicant shall prepare and implement a water conservation plan approved by Department of Health The standards for such a plan may be obtained from either the Department of Health or the Department of Ecology

Water Resources Act of 1971 specifies certain criteria regarding utilization and management of the waters of the state in the best public interest Use of water may be subject to regulation at certain times, based on the necessity to maintain water quantities sufficient for preservation of the natural environment

The right to use of the waters aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in RCW 90 03 380, 90 03 390, and 90 44 020

This certificate of water right is specifically subject to relinquishment for non-use of water as provided in RCW 90.14.180.

Given under my hand and the seal of this office at Bellevue, Washington,
this 19th *day of* FEBRUARY, *2004*

DEPARTMENT OF ECOLOGY STATE OF WASHINGTON

DOE REVIEW
ORIG DA
ECY 040-1-2 (Rev 8-97)

Landa Hoffman
Department of Ecology

By Daniel C Swe
Daniel Swenson, Section Supervisor

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

CERTIFICATE OF WATER RIGHT

☐ Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

☒ Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
October 10, 1989	G1-25518	G1-25518 P	G1-25518 C

NAME
City of Auburn Public Works Department/Lakeland Hills North

ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
25 West Main Street	Auburn	Washington	98001

This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown, but is limited to an amount actually beneficially used.

PUBLIC WATERS TO BE APPROPRIATED

SOURCE
Well

TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
	167	187 non-cumulative*

QUANTITY, TYPE OF USE, PERIOD OF USE

Community domestic supply - continuously

* The annual quantity is supplemental to existing rights.

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION–WITHDRAWAL

880 feet north and 1050 feet west of the southeast corner of Section 31

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE, (E. OR W.) W.M.	W.R.I.A.	COUNTY
SE¼ SE¼	31	21	5E	10	King

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

City of Auburn water service area as identified in the latest approved Water System Plan, and interties for wholesale water delivery to the service areas of any water purveyors that have approved interlocal agreements with the City of Auburn.

PROVISIONS

Installation and maintenance of an access port as described in Ground Water Bulletin No. 1 is required. An air line and gauge may be installed in addition to the access port.

An approved measuring device shall be installed and maintained in accordance with RCW 90.03.360, WAC 508-64-020 through 508-64-040. Meter readings shall be recorded monthly and this data shall be maintained and be made available to the Department of Ecology upon request.

In order to monitor the resource, static water level (SWL) shall be measured at least once each month. Measurements shall be taken after the pump has been shut off and the water level in the well has been stabilized. The data shall be maintained and made available to Ecology upon request. However, Ecology's Water Resources Section (NWRO) shall be notified if the SWL is determined to be below the level normally recorded at that time of year.

The right to the use of the water aforesaid hereby confirmed is restricted to the lands or place of use herein described, except as provided in RCW 90.03.380, 90.03.390, and 90.44.020.

This certificate of water right is specifically subject to relinquishment for nonuse of water as provided in RCW 90.14.180.

Given under my hand and the seal of this office at Bellevue, Washington,

this 27th day of November, 1996.

Department of Ecology

ENGINEERING/DATA
BY

by _____
Raymond K. Hellwig, Regional Supervisor, Shorelands and Water Resources

FOR COUNTY USE ONLY

Water Rights 8C

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

Northwest Regional Office, 3190 - 160th Ave S.E. • Bellevue, Washington 98008-5452 • (206) 649-7000

July 20, 1995

City of Auburn
25 West Main Street
Auburn, Washington 98001-4998

Dear Sir or Madam:

Re: Change Application for Ground Water Certificates 3560-A, G1-00277C, G1-20391C, and G1-23629C

Your change application has been approved. However, superseding certificates for 3560-A, G1-00277C, G1-20391C, and G1-23629C will not be issued until the authorized change has been accomplished. If the 30 day appeal period expires with no appeal, this letter and the accompanying Report of Examination (ROE) would become the legal instruments authorizing the change.

When wells 6 and 7 have been drilled and connected to Auburn's delivery system, notify this office in writing that the change as authorized in the ROE is completed. The notice shall include water well reports documenting well development in the same aquifer and statutory recording fees for issuing superseding certificates as indicated below.

$20.00 payable to the Department of Ecology and
$32.00 payable to the County Auditor.

This letter and the enclosed Report of Examination constitute our determination and order. Any person wishing to appeal this action may obtain review by submitting a written request, within thirty (30) days of receipt of this order, to the Washington Pollution Control Hearings Board, 4224 - 6th Avenue S.E., Bldg. #2, Lacey, WA 98504-0903. Concurrently send to the Director of the Department of Ecology, Mail Stop 7600, P.O. Box 47600, Olympia, Washington 98504-7600, a copy of the request for review. These procedures are consistent with the provisions of Chapter 43.21B RCW and the rules and regulations adopted thereunder.

Sincerely,

R. K. Hellwig

Raymond K. Hellwig
Northwest Regional Office

RKH:ms
Enclosures

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
REPORT OF EXAMINATION
FOR CHANGE OF WATER RIGHTS

Request: The City of Auburn wants to change existing ground water certificates 3560-A, G1-00277C, G1-20391C, and G1-23629C by adding two supplemental wells (#6 and #7) to each of the four certificates.

Recommend: That two supplemental wells (well 6 and well 7) be added to certificates 3560-A, G1-00277C, G1-20391C, and G1-23629C. All other conditions and terms pertaining to the certificates remain unchanged.

Superseding certificates will be issued when the following conditions are met.

Both wells (#6 and #7) are drilled, completed, and connected to Auburn's water delivery system.

Water well reports for wells (#6 and #7) are filed with Ecology documenting development in the same aquifer as wells under certificates 3560-A, G1-00277C, G1-20391C, and G1-23629C.

SUPPORT DATA

Background

Application of Change for: Ground Water Certificates 3560-A, G1-00277C, G1-20391C, and G1-23629C.

Name: City of Auburn

Date submitted: May 19, 1995

Request: Add two supplemental wells (#6 and #7) to each of the referenced certificates which share a common ground water source.

Use: Municipal water supply

Legal notice: Published in the Valley Daily News on June 9 and 16, 1995. No protests filed.

Investigation

Location: City of Auburn in southeast King County

Water supply sources: Auburn has seven wells plus West Hill Springs, and Coal Creek Springs.

Service area: The City of Auburn and surrounding areas including interties as described in their current water system plan.

Water rights: Auburn currently holds a combined total of 12,520 Acre Feet per year (AF/yr) in certificated water rights. The certificates pertaining to this application for change were issued as follows:

Cert. 3560-A (well 1), 2200 gallons per minute (gpm), 1120 AF/yr.

Cert. G1-00277C (well 2), 2400 gpm, 3840 AF/yr.

Cert. G1-20391C (well 4), 2800 gpm, 3600 AF/yr.

Cert. G1-23629C (wells 3A & 3B), 2800 gpm, 3600 AF/yr.

The proposed change would add wells (#6 and #7) as yet to be drilled to each of the four certificates to provide system flexibility and operational reliability. The instantaneous and annual quantities authorized by each certificate would remain unchanged.

Valley aquifer: According to a hydrogeologic study and report prepared by the consulting firm of Hart Crowser for Auburn, wells 1,2,3A,3B, and 4 are all developed in the same aquifer known as the Auburn Valley Aquifer.

Well 1 is in the NE1/4NE1/4, Sec. 19, T. 21N, R. 5E

Well 2 is in the NE1/4, Sec. 18, T. 21N, R. 5E

Wells 3A & 3B are in the NE1/4SW1/4, Sec. 30, T. 21N, R. 5E

Well 4 is in the NW1/4NE1/4, Sec. 30, T. 21N, R. 5E

The proposed supplemental wells are to be located as follows:

Well 6 in the NE1/4, Sec. 18, T. 21N, R. 5E

Well 7 in the NW1/4, Sec. 18, T. 21N, R. 5E

Staff hydrogeologist reviewed data on existing wells and the Hart Crowser report and confirms that all existing wells are developed in the same aquifer and are hydraulically connected to each other; therefore, it can be considered as being part of a very large well field. The aquifer covers an area of approximately four miles by one and one half miles. The proposed wells will be located between the other existing wells and within the area covered by the Auburn Valley Aquifer.

Well development: Auburn plans to drill well 6 by December 1996 and drill well 7 by October 1997. Both wells will be connected to Auburn's water delivery system by December 1997.

Prior to issuing any superseding certificates, copies of the water well reports must be filed with Ecology to document completion and document that the wells are developed in the same aquifer as the certificated wells.

Conclusion:

In accordance with RCW Chapters 90.03 and 90.44, I find that Auburn has water rights to approve the request for change to add supplemental wells, that the change is for a beneficial use and will not impair existing rights or be detrimental to the public welfare.

REPORT BY: Janet Jong **DATE:** 7/24/95

CITY OF ALGONA
402 Warde Street
ALGONA, WASHINGTON 98001-8505

ADMINISTRATION 833-2897
PUBLIC WORKS 833-2741
POLICE 833-2743
FAX 939-3366

October 4, 1996

Chris Thorn,
Water Quality Programs Coordinator
Department of Public Works
City of Auburn
25 West Main,
Auburn, WA 98001

Dear Mr. Thorn,

Enclosed please find completed Exhibits F and G to the Interlocal Agreement #3 between Auburn and Algona. We would appreciate recorded copies when available.

Thank you,

Diane Jenks

DIANE M. JENKS,
Administrative Director

EXHIBIT F. Algona Well Facility and Water Right Conveyance

WARRANTY DEED

The GRANTOR, THE CITY OF ALGONA, on this 4th day of October, 1996, for and in consideration of the sum of $1.00, receipt of which is hereby acknowledged, and for benefits to be derived by the GRANTOR herein, hereby conveys and warrants to the CITY OF AUBURN, GRANTEE, the following well facility and Certificated Ground Water G1-227769C situated in the County of King, State of Washington:

Well Facility. The well, piping, and appurtenances generally consist of 10 inch casing to approximately 65 feet below ground surface.

Ground Water Certificated Right: G1-22769C. This Ground Water Right is certificated to provide water on a continuous basis for municipal purposes pursuant to RCW 90.03.290. Further, this water right is certificated to provide an instantaneous rate of withdrawal (Qi) of 500 gpm, and an annual quantity/rate of withdrawal (Qa) of 175 acre feet per year. As a water right applied to municipal purposes, the instantaneous (Qi) and annual (Qa) amounts authorized for withdrawal within GW Certificate G1-22769C are not subject to relinquishment pursuant to RCW 90.14.140(2)(d).

Dated this 4th day of October, 1996.

Glenn Wilson
GRANTOR - CITY OF ALGONA

STATE OF WASHINGTON)
) ss
COUNTY OF KING)

On this 4th day of October, 1996, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared Glenn Wilson, to me known as the Mayor, for the City of Algona, the municipal jurisdiction that executed the above and foregoing instrument and acknowledged that he signed the same as the legally authorized representative of the City of Algona as his free and voluntary act and deed, for the uses and purposes therein mentioned.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal on the date hereinabove set forth.

Diana M Jenkins
NOTARY PUBLIC in and for the STATE of WASHINGTON, residing at Puyallup
My Commission expires May 10, 1997

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

CERTIFICATE OF WATER RIGHT

☐ Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

☒ Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
December 10, 1976	G1-22769	G1-22769P	G1-22769C

NAME
CITY OF ALGONA

ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
402 Warde Street	Algona	Washington	98002

This is to certify that the herein named applicant has made proof to the satisfaction of the Department of Ecology of a right to the use of the public waters of the State of Washington as herein defined, and under and specifically subject to the provisions contained in the Permit issued by the Department of Ecology, and that said right to the use of said waters has been perfected in accordance with the laws of the State of Washington, and is hereby confirmed by the Department of Ecology and entered of record as shown.

PUBLIC WATER TO BE APPROPRIATED

SOURCE
Well

(TRIBUTARY OF IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
	500	175.0

QUANTITY, TYPE OF USE, PERIOD OF USE
Municipal supply - continuously

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION—WITHDRAWAL
400 feet east and 1200 feet south from west quarter corner of Sec. 25

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE, E. OR W.M.	W.R.I.A.	COUNTY
NW¼SW¼	25	21	4 E.	10	King

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)
28	4	Woods Algona Add. Div. I

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

Area served by City of Algona

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

PROOF OF APPROPRIATION OF WATER

APPLICATION NUMBER: G1--22759P

NAME OF PERMITTEE: CITY OF ALGONA

POST OFFICE ADDRESS: 402 Kande Street | Algona | STATE: WA | ZIP CODE: 98002

SOURCE OF APPROPRIATION: Well 1

PURPOSE OF USE: Municipal Water Supply

DATE OF PRIORITY OF APPROPRIATION: April 17, 1967

IF USED FOR IRRIGATION, NUMBER OF ACRES ACTUALLY IRRIGATED:

IS SOURCE A WELL? [X] YES [ ] NO

MONTHS DURING WHICH WATER IS USED: All

RATE OF DIVERSION: 500 gal per minute

ANNUAL AMOUNT AUTHORIZED TO BE DIVERTED FROM PERMANENT SYSTEM: Average 19,564 CF per day [ ] GPM [ ] CFS

HAVE ALL PROVISIONS AS REQUIRED BY PERMIT BEEN ACCOMPLISHED? [X] YES [ ] NO

IF NO, EXPLAIN:

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS USED (USE ADDITIONAL SHEET IF NECESSARY)

Well site: Block 4, Lots 23-30, Woods Algona Division No. 1 as recorded in book of Plats, Vol. 10 Page 36, records of King County, Washington

Water used in City of Algona, Washington.

Description of City Limits: All that portion of Sections 20, 24, 25, 26 and 35 and 36 Township 21 North, Range 4 East, W.M. described as follows:

BEGINNING at the northwest corner of the southeast one-quarter of Section 20, Township 21 North, Range 4 East W.M. and running thence easterly along the North line of said southeast one-quarter to the northeast corner thereof; thence easterly along the north line of the southwest one-quarter of Section 24, Township 21 north, Range 4 east W.M. to a point on the easterly margin of the Joint C.M. & St. P. & O.W.R.R. Railway Right-of-way; thence southwesterly along said easterly margin to an intersection with the northerly margin of the right-of-way of South 350th Street; thence easterly along said northerly margin of South 350th Street to an intersection with the easterly margin of the right-of-way of 76th Avenue South; thence southerly along said easterly margin of 76th Avenue South to an intersection with the northerly line of the Southwest one-quarter of the Southeast one-quarter of Section 25, Township 21

OK-FEES
ISSUE CERTIFICATE
PER PERMIT
10-24-78

STATE OF WASHINGTON, County of King } ss

I, John E. Watchett, being first duly sworn, depose and say that I have read the above and foregoing proof of appropriation; that I know the contents thereof, and that the facts therein stated are true.

USE PERMIT

IN WITNESS WHEREOF, I have hereunto set my hand this 10th day of October, 19 78

John E. Watchett
Permittee Signature

Subscribed and sworn to before me this 10th day of October, 1978

Margaret J. Gerard
Notary Public

ECY 040-1-26

P/A

AFTER RECORDING, RETURN TO:

City of Auburn
25 West Main Street
Auburn, WA 98001-4998
ATTN: City Clerk

EXHIBIT G

Well and Ingress / Egress Easement

For and in consideration of the sum of one dollar ($1.00) and other good and valuable consideration, receipt of which is hereby acknowledged, and for benefits to be derived by the Grantor herein, Grantor, City of Algona, a Municipal Corporation of the State of Washington, hereby conveys and warrants to the City of Auburn, Grantee herein, a Municipal Corporation of the State of Washington, its successors and assigns, a perpetual Nonexclusive Easement under, over, through and across the following described real property for the purpose of laying, maintaining, and/or installing groundwater well facilities and appurtenances thereof, said real property being described as follows:

> Well and Protection Zone. A circle of land consisting of a 100 foot radius, centered on and surrounding the existing well facilities located on Lots 25-30 inclusive, Block 4, Woods Algona Addition, Division 1, according to the Plat thereof, as recorded in Volume 19 of Plats, page 36, in the records of King County, Washington.

Said Grantee shall have the absolute right, at times as may be necessary, for immediate ingress / egress over the regularly traveled portion of said Lots 25-30 inclusive, Block 4, for the purpose of maintenance, inspection, construction, operation, repair or reconstruction of the well facilities without incurring any legal obligation or liability therefore.

Said Grantor shall not in any way block, restrict or impede access and ingress / egress to or from said Easement, and/or in any way block, restrict or impede full use of the real property within the above-described Easement by said Grantee for the above-described purposes. Said Grantor may fence across said Easement and/or along the boundaries of said Easement provided that a gate is constructed in said fence. Said gate shall be of sufficient length and location to allow the Grantee full use of, and access and ingress / egress to and from the real property within the above-described Easement. If said gate is to be locked, keys shall be provided to the Grantee.

This Easement shall be a covenant running with the above-described real property and burden said real estate, and shall be binding on the successors, heirs and assigns of all parties hereto.

In the event of future well abandonment by Grantee, this easement shall be vacated by Grantee, and Grantor shall no longer be bound hereby.

IN WITNESS WHEREOF, said corporation has caused this instrument to be executed by its property officers this 4TH day of October, 1996.

City of Algona, GRANTOR

BY _____
GLENN WILSON, MAYOR

BY _____
, CITY CLERK

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Well Driller's Copy

PERMIT

TO APPROPRIATE PUBLIC WATERS OF THE STATE OF WASHINGTON

☐ Surface Water (Issued in accordance with the provisions of Chapter 117, Laws of Washington for 1917, and amendments thereto, and the rules and regulations of the Department of Ecology.)

☒ Ground Water (Issued in accordance with the provisions of Chapter 263, Laws of Washington for 1945, and amendments thereto, and the rules and regulations of the Department of Ecology.)

PRIORITY DATE	APPLICATION NUMBER	PERMIT NUMBER	CERTIFICATE NUMBER
January 14, 1988	G1-25173	G1-25173P	

NAME
Summersett E & L

ADDRESS (STREET)	(CITY)	(STATE)	(ZIP CODE)
13477 N.E. 132nd Street	Kirkland	Washington	98034

The applicant is, pursuant to the Report of Examination which has been accepted by the applicant, hereby granted a permit to appropriate the following described public waters of the State of Washington, subject to existing rights and to the limitations and provisions set out herein.

PUBLIC WATER TO BE APPROPRIATED

SOURCE
Well

TRIBUTARY OF (IF SURFACE WATERS)

MAXIMUM CUBIC FEET PER SECOND	MAXIMUM GALLONS PER MINUTE	MAXIMUM ACRE-FEET PER YEAR
---	20	6.5

QUANTITY, TYPE OF USE, PERIOD OF USE
Group domestic supply - continuously (13 homes)

LOCATION OF DIVERSION/WITHDRAWAL

APPROXIMATE LOCATION OF DIVERSION—WITHDRAWAL
1025' north and 1324' east from center of Section 33.

LOCATED WITHIN (SMALLEST LEGAL SUBDIVISION)	SECTION	TOWNSHIP N.	RANGE, (E. OR W.) W.M.	W.R.I.A.	COUNTY
NE¼	33	21	5E	10	King

RECORDED PLATTED PROPERTY

LOT	BLOCK	OF (GIVE NAME OF PLAT OR ADDITION)

LEGAL DESCRIPTION OF PROPERTY ON WHICH WATER IS TO BE USED

SW¼ NE¼ Section 33, T.21N., R.5E., and W½ of the SE¼ NE¼

DESCRIPTION OF PROPOSED WORKS

G1-25173
6" well, 352' deep, 19,000 gallon storage, five 119 gallon pressure tanks, two 55 gpm booster pumps, 4" main lines.

DEVELOPMENT SCHEDULE

BEGIN PROJECT BY THIS DATE:	COMPLETE PROJECT BY THIS DATE:	WATER PUT TO FULL USE BY THIS DATE:
Started	February 15, 1991	February 15, 1992

PROVISIONS

Installation and maintenance of an access port as described in Ground Water Bulletin No. 1 is required. An air line and gauge may be installed in addition to the access port.

An approved measuring device shall be installed and maintained in accordance with RCW 90.03.360, WAC 508-64-020 through WAC 508-64-040 (Installation, operation and maintenance requirements attached hereto).

This permit shall be subject to cancellation should the permittee fail to comply with the above development schedule and/or fail to give notice to the Department of Ecology on forms provided by that Department documenting such compliance.

Given under my hand and the seal of this office at Redmond *Washington, this* 15th *day of* February, *19* 90.

ENGINEERING DATA
OK

Department of Ecology

by Herman H. Huggins
Herman H. Huggins
Section Supervisor
Water Resources

HYDRAULIC MODEL CALIBRATION AND HYDRANT TESTING PLAN

Technical Memorandum

Date: May 6, 2022

Project: 22-3425

To: Susan Fenhaus, City of Auburn

From: Stephanie Ard, PE
Murraysmith

Re: Hydraulic Model Calibration

Background

The City of Auburn (City) has retained Murraysmith to update their Comprehensive Water System Plan. As part of this scope, Murraysmith will utilize the City's hydraulic model to analyze the system's capacity to meet existing and projected future demands. To ensure the model as accurate as possible, hydrant flow and pressure field data will be used to calibrate model parameters.

The process for hydrant testing is described in this memo.

Task Goals

The goal of this model calibration is to match model and field pressures and flows. During the calibration, system field data will be compared to model simulation results and the model will be updated to better reflect the existing system conditions. The calibration process ensures that the model accurately represents real-world conditions. Common model adjustments include pipeline friction coefficients adjustments (within standard ranges based on pipe age and material) and operational settings adjustments to match the actual system operations.

Field Testing Process

Flow and pressure testing in the field is a critical step for calibrating the City's existing hydraulic model. It provides the real-world data that will be used to ensure the model replicates existing system conditions.

Testing Locations

A total of thirty (30) test locations have been identified for calibration testing, as shown in Attachment 1. If field conditions make a test location impossible or impractical, a new location will

be selected that is close to the original location. Any new locations should be as similar as possible to the original location considering pressure zone, pipe size, and dead ends. Any changes in test location should be documented (marked on a map and written in the data collection log) to ensure that test results are accurately represented in the model during the calibration process.

Procedure

Flow and pressure tests will be conducted using at least two adjacent hydrants. One hydrant is used to measure pressure and at least one other hydrant is opened to create a pressure drop in the system (see Figure 1, below). Record results from the tests on the Data Collection sheet, provided in Attachment 2. The recommended testing process is as follows:

1. Locate the flow and pressure hydrants indicated on Attachment 1 in the field. It is advisable for City staff to review or visit each proposed flow location prior to field testing to evaluate the risks of flooding and mark the hydrants involved in testing. If time does not permit review of the locations in advance, flow test locations may need to be changed in the field and any changes should be indicated. It is important to keep the pressure and flow hydrant adjacent, if possible.

2. Flush the "pressure hydrant" to remove sediment, and then install the pressure gauge. Open hydrant, confirm no leakage, and then measure the static pressure. Recorded "static pressure" on the Data Collection sheet.

3. Install pitot pressure measurement gauge on the "flow hydrant." If possible, the gauge should be directly connected to the hydrant, without the use of a hose. Open hydrant, confirm no leakage, and then measure the static pressure. Recorded "flow static pressure" on the Data Collection sheet.

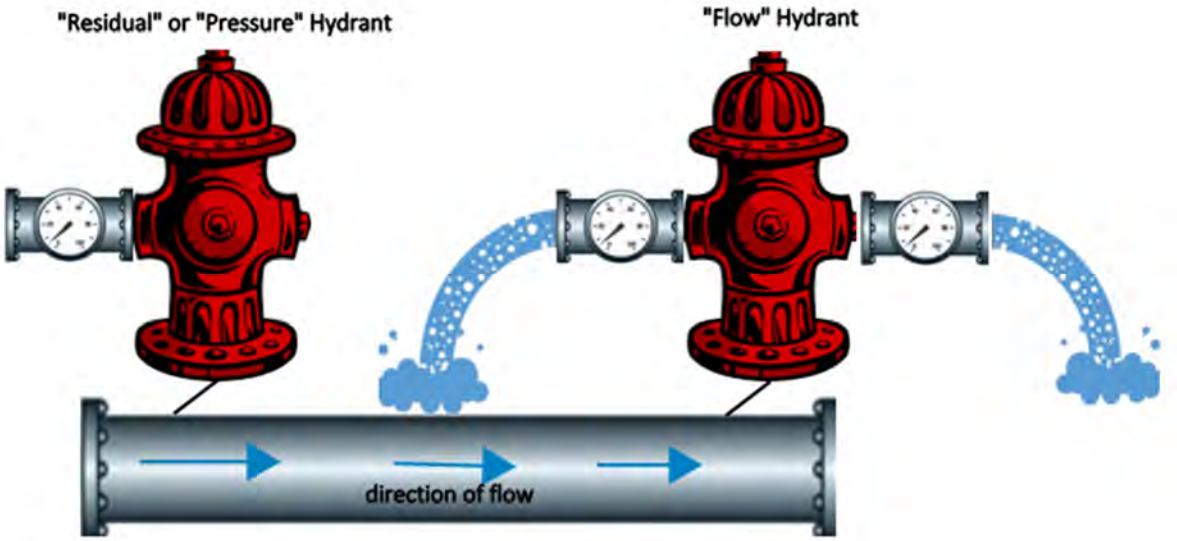
4. As the "flow hydrant" discharges, monitor the pressure at the "pressure hydrant" until it drops at least 10 psi and stabilizes. This process can take up to five minutes. Record "residual pressure" and "pitot pressure" on the Data Collection sheet.

    a. If the 10-psi pressure drop cannot be realized with a single flow hydrant, select a second flow hydrant near the pressure and first flow hydrant. Flow measurements will need to be recorded at all flow hydrants. If the test is near a facility, the 10 psi may not be realized. If this is the case, add a note on the Data Collection sheet.

    b. If the pressure does not stabilize after 5 minutes, record a couple of values.

5. Close both hydrants. Remove equipment. Clean up site, as necessary.

Figure 1 | Example Test Configuration



Additional Testing Notes

- Field testing should be completed in less than one week of field time by City crews.
- Open and close the hydrants slowly to prevent water hammer and potential system damage.
- Estimate discharge path prior start of flow test to ensure the flowed water does not cause erosion or flooding. If necessary, use sand bags or a diffuser to divert water to appropriate drainages.
- Measure and note the size of the orifice a flow hydrant. These measurements are used to translate the pressure measurement from the pitot gauge into a flow rate. Note any non-typical outlet geometry or signs of excessive corrosion or damage that could affect the accuracy of the measurement.

Boundary Conditions

In addition to flow and pressure data collected at the hydrants, system boundary conditions are required to calibrate the model. To accurately represent system conditions during flow testing, supervisory control and data acquisition (SCADA) information for all facilities will be used in the model to represent system conditions during testing including the following.

- Water levels in reservoirs.
- Well and booster pump status and flow rates.
- Intertie flow rates (as applicable).
- Valve status and flow rates (as available).

The SCADA information should be recorded and provided at time intervals small enough to show the testing, preferably one-minute increments. If SCADA is not available at the facilities, a person should be at the station to manually record information for the facilities that are anticipated to contribute flow during the testing period.

Equipment

One crew of 2-4 City staff (if possible, the same people for the duration of testing) with the appropriate vehicle and equipment will be required to conduct the pressure and flow tests. All fire flow test equipment should be calibrated before field use to confirm measurement accuracy. This can be done by calibrating to manufacturer recommendations or comparing with other pressure reading instruments. Flowed hydrants make considerable noise, and the two hydrants may not be in direct line of sight of one another, so radios or phones are a good idea for communicating between the operator at the pressure hydrant and the operators at the flowed hydrants. A list of field equipment includes:

Equipment List

- Two manually read pressure gauges
- Two pitot gauges or pitot diffusers
- Radios/phones for communication between pressure and flow hydrant
- Spray paint for marking pressure and flow hydrants (optional)
- Hydrant Testing Plan map (Provided by Murraysmith)
- Data Collection sheet to record pressure and flow measurements (Provided by Murraysmith)
- Sandbags for flow tests (as needed)
- Safety equipment including cones for traffic control
- Equipment necessary for accessing and opening all hydrants/valve vaults

Next Steps

Once testing is complete, the City shall submit the completed Data Collection sheet, marked-up Hydrant Testing Plan map, and the requested boundary conditions data to Murraysmith. Please also provide any additional notes or information that may be helpful to understanding how the system was operating at the time of these tests. This information will be compared to model simulation results to calibrate the hydraulic model. Based on the results of this calibration process, additional questions may arise.

Attachment 1 – Testing Locations

Fire Hydrants

Water Mains

- 6 inch and smaller
- 8 inch
- 10 inch
- 12 inch
- 18 inch
- 20 inch and larger

Water Pressure Zones

- ACADEMY 445
- LEA HILL 299
- LEA HILL 395
- LEA HILL 405
- LEA HILL 406
- LEA HILL 462
- LEA HILL 500
- LEA HILL 563
- LEA HILL 648
- VALLEY 242

ID 3824
ID 3825
ID 5040
ID 5039
ID 2260
ID 2259
ID 1156
ID 1171
ID 5099
ID 1872
ID 5043
ID 5078
ID 2509
ID 2510
ID 835
ID 1860
ID 4028
ID 1128
ID 1237
ID 1238
ID 1623
ID 1624
ID 353
ID 352
ID 726
ID 1909
ID 218

552 ft
515 ft
478 ft
387 ft
79 ft

Thomas
Meredith
Christopher
Auburn
Lea Hill
Auburn Municipal Airport

Data Sources:
City of Auburn
Coordinate System: NAD 1983 HARN StatePlane Washington North FIPS 4601 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983 HARN
Disclaimer: The City of Auburn makes no representations, express or implied, as to the accuracy, completeness and timeliness of the information displayed. This map is not suitable for legal, engineering, or surveying purposes. Notification of any errors is appreciated.

Esri, NASA, NGA, USGS, FEMA, King County, WA State Parks GIS, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land

0 5,000 10,000 Feet

murraysmith

City of Auburn
Water System Plan

Hydrant Testing Plan
North

May 2022

22-3425

K:\TAC_Projects\22\3425 - Auburn Water System Plan\07 GIS\Exhibits\Pressure Test\Pressure Test_v2.aprx 5/5/2022 5:17 PM julia.king

Fire Hydrants
- Pressure Hydrant
- Flow Hydrant
- Fire Hydrants

Water Mains
- 6 inch and smaller
- 8 inch
- 10 inch
- 12 inch
- 18 inch
- 20 inch and larger

Water Pressure Zones
- ACADEMY 350
- ACADEMY 445
- ACADEMY 531
- ACADEMY 585
- LAKELAND 330
- LAKELAND 390
- LAKELAND 440
- LAKELAND 441
- LAKELAND 446
- LAKELAND 485
- LAKELAND 545
- LAKELAND 575
- LAKELAND 630
- LAKELAND 670
- LAKELAND 697
- VALLEY 242

ID 1791
ID 601
ID 572
ID 438
ID 2223
ID 2224
ID 2353
ID 2354
ID 5889
ID 5888
ID 948
ID 949
ID 3382
ID 1350
ID 1359
ID 3489
ID 2443
ID 5156
ID 5230
ID 1358
ID 3708
ID 3709
ID 5836
ID 5835
ID 1770
ID 1765
ID 1744
ID 4282
ID 4281
ID 1732
ID 4285
ID 3863

79 ft
509 ft
568 ft
514 ft

Stuck
Algona
Pacific
Dieringer

Data Sources:
City of Auburn
Coordinate System: NAD 1983 HARN StatePlane Washington North FIPS 4601 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983 HARN
Disclaimer: The City of Auburn makes no representations, express or implied, as to the accuracy, completeness and timeliness of the information displayed. This map is not suitable for legal, engineering, or surveying purposes. Notification of any errors is appreciated.

Esri, NASA, NGA, USGS, FEMA, King County, WA State Parks GIS, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land

0 5,000 10,000 Feet

murraysmith

N W E S

City of Auburn
Water System Plan

Hydrant Testing Plan
South

May 2022

22-3425

K:\TAC_Projects\22\3425 - Auburn Water System Plan\07 GIS\Exhibits\Pressure Test\Pressure Test_v2.aprx 5/5/2022 4:17 PM julia.king

Attachment 2 – Hydrant Testing Data Collection Form

Client: City of Auburn
Project: Water System Plan Update
Task: Hydraulic Model Calibration - Hydrant Flow Testing

Model Calibration: Hydrant & Pressure Data Collection														
Test ID	Location	Pressure Zone		Date of Test	Time of Test	Flow Hydrant				Pressure Hydrant			Notes
		Pressure Zone	Facility ID			Flow Hydrant	Flow Static Pressure (psi)	Pitot Pressure (psi)	Total Flow (gpm)	Residual/ Static Hydrant	Static Pressure (psi)	Residual Pressure (psi)	

HYDRAULIC MODEL CALIBRATION RESULTS

Client: City of Auburn

Project: 2024 Water System Plan Update

Model Calibration: Hydrant Test Vs. Model Static Pressure Comparison							
General Info		Pressure Comparison Post Calibration					
Test ID	Residual Hydrant	Field Static Pressure (psi)	Model Static Pressure (psi)	Difference (psi)	Field Pressure Drop (psi)	Model Pressure Drop (psi)	Difference (psi)
1	2223	84	83.32	-0.68	16	12.79	-3.21
2	572	82	80.54	-1.46	21	15.47	-5.53
3	553	78	78.44	0.44	12	9.36	-2.64
4	5888	70	73.84	3.84	6	6.01	0.01
5	948	72	72.47	0.47	7	5.89	-1.11
6	1350	65	66.32	1.32	17	17.16	0.16
7	3709	74	75.62	1.62	41	41.26	0.26
8	4285	59	61.07	2.07	7	11.07	4.07
9	4282	51	53.53	2.53	3	0.39	-2.61
10	5230	64	64.04	0.04	13	7.35	-5.65
11	5836	70	70.82	0.82	14	14.77	0.77
12	1358	101	79.33	--*	35	4.19	--*
13	1765	66	67.05	1.05	1	1.96	0.96
14	2443	66	66.17	0.17	20	17.67	-2.33
15	1744	65	62.87	-2.13	9	3.05	-5.95
16	1623	65	64.89	-0.11	16	15.65	-0.35
17	1238	72	73.12	1.12	9	7.64	-1.36
18	1872	60	65.72	5.72	11	8.7	-2.3
19	5043	67	66.57	-0.43	19	18.18	-0.82
20	835	58	64.15	6.15	15	20.06	5.06
21	352	65	65.04	0.04	7	10.71	3.71
22	1156	62	64.15	2.15	4	9.12	5.12
23	1587	63	64.96	1.96	12	8.07	-3.93
24	2509	78	78.71	0.71	-15	-15.06	-0.06
25	1791	50	50.85	0.85	1	3.36	2.36
26	2353	48	47.71	-0.29	4	7.92	3.92

27	218	73	70.88	-2.12	19	15.74	-3.26
28	423	73	73.64	0.64	6	9.27	3.27
29	4028	0	78.92	--**	0	1.1	1.1
30	2259	83	81.34	-1.66	3	1.96	-1.04
31	3824	83	83.38	0.38	5	9.4	4.4
32	5040	87	82.81	-4.19	12	11.11	-0.89
33	2002	87	84.68	-2.32	4	1.99	-2.01
34	2212	85	83.26	-1.74	1	1.38	0.38
35	5759	76	74.71	-1.29	2	1.26	-0.74
36	275	73	68.92	-4.08	1	2.41	1.41
37	1230	68	66.09	-1.91	1	2.07	1.07
38	1897	73	70.33	-2.67	2	2.02	0.02
39	2271	61	59.03	-1.97	1	2.83	1.83
40	5682	68	65.53	-2.47	3	5.66	2.66

Notes:

*Test Voided - appears that there was a misread of the static pressure or a partially opened zone valve at time of test. The recorded HGL is equivalent to the zone supplying the PRV. Checked static pressure again no 2/8/2024 and static pressure was consistent with a setting of 69 psi (HGL of 555').

**Test Voided - no Static Pressure provided

Client: City of Auburn

Project: 2024 Water System Plan Update

Model Calibration: Hydrant & Pressure Data Collection						
Static Pressure and Total Flow Results						
Test ID	Pressure Zone	Date of Test	Time of Test	Flow Hydrant	Flow Static Pressure (psi)	Total Flow (gpm)
1	Academy 350	5/16/2022	7:35-7:40	2224	85	1050
2	Academy 445	5/16/2022	8:07-8:13	438	79	1000
3	Academy 445	5/16/2022	8:30-8:38	552	80	700
4	Academy 531	5/16/2022	8:54-9:04	5889	72	1100
5	Academy 585	5/16/2022	9:25-9:33	949	82	1100
6	Lakeland 390	5/16/2022	9:59-10:09	3382	62	915
7	Lakeland 440	5/16/2022	10:45-10:55	3708	70	650
8	Lakeland 441	5/16/2022	12:15-12:35	3863	56	1000
9	Lakeland 446	5/16/2022	12:50-1:00pm	4281	56	1025
10	Lakeland 485	5/16/2022	1:20-1:30pm	5156	77	1100
11	Lakeland 545	5/16/2022	1:46-2:01pm	5835	63	950
12	Lakeland 575	5/17/2022	7:02-7:22	1359	95	1050
13	Lakeland 630	5/17/2022	7:31am	1770	60	1050
14	Lakeland 670	5/17/2022	8:04-8:17	3489	70	825
15	Lakeland 697	5/17/2022	8:32-8:42	1732	64	1075
16	Lea Hill 395	5/17/2022	9:09 9:19	1624	66	825
17	Lea Hill 405	5/17/2022	9:32-9:42	1237	64	1000
18	Lea Hill 406	5/17/2022	9:59-10:09	5099	58	850
19	Lea Hill 462	5/17/2022	10:25-10:35	5078	79	1100
20	Lea Hill 500	5/17/2022	12:15-12:25	1860	82	1100
21	Lea Hill 563	5/17/2022	12:57-1:57pm	353	70	1075
22	Lea Hill 563	5/18/2022	8:33-8:45	1171	50	950
23	Lea Hill 563	5/17/2022	1:40-2:30	1588	70	1075
24	Lea Hill 648	5/18/2022	8:00-8:10	2510	72	1250
25	Valley 242	5/18/2022	9:15-9:25	601	49	900
26	Valley 242	5/18/2022	9:45-9-:55	2354	49	875

27	Valley 242	5/18/2022	10:20-10:32	1909	78	900
28	Valley 242	5/19/2022	8:15-8:20	726	73	975
29	Valley 242	5/19/2022	12:00-12:05	1128	0	1120
30	Valley 242	5/19/2022	8:45-8:50	2260	84	1100
31	Valley 242	5/19/2022	9:15-9:20	3825	83	1100
32	Valley 242	5/19/2022	10:15-10:20	5039	80	1150
33	Valley 242	5/19/2022	10:30-10:35	2050	89	1125
34	Valley 242	5/19/2022	1:30-1:35pm	3386	85	1200
35	Valley 242	5/19/2022	1:45-1:50pm	244	76	1150
36	Valley 242	5/19/2022	2:00 2:15pm	4258	73	1120
37	Valley 242	5/20/2022	8:30-8:45	5021	67	975
38	Valley 242	5/20/2022	9:35am	1898	74	1150
39	Valley 242	5/20/2022	9:05-9:20	2270	64	1025
40	Valley 242	5/20/2022	2:08-2:18pm	5683	79	1100

Client: City of Auburn

Project: 2024 Water System Plan Update

Model Calibration: HGL Comparison							
General Info			HGL Comparison				
Test ID	Original Pressure Zone Name	Updated Pressure Zone Name	Field Static Pressure (psi)	Original Zone HGL (ft)	HGL from Field Test (ft)	Difference	Notes
1	Academy 350	Academy 400	84	350	404	53.8	Changed to Academy 400
2	Academy 445	Academy 470	82	445	472	27.4	Changed to Accademy 470
3	Academy 445	Academy 445	78	445	468	23.0	Changed to Accademy 470
4	Academy 531	Academy 531	70	531	537	5.6	
5	Academy 585	Academy 585	72	585	587	2.0	
6	Lakeland 390	Lakeland 390	65	390	399	9.4	
7	Lakeland 440	Lakeland 450 and Lakeland 505	74	440	505	65.4	Split zone into two pressure Zones: Lakeland 450 and Lakeland 505
8	Lakeland 441	Lakeland 385	59	441	387	-53.7	Changed to Lakeland 385
9	Lakeland 446	Lakeland 415	51	446	416	-30.2	Changed to Lakeland 415
10	Lakeland 485	Lakeland 455	64	485	458	-26.9	Changed to Lakeland 455
11	Lakeland 545	Lakeland 545	70	545	543	-1.8	
12	Lakeland 575	Lakeland 560	101	575	629	54.4	Changed to Lakeland 560
13	Lakeland 630	Lakeland 630	66	630	635	4.5	
14	Lakeland 670	Lakeland 670	66	670	678	8.1	
15	Lakeland 697	Lakeland 697	65	697	713	16.5	
16	Lea Hill 395	Lea Hill 395	65	395	397	2.3	
17	Lea Hill 405	Lea Hill 405	72	405	401	-4.3	
18	Lea Hill 406	Lea Hill 406	60	406	393	-13.3	
19	Lea Hill 462	Lea Hill 480	67	462	484	21.5	Changed to Lea Hill 480
20	Lea Hill 500	Lea Hill 500	58	500	485	-14.8	
21	Lea Hill 563	Lea Hill 563	65	563	573	10.2	
22	Lea Hill 563	Lea Hill 563	62	563	569	6.2	
23	Lea Hill 563	Lea Hill 563	63	563	570	6.5	
24	Lea Hill 648	Lea Hill 648	78	648	654	5.5	
25	Valley 242	Valley 242	50	242	248	6.0	

26	Valley 242	Valley 242	48	242	251	8.5	
27	Valley 242	Valley 242	73	242	247	4.6	
28	Valley 242	Valley 242	73	242	246	4.2	
29	Valley 242	Valley 242	0	242	66	-176.1	
30	Valley 242	Valley 242	83	242	250	7.8	
31	Valley 242	Valley 242	83	242	249	7.1	
32	Valley 242	Valley 242	87	242	260	17.7	
33	Valley 242	Valley 242	87	242	250	7.8	
34	Valley 242	Valley 242	85	242	249	7.3	
35	Valley 242	Valley 242	76	242	248	5.5	
36	Valley 242	Valley 242	73	242	249	7.4	
37	Valley 242	Valley 242	68	242	249	7.2	
38	Valley 242	Valley 242	73	242	250	8.4	
39	Valley 242	Valley 242	61	242	248	5.7	
40	Valley 242	Valley 242	68	242	244	2.1	

For questions, call Kristina Westbrook,
King County Reclaimed Water Program Manager at (206) 296-5279
www.kingcounty.gov/reclaimedwater

King County

Water Reclamation Evaluation Checklist
For Systems with 1,000 or more Connections

The County and State recognize that changing conditions could initiate a need to respond in new ways to future water quality standards, wastewater discharge requirements, take advantage of advances in treatment technologies and/or allow our region to be positioned to respond to changes associated with climate change and population growth.

In 2003, Chapter 90.46 of the Revised Code of Washington (RCW) was amended to require public water systems serving 1,000 or more connections to evaluate opportunities for reclaimed water when completing their water system plans. Please use this checklist to meet King County consistency requirements in responding to this legislation.

Please use this checklist, including the inventory template, to ensure that your water system plan includes sufficient information about opportunities for reclaimed water and your system's efforts to develop those opportunities. If a question is not applicable or the information is unavailable, then answer, "unknown" or "n/a." King County will consider the checklist completed if each answer is filled in with the best available information, even if the utility states that it is not aware of any reclaimed water opportunities within its service area.

Water System Name: City of Auburn
Date: 03/11/2024
PWS ID# 03350V
Contact: Senait Gebreeyesus

1. **Identifying Potential Future Demand for Reclaimed Water:** King County maintains a database and map of potential reclaimed water users for evaluating future projects. Please use the template below, or similar table, to provide information to assist King County in further researching these potential uses.
   - **Large Utility Water Users** (choose one):
     - ☐ Attached is an inventory of twenty large (above 20,000 gallons/month on average), non single-family residential, water users served by our utility that have a potential for reclaimed water use, or
     - ☑ Attached is an inventory of our utility's top twenty water users, or
     - ☐ The information requested is unknown or not available.
       Additional Comments: _____
   - **Large Self Suppliers** (choose one):
     - ☐ Attached is an inventory of large, self-supplied water users within our water utility's service boundaries - especially those near wastewater treatment plants, mainlines, outfalls, and pump stations or similar reclaimed water facilities), or
     - ☑ The information requested is unknown or not available.
       Additional Comments: _____
   - **Other** (choose one):
     - ☐ Attached is an inventory of other water users (such as those that are clustered near one another and could be served by a single system) that may be likely candidates for reclaimed water use, or
     - ☑ The information requested is unknown or not available.
       Additional Comments: _____

2. **Environmental Commitment**: Are you a city/town, or providing water service to a city/town, that has made commitments within resource management plans, salmon recovery plans, or other environmental initiatives for which there is a potential opportunity for using reclaimed water to assist in meeting commitments? (choose one)

   ☐ Yes, here are plans that have potential for reclaimed water use in our service area to meet the above commitments:

   _____

   _____

   ☑ The information requested is unknown, not available.
   Additional Comments: _____

3. **Identifying Areas of Potential Use of Reclaimed Water for Environmental Benefit:**
   Below are ***examples*** of uses of reclaimed water ***that comply with State, Federal and other reclaimed water environmental, health and safety standards***. All of these uses are currently in effect somewhere in Washington State. To the best of your knowledge, are any of these potential uses for reclaimed water applicable to your area?

   River Augmentation (choose one):

   ☐ Yes, our water rights are limited by instream flows. For more information, King County may contact:

   _____

   _____

   ☑ The information requested is unknown, or not available.
   Additional Comments: _____

   Groundwater Recharge (choose one):

   ☐ Yes, we withdraw water from an aquifer that is in a groundwater management area, or from a declining aquifer, where water levels may need to be replenished or to maintain aquifer storage. For more information, King County may contact:

   _____

   ☑ The information requested is unknown, or not available.
   Additional Comments: _____

   Water Rights Mitigation (choose one):

   ☑ Yes, our area is pursuing, or planning to pursue, new or additional water rights, and there may be an opportunity to use reclaimed water for mitigation of those new water rights. For more information, King County may contact:
   Application G1-28404. Contact Ingrid Gaub, 253-804-3113

   ☐ The information requested is unknown, or not available.
   Additional Comments: _____

   Potential Areas of Environmental Need (choose one):

   ☐ Yes, parts of our service area include potential environmental enhancement locations, such as wetlands enhancement, aquifer recharge, stream flow augmentation, that might be candidates for reclaimed water use. For more information, King County may contact:

   _____

   ☑ The information requested is unknown, or not available.
   Additional Comments: _____

4. **Local Reclaimed Water Legislation**: If water reclamation is mandated for this water system through local government agreement, contract, local regulations, ordinances, or other mechanisms, please provide a copy of the governing mechanism (choose one).

   ☐ Yes, local legislation exists in our area in support of reclaimed water use. The following relevant legislation is attached (please list titles of documents):

   _____

   _____

   ☑ No water reclamation legislation exists, or is known to exist, at a local level in our service area.

5. **Coordination with Local Wastewater Utility:** Include a brief description of your interactions with any wastewater or reclaimed water utility (King County or other) adjacent to your service area to evaluate any potential opportunities to develop reclaimed water (choose one).

   ☑ Describe if applicable:
   The City of Auburn's policy is to coordinate with King County to explore potential opportunities for water reclamation.

   ☐ None. Additional Comments: _____

Template for
Inventory of Water Users and Identification of Potential Reclaimed Water Users

Site Owner or Site Name	Site Address (for general mapping purposes)	Estimated Annual Water Use	Water uses not requiring potable water[1]	Is this a Potential Reclaimed Water Customer?
Boeing	700 15th St SW	188,246,355 gal.	?	Yes
Muckleshoot Casino	2402 Auburn Way S	32,219,539 gal.		No
Auburn Manor	210 37th St SE	22,827,838 gal.		No
Copper Gate	4750 Auburn Way N	14,905,895 gal.		No? (new)
Emerald Downs	2828 Emerald Downs Dr.	29,984,048 gal.	12,095,080	Yes
White River Estates	4248 A St. SE	15,270,794 gal.		No
Laundry Facility	1600 M ST. NW	25,749,807 gal.		No? (new)
Promenade Apartments	12902 SE 312th St	15,666,411 gal.		No? (new)
MultiCare	202 N Division St	13,091,590 gal.		No
Villas/Reserve	1107 A St NE	11,592,354 gal.		No? (new)
Walmart/Supermall	1200 Supermall Way	13,991,247 gal.	1,319,101	Yes
Auburn Dairy	702 W Main St	10,548,203 gal.		No
Rio Verde	1402 22nd St NE	12,753,400 gal.		No
College Place	31600 126th Ave SE	11,624,762 gal.		No? (new)
Skylark Village	900 29th St SE	12,359,952 gal.		No? (new)
The River Estates	3611 I St. NE	10,086,593 gal.		No? (new)
Safeway	3520 Pacific Ave S	9,678,279 gal.		No
Adventist Academy	32nd St SE & Wyman Dr.	9,028,734 gal.	?	Yes
Forest Villa (PIC)	4205 Auburn Way S	9,163,094 gal.		No
Tall Cedars	40137th St SE	6,759,209 gal.		No

[1] See Washington State Reclamation and Reuse Standards, September 1997, Section 1, Articles 1-5 for allowable uses of reclaimed water. http://www.ecy.wa.gov/PROGRAMS/WQ/reclaim/standards.html

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

Date Submitted: 4/14/2021

Water Use Efficiency
Annual Performance Report - 2020

WS Name: Auburn City of

Water System ID# : 03350 WS County: KING

Report submitted by: *Susan Fenhaus*

Meter Installation Information:

Estimate the percentage of metered connections: *100%*

If not 100% metered – Did you submit a meter installation plan to DOH? No

Within your meter installation plan, what date did you commit to completing meter installation?

Current status of meter installation:

Production, Authorized Consumption, and Distribution System Leakage Information:

12-Month WUE Reporting Period _____ To _____

Incomplete or missing data for the year? *No*

If yes, explain:

Total Water Produced & Purchased (TP) – Annual volume gallons	*2,312,559,400*	gallons	
Authorized Consumption (AC) – Annual Volume in gallons	*2,165,043,100*	gallons	
Distribution System Leakage – Annual Volume TP – AC	*147,516,300*	gallons	
Distribution System Leakage – DSL = [(TP – AC) / TP] x 100 %	*6.4 %*		
3-year annual average - %	*4.5 %*		*2018, 2019, 2020*

Goal-Setting Information:

Enter the date of most recent public forum to establish WUE goal: *10/25/2014*

Has goal been changed since last performance report? *No*

Note: Customer goal must be re-established every 6 years through a public process.

Customer WUE Goal (Demand Side):

1 percent reduction per year in equivalent residential unit values over 6-year planning period (2015-2020).

Customer (Demand Side) Goal Progress:

In 2020, due to Covid-19, no low flow shower heads were given and no applications for WaterSense® toilet rebates were processed.

The goal of 1 percent reduction per year in equivalent residential unit (ERU) values over the 6-year planning period was adopted on 10/25/2014. The change of ERU values from year 2019 to 2020 was 168 to 179, a 6.5% increase, the value of 168 for year 2019 is the lowest value achieved so far.

The City continued to implement WUE program measures such as bills showing consumption history, water saving device kits and conservation pricing.

Additional Information Regarding Supply and Demand Side WUE Efforts

In 2020, the City continued efforts to reduce unaccounted-for water, performing leak detection and repair, metering hydrant use and repairing breaks. As a result, the Distribution System Leakage for year 2020 was 6.4%, below the 10% target. The rolling 3-year average was 4.5%, meeting the WUE rule of at or below 10%.

In 2020, the City continued to implement the WaterSense® toilet rebate program, providing customers a $100 rebate per toilet for the replacement of up to two old toilets with new high efficiency toilets with the WaterSense® label.

The City continued to implement the low flow shower head giveaway program, providing free low flow shower heads so that customers could replace their higher flow ones.

The City continued to perform large meter consumption and meter register checking and calibration.

The City continued to educate customers about water use efficiency practices.

The City continued to encourage the use of water conserving plants in landscaping for both public and private projects.

The City continued to use an inclining block rate for the quantity of water consumed to promote water conservation and customer notification of any high or abnormal water consumption.

The City continued to utilize the AMI (Advanced Metering Infrastructure) system to better understand usage, proactively and more efficiently and effectively manage the water resources and respond better to customers. The City completed the replacement of all small and large water meters in 2017 as part of the AMI implementation.

Describe Progress in Reaching Goals:

- Estimate how much water you saved.
- Report progress toward meeting goals within your established timeframe.
- Identify any WUE measures you are currently implementing.
- If you established a goal to maintain a historic level (such as maintaining daily consumption at 65 gallons per person per day for the next two years) you must explain why you are unable to reduce water use below that level.

The following questions will help DOH better understand water usage, water resources management and drought response. The data will be used to provide technical assistance, not for regulatory purposes.

All questions are voluntary

Month	Date of Measurement	Static Water Level (feet below measuring point)	Dynamic Water Level (feet below measuring point)
January	01/07/2020	43.3	51.6
February	02/18/2020	43.2	49.1
March	03/10/2020	43.3	50.0
April	04/16/2020	42.6	51.7
May	05/06/2020	42.7	51.3
June	06/05/2020	42.6	51.7
July	07/20/2020	43.1	53.1
August	08/01/2020	44.6	53.5
September	09/01/2020	45.3	54.0
October	10/19/2020	45.1	53.2
November	11/20/2020	44.8	52.5
December	12/02/2020	44.1	53.2

Water level data:

Please provide the following information (if known) to help us better utilize the water level data.

Well tag Id number:

Well depth: 339.0

Water level accuracy (within 0.01 ft < 1 ft ~ 1 ft) 0.1'

Completion type (e.g., cased open interval, cased open-ended, cased open-ended with perforations, etc…)

Location coordinates (latitude, longitude) and accuracy of the coordinates (< 1ft, ~1ft, >1000ft) 47.28582N, 122.21645W

Water level parameter name (e.g. depth below measuring point, depth below top of casing, depth below ground surface) depth below top of casing

Elevation of top of casing OR elevation of measuring point if different than top of casing (as specified in question 7) 120.8'

Monthly/Seasonal Water Usage:

What was your maximum daily water demand for the previous year (in gallons per day)? 13,616,000

Month	Volume of Water Produced in gallons
January	153,656,000
February	146,249,000
March	161,764,000
April	162,137,000
May	187,153,000
June	197,198,000
July	263,820,000
August	293,885,000
September	237,212,000
October	171,856,000
November	155,010,000
December	159,250,000

Water shortage response:

Did you activate any level of water shortage response plan the previous year?

☐ Yes ☑ No ☐ There was no need to

If you activated a water shortage response plan the previous year, what level did you activate? (Check all that apply)

☐ Advisory Conservation ☐ Voluntary Conservation

☐ Mandatory Conservation ☐ Rationing ☐ Other

What factors caused your water shortage the previous year?

☐ Drought ☐ Fire ☐ Landslides ☐ Earthquakes

☐ Flooding ☐ Water Supply Limitations ☐ Other

Do not mail, fax, or email this report to DOH

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

Date Submitted: 5/12/2022

Water Use Efficiency
Annual Performance Report - 2021

WS Name: Auburn City of

Water System ID# : 03350 WS County: KING

Report submitted by: *Susan Fenhaus*

Meter Installation Information:

Estimate the percentage of metered connections: *100%*

If not 100% metered – Did you submit a meter installation plan to DOH? No

Within your meter installation plan, what date did you commit to completing meter installation?

Current status of meter installation:

Production, Authorized Consumption, and Distribution System Leakage Information:

12-Month WUE Reporting Period *01/01/2021* To *12/31/2021*

Incomplete or missing data for the year? *No*

If yes, explain:

Total Water Produced & Purchased (TP) – Annual volume gallons	*2,453,684,600*	gallons	
Authorized Consumption (AC) – Annual Volume in gallons	*2,251,573,400*	gallons	
Distribution System Leakage – Annual Volume TP – AC	*202,111,200*	gallons	
Distribution System Leakage – DSL = [(TP – AC) / TP] x 100 %	*8.2 %*		
3-year annual average - %	*7.0 %*	*2019, 2020, 2021*	

Goal-Setting Information:

Enter the date of most recent public forum to establish WUE goal: *08/02/2021*

Has goal been changed since last performance report? *Yes*

Note: Customer goal must be re-established every 6 years through a public process.

Customer WUE Goal (Demand Side):

Decrease the planning ERU value (gpd/ERU) 1 percent annually from the current planning ERU value of 179 gpd/ERU, which is the 75th percentile of the 7 years of historical data (2014-2020). Revaluate goal when the planning ERU value reaches less than 172 gpd/ERU.

Customer (Demand Side) Goal Progress:

In 2021, the City processed 5 applications for WaterSense® toilet rebates for an estimated consumption savings (reduction) of 40,920 gallons per year.

Decreasing the planning ERU value (gpd/ERU) 1 percent annually from the current planning ERU value of 179 gpd/ERU was adopted on 8/2/2021. The change of ERU values from year 2020 to 2021 was 179 to 182, a 1.7% increase, the value of 168 for year 2019 is the lowest value achieved so far.

The City continued to implement WUE program measures such as bills showing consumption history, water saving device kits and conservation pricing.

Additional Information Regarding Supply and Demand Side WUE Efforts

In 2021, the City continued efforts to reduce unaccounted-for water, performing leak detection and repair, metering hydrant use and repairing breaks. As a result, the Distribution System Leakage for year 2021 was 8.2%, below the 10% target. The rolling 3-year average was 7.0%, meeting the WUE rule of at or below 10%.

In 2021, the City continued to implement the WaterSense® toilet rebate program, providing customers a $100 rebate per toilet for the replacement of up to two old toilets with new high efficiency toilets with the WaterSense® label.

The City continued to implement the low flow shower head giveaway program, providing free low flow shower heads so that customers could replace their higher flow ones.

The City continued to perform large meter consumption and meter register checking and calibration.

The City continued to educate customers about water use efficiency practices.

The City continued to encourage the use of water conserving plants in landscaping for both public and private projects.

The City continued to use an inclining block rate for the quantity of water consumed to promote water conservation and customer notification of any high or abnormal water consumption.

The City continued to utilize the AMI (Advanced Metering Infrastructure) system to better understand usage, proactively and more efficiently and effectively manage the water resources and respond better to customers. The City completed the replacement of all small and large water meters in 2017 as part of the AMI implementation.

Describe Progress in Reaching Goals:

- Estimate how much water you saved.
- Report progress toward meeting goals within your established timeframe.
- Identify any WUE measures you are currently implementing.
- If you established a goal to maintain a historic level (such as maintaining daily consumption at 65 gallons per person per day for the next two years) you must explain why you are unable to reduce water use below that level.

The following questions will help DOH better understand water usage, water resources management and drought response. The data will be used to provide technical assistance, not for regulatory purposes.

All questions are voluntary

Month	Date of Measurement	Static Water Level (feet below measuring point)	Dynamic Water Level (feet below measuring point)
January	01/11/2021	35.1	21.5
February	02/02/2021	41.9	22.7
March	03/11/2021	48.1	
April	04/12/2021	46.2	25.3
May	05/11/2021	45.1	24.0
June	06/01/2021	44.7	23.4
July	07/02/2021	43.1	22.1
August	08/01/2021	41.4	20.6
September	09/11/2021	40.4	20.2
October	10/22/2021	40.7	21.2
November	11/30/2021	46.9	
December	12/08/2021	47.4	26.8

Water level data:

Please provide the following information (if known) to help us better utilize the water level data.

Well tag Id number:

Well depth: 298.0

Water level accuracy (within 0.01 ft < 1 ft ~ 1 ft) 0.1

Completion type (e.g., cased open interval, cased open-ended, cased open-ended with perforations, etc…)

Location coordinates (latitude, longitude) and accuracy of the coordinates (< 1ft, ~1ft, >1000ft) 47.29780N, 122.21294W

Water level parameter name (e.g. depth below measuring point, depth below top of casing, depth below ground surface) depth above the probe

Elevation of top of casing OR elevation of measuring point if different than top of casing (as specified in question 7) 27.7'

Monthly/Seasonal Water Usage:

What was your maximum daily water demand for the previous year (in gallons per day)? 13,080,000

Month	Volume of Water Produced in gallons
January	162,246,000
February	145,212,000
March	169,190,000
April	179,441,000
May	204,398,000
June	252,258,000
July	304,515,000
August	299,897,000
September	229,711,000
October	177,834,000
November	165,938,000
December	173,023,000

Water shortage response:

Did you activate any level of water shortage response plan the previous year?

☐ Yes ☑ No ☐ There was no need to

If you activated a water shortage response plan the previous year, what level did you activate? (Check all that apply)

☐ Advisory Conservation ☐ Voluntary Conservation

☐ Mandatory Conservation ☐ Rationing ☐ Other

What factors caused your water shortage the previous year?

☐ Drought ☐ Fire ☐ Landslides ☐ Earthquakes

☐ Flooding ☐ Water Supply Limitations ☐ Other

Do not mail, fax, or email this report to DOH

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

Date Submitted: 5/31/2023

Water Use Efficiency
Annual Performance Report - 2022

WS Name: Auburn City of

Water System ID# : 03350 WS County: KING

Report submitted by: *Senait Gebreeyesus*

Meter Installation Information:

Estimate the percentage of metered connections: *100%*

If not 100% metered – Did you submit a meter installation plan to DOH? No

Within your meter installation plan, what date did you commit to completing meter installation?

Current status of meter installation:

Production, Authorized Consumption, and Distribution System Leakage Information:

12-Month WUE Reporting Period _____ To _____

Incomplete or missing data for the year? *No*

If yes, explain:

Total Water Produced & Purchased (TP) – Annual volume gallons	*2,425,214,900*	gallons	
Authorized Consumption (AC) – Annual Volume in gallons	*2,215,863,800*	gallons	
Distribution System Leakage – Annual Volume TP – AC	*209,351,100*	gallons	
Distribution System Leakage – DSL = [(TP – AC) / TP] x 100 %	*8.6 %*		
3-year annual average - %	*7.7 %*		*2020, 2021, 2022*

Goal-Setting Information:

Enter the date of most recent public forum to establish WUE goal: *08/02/2021*

Has goal been changed since last performance report? *No*

Note: Customer goal must be re-established every 6 years through a public process.

Customer WUE Goal (Demand Side):

Decrease the planning ERU value (gpd/ERU) 1 percent annually from the current planning ERU value of 179 gpd/ERU, which is the 75th percentile of the 7 years of historical data (2014-2020). Revaluate goal when the planning ERU value reaches less than 172 gpd/ERU.

Customer (Demand Side) Goal Progress:

In 2022, the City processed 6 applications for WaterSense® toilet rebates for an estimated consumption savings (reduction) of 81,840 gallons per year.

Decreasing the planning ERU value (gpd/ERU) 1 percent annually from the current planning ERU value of 179 gpd/ERU was adopted on 8/2/2021. The change of ERU value from year 2021 to 2022 was 182 to 173, a 4.9% decrease, the value of 168 for year 2019 is the lowest value achieved so far.

The City continued to implement WUE program measures such as bills showing consumption history, consumer web portal to check consumption, customer possible leak alert, water saving device kits and conservation pricing.

Additional Information Regarding Supply and Demand Side WUE Efforts

In 2022, the City continued efforts to reduce unaccounted-for water, performing leak detection and repair, metering hydrant use and repairing breaks. The Distribution System Leakage for year 2022 was 8.6%, below the 10% target. The rolling 3-year average was 7.7%, meeting the WUE rule of at or below 10%.

In 2022, the City continued to implement the WaterSense® toilet rebate program, providing customers a $100 rebate per toilet for the replacement of up to two old toilets with new high efficiency toilets with the WaterSense® label.

The City continued to implement the low flow shower head giveaway program, providing free low flow shower heads so that customers could replace their higher flow ones.

The City continued to perform large meter consumption and meter register checking and calibration.

The City continued to educate customers about water use efficiency practices.

The City continued to encourage the use of water conserving plants in landscaping for both public and private projects.

The City continued to use an inclining block rate for the quantity of water consumed to promote water conservation and customer notification of any high or abnormal water consumption.

The City continued to utilize the AMI (Advanced Metering Infrastructure) system to better understand usage, proactively and more efficiently and effectively manage the water resources and better response to customers. The City completed the replacement of all small and large water meters in 2017 as part of the AMI implementation.

Describe Progress in Reaching Goals:

- Estimate how much water you saved.
- Report progress toward meeting goals within your established timeframe.
- Identify any WUE measures you are currently implementing.
- If you established a goal to maintain a historic level (such as maintaining daily consumption at 65 gallons per person per day for the next two years) you must explain why you are unable to reduce water use below that level.

The following questions will help DOH better understand water usage, water resources management and drought response. The data will be used to provide technical assistance, not for regulatory purposes.

All questions are voluntary

Month	Date of Measurement	Static Water Level (feet below measuring point)	Dynamic Water Level (feet below measuring point)
January	01/19/2022	51.0	30.0
February	02/03/2022	50.0	30.0
March	03/02/2022	49.0	
April	04/05/2022	49.0	27.0
May	05/20/2022	47.0	27.0
June	06/16/2022	47.0	27.0
July	07/27/2022	45.0	22.0
August	08/02/2022	43.0	22.0
September	09/06/2022	42.0	21.0
October	10/02/2022	41.0	
November	11/03/2022	41.0	
December	12/07/2022	42.0	23.0

Water level data:

Please provide the following information (if known) to help us better utilize the water level data.

Well tag Id number:

Well depth: 298.0

Water level accuracy (within 0.01 ft < 1 ft ~ 1 ft)	0.1
Completion type (e.g., cased open interval, cased open-ended, cased open-ended with perforations, etc…)	
Location coordinates (latitude, longitude) and accuracy of the coordinates (< 1ft, ~1ft, >1000ft)	47.29780N, 122.21294W
Water level parameter name (e.g. depth below measuring point, depth below top of casing, depth below ground surface)	Depth above the probe
Elevation of top of casing OR elevation of measuring point if different than top of casing (as specified in question 7)	27.7

Monthly/Seasonal Water Usage:

What was your maximum daily water demand for the previous year (in gallons per day)? 12,780,000

Month	Volume of Water Produced in gallons
January	176,940,100
February	154,504,000
March	173,420,000
April	161,478,000
May	167,443,000
June	196,910,000
July	287,090,000
August	303,981,000
September	246,949,000
October	192,973,000
November	155,639,000
December	170,211,000

Water shortage response:

Did you activate any level of water shortage response plan the previous year?

☐ Yes ☑ No ☐ There was no need to

If you activated a water shortage response plan the previous year, what level did you activate? (Check all that apply)

☐ Advisory Conservation ☐ Voluntary Conservation

☐ Mandatory Conservation ☐ Rationing ☐ Other

What factors caused your water shortage the previous year?

☐ Drought ☐ Fire ☐ Landslides ☐ Earthquakes

☐ Flooding ☐ Water Supply Limitations ☐ Other

Do not mail, fax, or email this report to DOH

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water

Date Submitted: 5/31/2023

Water Use Efficiency
Annual Performance Report - 2022

WS Name: BRAUNWOOD ESTATES

Water System ID# : 03336 WS County: KING

Report submitted by: *Senait Gebreeyesus*

Meter Installation Information:

Estimate the percentage of metered connections: *100%*

If not 100% metered – Did you submit a meter installation plan to DOH? No

Within your meter installation plan, what date did you commit to completing meter installation?

Current status of meter installation:

Production, Authorized Consumption, and Distribution System Leakage Information:

12-Month WUE Reporting Period _____ To _____

Incomplete or missing data for the year? *No*

If yes, explain:

Total Water Produced & Purchased (TP) – Annual volume gallons	*1,181,230* gallons	
Authorized Consumption (AC) – Annual Volume in gallons	*1,103,440* gallons	
Distribution System Leakage – Annual Volume TP – AC	*77,790* gallons	
Distribution System Leakage – DSL = [(TP – AC) / TP] x 100 %	*6.6 %*	
3-year annual average - %	*5.1 %*	*2020, 2021, 2022*

Goal-Setting Information:

Enter the date of most recent public forum to establish WUE goal: *08/02/2021*

Has goal been changed since last performance report? *No*

Note: Customer goal must be re-established every 6 years through a public process.

Customer WUE Goal (Demand Side):

Decrease the planning ERU value (gpd/ERU) 1 percent annually from the current planning ERU value of 179 gpd/ERU, which is the 75th percentile of the 7 years of historical data (2014-2020). Revaluate goal when the planning ERU value reaches less than 172 gpd/ERU.

Customer (Demand Side) Goal Progress:

Decreasing the planning ERU value (gpd/ERU) 1 percent annually from the current planning ERU value of 179 gpd/ERU was adopted on 8/2/2021. The change of ERU value from year 2021 to 2022 was 429 to 251, a 41.5% decrease, the value of 251 for this year is the lowest value achieved so far.

The City continued to implement WUE program measures such as bills showing consumption history, consumer web portal to check consumption, customer possible leak alert, water saving device kits and conservation pricing.

Additional Information Regarding Supply and Demand Side WUE Efforts

All meters in the Braunwood system have been replaced in 2017 as part of the Advanced Metering Infrastructure (AMI) project. The Distribution System Leakage for year 2022 was 6.6%, below the 10% target. The rolling 3-year average was 5.1%, meeting the WUE rule of at or below 10%.

In 2022, the City continued to implement the WaterSense® toilet rebate program, providing customers a $100 rebate per toilet for the replacement of up to two old toilets with new high efficiency toilets with the WaterSense® label.

The City continued to implement the low flow shower head giveaway program, providing free low flow shower heads so that customers could replace their higher flow ones.

The City continued to educate customers about water use efficiency practices.

The City continued to encourage the use of water conserving plants in landscaping for both public and private projects.

The City continued to use an inclining block rate for the quantity of water consumed to promote water conservation and customer notification of any high or abnormal water consumption.

The City continued to utilize the AMI (Advanced Metering Infrastructure) system to better understand usage, proactively and more efficiently and effectively manage the water resources and better response to customers.

Describe Progress in Reaching Goals:

- Estimate how much water you saved.
- Report progress toward meeting goals within your established timeframe.
- Identify any WUE measures you are currently implementing.
- If you established a goal to maintain a historic level (such as maintaining daily consumption at 65 gallons per person per day for the next two years) you must explain why you are unable to reduce water use below that level.

The following questions will help DOH better understand water usage, water resources management and drought response. The data will be used to provide technical assistance, not for regulatory purposes.

All questions are voluntary

Month	Date of Measurement	Static Water Level (feet below measuring point)	Dynamic Water Level (feet below measuring point)
January	01/05/2022	59.0	21.0
February	02/05/2022	59.0	21.0
March	03/04/2022	59.0	21.0
April	04/04/2022	59.0	22.0
May	05/10/2022	59.0	22.0
June	06/08/2023	59.0	21.0
July	07/07/2023	60.0	22.0
August	08/07/2023	60.0	22.0
September	09/04/2023	59.0	21.0
October	10/04/2023	59.0	21.0
November	11/11/2023	60.0	21.0
December	12/02/2023	59.0	22.0

Water level data:

Please provide the following information (if known) to help us better utilize the water level data.

Well tag Id number: 21/05-34E

Well depth: 352.0

Water level accuracy (within 0.01 ft < 1 ft ~ 1 ft)	0.1
Completion type (e.g., cased open interval, cased open-ended, cased open-ended with perforations, etc…)	
Location coordinates (latitude, longitude) and accuracy of the coordinates (< 1ft, ~1ft, >1000ft)	47.26779 N, 122.17083 W
Water level parameter name (e.g. depth below measuring point, depth below top of casing, depth below ground surface)	depth above the probe
Elevation of top of casing OR elevation of measuring point if different than top of casing (as specified in question 7)	220'

Monthly/Seasonal Water Usage:

What was your maximum daily water demand for the previous year (in gallons per day)? 12,578

Month	Volume of Water Produced in gallons
January	61,600
February	53,400
March	60,300
April	72,800
May	54,500
June	102,500
July	194,100
August	214,800
September	135,000
October	104,800
November	65,500
December	64,800

Water shortage response:

Did you activate any level of water shortage response plan the previous year?

☐ Yes ☑ No ☐ There was no need to

If you activated a water shortage response plan the previous year, what level did you activate? (Check all that apply)

☐ Advisory Conservation ☐ Voluntary Conservation

☐ Mandatory Conservation ☐ Rationing ☐ Other

What factors caused your water shortage the previous year?

☐ Drought ☐ Fire ☐ Landslides ☐ Earthquakes

☐ Flooding ☐ Water Supply Limitations ☐ Other

Do not mail, fax, or email this report to DOH

CITY OF AUBURN WASHINGTON	**Public Works Committee** **October 20, 2014 - 3:30 PM** **Annex Conference Room 2** **MINUTES**

I. CALL TO ORDER

Chairman Wayne Osborne called the meeting to order at 3:30 p.m. in Conference Room #2, located on the second floor of Auburn City Hall, One East Main Street, Auburn, Washington.

A. Roll Call

Chairman Wayne Osborne, Vice-Chair Bill Peloza, and Member Claude DaCorsi were present. Also present during the meeting were: Mayor Nancy Backus, Community Development & Public Works Director Kevin Snyder, Assistant Director of Engineering/City Engineer Ingrid Gaub, Assistant City Engineer Jacob Sweeting, Utility Engineering Manager Lisa Tobin, Transportation Manager Pablo Para, Water Utility Engineer Susan Fenhaus, Planning & Design Services Manager Elizabeth Chamberlain, Financial Planning Manager Bob Brooks, Water Manager Allen Hunter and Public Works Secretary Molly Mendez.

B. Announcements

1. Announcements
   Public comment will be accepted on Discussion Item E.

C. Agenda Modifications

There was one agenda modification, removing Action Item A, Public Works Project No. C512A, from the agenda.

II. CONSENT AGENDA

A. Approval of Minutes
Public Works Committee to approve the minutes of the October 6, 2014 Public Works Committee meeting

It was moved by Vice-Chair Peloza, seconded by Member DaCorsi, that the Committee approve the Public Works Committee Meeting minutes for date, October 6, 2014.

Motion carried 3-0.

III. ACTION

A. Public Works Project No. C512A (Wickstrom)
Award Contract No. 13-12, to Gary Harper Construction, Inc. on their Low Bid of $870,696.00 plus Washington State Sales Tax of $82,716.12 for a Total Contract Price of $953,412.12 for Project No. C512A, Well 4 Emergency Power Improvements

Action Item A was removed from the agenda.

B. Resolution No. 5108 (Tobin)
A Resolution of the City Council of the City of Auburn, Washington, Authorizing the Public Works Committee to Appoint the City of Auburn Representatives to the King County Metropolitan Water Pollution Abatement Advisory Committee

Utility Engineering Manager Tobin provided a brief background summary of Resolution No. 5108 and reviewed the draft letter identifying the City's representative and alternates. There were no questions from the Committee.

It was moved by Vice-Chair Peloza, seconded by Member DaCorsi, that the Committee adopt Resolution No. 5108.

Motion carried 3-0.

IV. DISCUSSION ITEMS

A. Ordinance No. 6534 (Chamberlain)
An Ordinance of the City Council of the City of Auburn, Washington, amending Section 18.29.060 of the Auburn City Code related to floor area ratio in the Downtown Urban Center Zone.

For the purpose of these minutes, this item was discussed after Discussion Item C.

Planning & Design Services Manager Chamberlain provided a brief background summary of Ordinance No. 6534. Chamberlain stated Ordinance No. 6534 already went before the Planning Commission which held a public hearing on October 7, 2014. There was no public testimony. The Planning Commission recommended approval of the code change. Ordinance No. 6534 also went to the Planning and Community Development Committee on October 13, 2014 and the Committee concurred with Planning Commission's recommendation.

Planning & Design Services Manager Chamberlain responded to a question asked by Chairman Osborne regarding the building height limit of 75 feet and that this could be reviewed in the City's Comprehensive Planning effort.

In response to a question asked by Chairman Osborne, Planning & Design Services Manager Chamberlain provided definition of "life of the project" as mentioned on page 29 of the packet.

B. Ordinance No. 6537 (Chamberlain)
An Ordinance of the City Council of the City of Auburn, Washington, amending Section 17.09.010 of the Auburn City Code related to short plat thresholds.

Planning & Design Services Manager Chamberlain provided a brief background summary of Ordinance No. 6537. There were no questions from the Committee.

C. System Development Charges (Tobin/Fenhaus)

For the purpose of these minutes, this item was discussed before Discussion Item A.

Utility Engineering Manager Tobin invited Financial Planning Manager Brooks and Water Utility Engineer Fenhaus to join her at the table as this has been a collaborative effort.

Using a slideshow presentation, Utilities Engineering Manager Tobin briefed the Committee on the System Development Charges.

This was followed by a group discussion.

The Committee reached consensus on Option 1 – Full Water and Sewer SDC increase to be effective in January 2015, with annual updates to the Water, Sewer, and Storm SDCs in subsequent years based on the Construction Cost Index (CCI), but not to be an annual change less than zero.

Staff will provide a similar briefing for the full council before the proposed fee schedule is brought to the council for action.

D. Cross Connection Control Program (Fenhaus)

For the purpose of these minutes, this item was discussed after Discussion Item B.

Water Utility Engineer Fenhaus provided informational materials which explained the Cross Connection Control Program. Fenhaus briefly reviewed the presentation materials with the Committee.

Water Utility Engineer Fenhaus introduced Allen Hunter, the Water Manager at Maintenance and Operations, to the Committee. Water Utility Engineer Fenhaus mentioned that Water Manager Hunter has extensive knowledge with cross connection as he used to be the Cross Connection Specialist.

Water Manager Hunter further explained that Washington Administrative Code requires Public Water Systems to address "Table 9 Facilities" which are facilities that could pose a health concern because of the risk of death, spread of disease or illness. The Department of Health has mandated water systems to concentrate on medical facilities. The City program has identified 65 facilities within that category, and to date, 55 of them have the required premise isolation with the approved backflow device. The staff continue to work with the remaining 10. The Washington Administrative Code also requires Public Water Systems to track backflow assemblies used to protect the water system. The City currently tracks 2600 assemblies, all of which require annual testing by the owner.

Following a question asked by Member DaCorsi, Water Utility Engineer Fenhaus explained the City process for existing facilities.

E. Water Use Efficiency Program (Fenhaus)

Water Utility Engineer Fenhaus indicated this is Chapter 8 of the Water System Comprehensive Plan. Fenhaus noted that a requirement for putting together a Water Use Efficiency Program is to hold a public meeting where public comments are accepted. There were no public comments received.

Water Utility Engineer Fenhaus pointed out some highlights as seen in the memorandum on page 48 of the packet.

There was a group discussion regarding Distribution System Leakage following a question asked by Chairman Osborne.

Water Utility Engineer Fenhaus will investigate the numbers in the chart on page 70 of the packet, specifically the "Schools" column as pointed out by Vice-Chair Peloza.

Water Utility Engineer Fenhaus responded to a question asked by Chairman Osborne regarding the average consumption per account (single family) on the chart on page 72 of the packet.

F. Capital Project Status Report (Sweeting)

<u>Item 6 – CP1024 – AWS and M Street SE Intersection Improvements:</u>
Assistant City Engineer Sweeting provided the Committee with a project status update in response to a question asked by Member DaCorsi.

<u>Item 10 – CP1308 – BNSF Utility Crossings Project:</u>
Chairman Osborne requested staff keep the Committee updated on this project as this contractor has not been used by the City before.

Assistant City Engineer Sweeting indicated staff will keep the Committee informed.

Item 28 – CP1406 – West Main Street Traffic Signal Upgrades:
Assistant City Engineer Sweeting replied to a question asked by Vice-Chair Peloza regarding the completion date of this project.

G. Significant Infrastructure Projects by Others - Public Works Status Report (Gaub)

There were no questions from the Committee.

H. Action Tracking Matrix (Gaub)

Assistant Director of Engineering/City Engineer Gaub reviewed the previous discussion on the 105th Place SE at 107th with committee; staff indicated they would investigate the site to see whether additional signage could be installed in the interim until the repair work could be done next year. Staff is completing this investigation.

Assistant City Engineer Sweeting noted this section of the road is scheduled with the capital projects to go out early next year. Sweeting advised the Committee that this is Item 17 on the Capital Project Status Report.

V. ADJOURNMENT

There being no further business to come before the Public Works Committee, the meeting was adjourned at 5:03 p.m.

Approved this 3rd day of November, 2014.

_____	_____
Wayne Osborne	Molly Mendez
Chairman	Public Works Department Secretary

Report Form

Consumer Confidence Report Certification Form

331-203 • Updated 3/6/2023

Consumer Confidence Reports are due before July 1, 2023

You need to complete the following.

1. **Before July 1, 2023**, mail or otherwise directly deliver a copy of your 2021 Consumer Confidence Report (CCR) to your water system customers. Keep a copy for your records.

2. **Before July 1, 2023**, mail or email a copy of your CCR to the regional office for your county (information on back)**.**

3. **By October 1, 2023*** complete and send this certification form to the regional office with your CCR.

***Note**: We are better able to properly credit your water system when we receive both documents, together, before the July 1 deadline.*

Certification for

Water System Name City of Auburn

Water System ID Number 03350 Water System County King and Pierce

Date delivered Mail and electronically delivered in June, 2023

URL (if delivered electronically) auburnwa.gov/water

In compliance with the CCR requirements in WAC 246-290-72001 through -72012, I confirm that:

- The CCR has been appropriately delivered to customers who use this water system.
- All information contained in this report is correct.
- The monitoring data stated in the CCR matches information submitted to Washington State Department of Health, Office of Drinking Water.

Certified by

Signature

Printed Name Jirong Lu

Phone 253-876-1977 Date 6/26/2023

Report Form

Consumer Confidence Report Certification Form

331-203 • Updated 3/6/2023

Consumer Confidence Reports are due before July 1, 2023

You need to complete the following.

1. **Before July 1, 2023**, mail or otherwise directly deliver a copy of your 2021 Consumer Confidence Report (CCR) to your water system customers. Keep a copy for your records.

2. **Before July 1, 2023**, mail or email a copy of your CCR to the regional office for your county (information on back)**.**

3. **By October 1, 2023*** complete and send this certification form to the regional office with your CCR.

***Note**: We are better able to properly credit your water system when we receive both documents, together, before the July 1 deadline.*

Certification for

Water System Name Braunwood Estates

Water System ID Number 03336 Water System County King

Date delivered Mail delivered in June, 2023

URL (if delivered electronically) _____

In compliance with the CCR requirements in WAC 246-290-72001 through -72012, I confirm that:

- The CCR has been appropriately delivered to customers who use this water system.
- All information contained in this report is correct.
- The monitoring data stated in the CCR matches information submitted to Washington State Department of Health, Office of Drinking Water.

Certified by

Signature _____

Printed Name Jirong Lu

Phone 253-876-1977 Date 6/26/2023

RESIDENTIAL LEAD AND COPPER MONITORING

Residential lead and copper sampling was conducted in Summer 2021 to determine the concentrations of lead and copper that leach from residential water pipes and fixtures. Lead results ranged from <1 ppb to 6.6 ppb. Copper results ranged from <0.02 ppm to 0.294 ppm. The 90th percentile results for lead and copper were 1.3 ppb and 0.056 ppm respectively, which are below the Action Level for lead (15 ppb) and for copper (1.3 ppm). If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing.

The Auburn Water Utility is responsible for providing high quality drinking water, but cannot control the variety of materials used in its customers' plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for thirty seconds to two minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at **800-426-4791** or at **epa.gov/lead**.

WATER USE EFFICIENCY

The main components of the City of Auburn Water Use Efficiency(WUE) program are managing the water distribution system to minimize water loss, and encouraging responsible use of water by our customers.

Water loss is the difference between the total water produced and the water used by our customers, presented here as a percentage of water produced. The City of Auburn Water Utility goal since 1999 has been to maintain water loss at or below 10 percent. In accordance with the Water Use Efficiency reporting requirements, the water loss for year 2022 is **8.6%**. The three year average for the years up to and including 2022 was **7.7%**. In an effort to limit water loss, the Utility performs annual system leak detection and repair; tests production and service meters, calibrating or replacing them as required; and issues permits for water withdrawal from hydrants.

Responsible water use by our customers is promoted by the Utility through educational programs for school children and homeowners. Quantifying the benefit of educational programs and corresponding behavioral changes is difficult, but reductions in water use and/or waste can have a significant impact on the amount of water used as a whole. The City of Auburn is committed to efficiently managing the water distribution system and encourages you to use water wisely.

The City's Water Use Efficiency Annual Performance Report and other information regarding Auburn's Water Use Efficiency program are available on the City of Auburn's website at visit **auburnwa.gov/water**.

FLUORIDE

The City of Auburn does not add fluoride to your drinking water. In 2022, Fluoride levels present in Auburn's water range from 0.0-0.2 ppm. If you have questions about fluoride for dental use, please consult with your doctor or dentist. For more information on fluoride in drinking water, visit the Environmental Protection Agency (EPA) website at **epa.gov/ground-water-and-drinking-water**.

CROSS CONNECTION PROGRAM

Protecting Our Water System From Contamination

A cross connection is a connection between a water pipe and a source of contamination. Examples of cross connections within the home include hose ends submerged in pools, hot tubs or buckets, irrigation systems and most hose-end spray applicators. Cross connections are extremely dangerous because they provide opportunities for contaminated fluids to be pulled back into the water system.

To protect our water supply, avoid using hose-end sprayers and maintain an air gap by keeping the hose end above the water surface when filling containers. Irrigation systems are required to have a backflow assembly. Backflow assemblies require a plumbing permit, must be inspected by a cross connection specialist, and must be tested by a certified tester when installed, and yearly thereafter. For more information or a list of certified testers, call the Water Division at **253-931-3048** or visit **auburnwa.gov/water**.

PARAMETER	STANDARDS		SAMPLE RESULTS		ADDITIONAL INFORMATION
	MCLG	MCL	Average	Range	Typical Source/Comments
INORGANIC SUBSTANCE					
Arsenic (ppb)	0	10		ND - 1.8	Erosions of natural deposits. Most recent sampling date and data are from the most recent testing done in accordance with the regulations.
Nitrate (ppm)	10	10		0.30 - 3.25	Natural deposits, fertilizer, septic tanks
VOLATILE ORGANIC SUBSTANCE					
Haloacetic Acids (ppb)	NA	60		ND	By-product of drinking water disinfection
Total Trihalomethanes (ppb)	NA	80		9.03 - 10.41	By-product of drinking water disinfection
OTHER MONITORED SUBSTANCE					
Chlorine Residual (ppm)	4 (MRDL)	4 (MRDLG)	0.59	0.40 - 0.77	Measure of disinfectant added to water
Manganese (ppb)		50 (SMCL)		ND	Black to brown color, black staining; Bitter metallic taste
UNIT DESCRIPTION					

NA: Not applicable
ND: Not detected
ppm: parts per million, or milligrams per liter (mg/l)
ppb: parts per billion, or micrograms per liter (µg/l)

DEFINITIONS

MCL | Maximum Contaminant Level
The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG | Maximum Contaminant Level Goal
The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MRDL | Maximum Residual Disinfectant Level
The highest level of a disinfectant allowed in drinking water.

MRDLG | Maximum Residual Disinfectant Level Goal
The level of a drinking water disinfectant below which there is no known or expected risk to health.

SMCL | Secondary Maximum Contaminant Level
The secondary standards are set to give public water systems some guidance on removing those chemicals to levels that are below what most people will find to be noticeable. They are non-mandatory and non-enforceable.

REQUIRED HEALTH INFORMATION FROM THE EPA

HEALTH ISSUES

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. Environmental Protection Agency (EPA)/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the EPA's Safe Water Drinking Hotline at **800-426-4791**.

CONTAMINANTS AND REGULATIONS

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA Safe Drinking Water Hotline at **800-426-4791**. The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Microbial contaminants, such as viruses and bacteria, may come from septic systems, livestock and wildlife. Inorganic contaminants, such as salts and metals, can be naturally occurring or result from urban stormwater run-off, septic systems or fertilizer use. Pesticides and herbicides may come from a variety of sources such as agriculture, urban stormwater run-off and residential uses. Organic chemical contaminants, including synthetic and volatile organic chemicals, are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater run-off, and septic systems. Radioactive contaminants can be naturally occurring or be the result of oil and gas production and mining activities. In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations set limits for contaminants in bottled water that are intended to provide similar protection for public health.

Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.

В этом сообщении содержится важная информация о воде, которую вы пьёте. Попросите кого-нибудь перевести для вас это сообщение или поговорите с человеком, который понимает его содержание.

Tài liệu này có tin tức quan trọng về nước uống của quý vị. Hãy nhờ người dịch cho quý vị, hoặc hỏi người nào hiểu tài liệu này.

此报告包含有关您的饮用水的重要信息。请人帮您翻译出来，或请看懂此报告的人将内容说给您听。

이 보고서에는 귀하의 식수에 대한 중요한 내용이 실려있습니다. 그러므로 이 보고서를 이해할 수 있는 사람한테 번역해 달라고 부탁하시기 바랍니다.

Public Works Department
City of Auburn
25 W Main Street
Auburn WA 98001-4998

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SEATTLE WA
PERMIT #1652

AUBURN WATER UTILITY
2022 WATER QUALITY REPORT

THE AUBURN WATER UTILITY IS PROUD TO PRESENT YOU WITH OUR 2022 WATER QUALITY REPORT.

This report is a snapshot of 2022 water quality. The test results in this report show that Auburn's water meets or surpasses all federal and state standards for public drinking water. Auburn's water comes from a combination of wells drawing water from deep below the city, and springs located near the walls of the valley. Water from the valley wells and springs is distributed to the entire Auburn service area. Additional wells are located in Lakeland Hills and serve Auburn customers in that neighborhood.

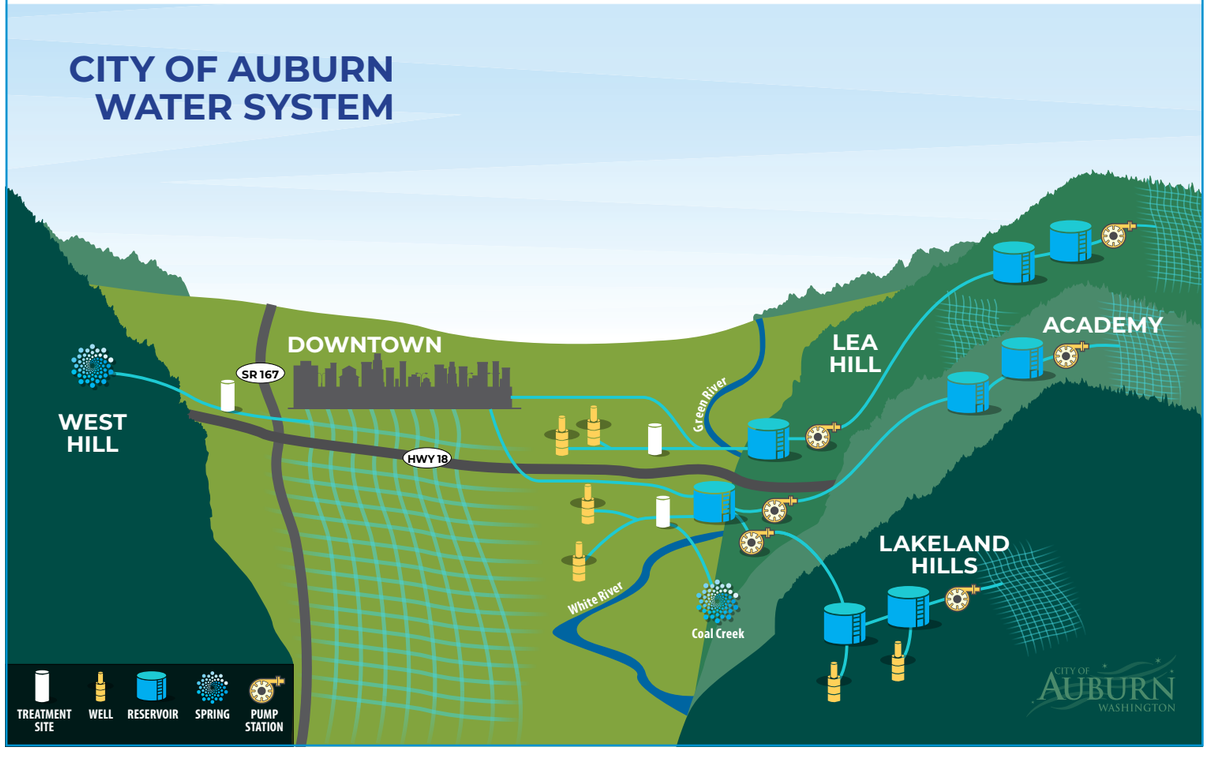
AUBURN WATER UTILITY
2022 WATER QUALITY REPORT

Auburn provides water to its customers from 4 active wells and 2 springs located in the Valley. Auburn customers in Lakeland Hills get their water from 2 active wells in that area. The wells are 290 to 750 feet deep and produce from 180 to 3,500 gallons per minute (gpm) of water. The Springs produce from 600 to 3,800 gpm of water. To supplement the demand in Lakeland Hills, water from the Valley is also provided from the Terrace View Pump Station located at Alexander Place and Terrace View Drive SE.

Water quality is generally very good and requires minimal treatment and the water is soft to moderately hard. Water from wells and springs is aerated for pH adjustment through two corrosion control facilities, and chlorine is added for disinfection. Auburn does not add fluoride to its water. Fluoride is a naturally-occurring element in groundwater, and is detected at levels up to 0.2 parts per million (ppm) in Auburn's sources. For the latest map showing fluoride levels throughout the City, please visit **auburnwa.gov/water**.

Although most wells and springs are in the Valley, water storage tanks/reservoirs are generally located at the highest elevation in the hills so that water from these tanks can flow by gravity to our customers. Auburn has 8 reservoirs with a total storage capacity of 15.8 million gallons.

Auburn has 6 active pump stations that pump water from the Valley up to the hills to the reservoirs, and boost it to higher elevations and pressure on the hills. Auburn also has 36 Pressure Reducing Valve (PRV) stations to keep the pressure in the water mains at acceptable levels. These PRVs are located at various elevations in the hills.



AUBURN WATER UTILITY
2022 WATER QUALITY REPORT

HIDDEN VALLEY ACRES

THE AUBURN WATER UTILITY IS PROUD TO PRESENT YOU WITH OUR 2022 WATER QUALITY REPORT.

The water which we provide to your home comes from a deep well located in your neighborhood. This report is a snapshot of 2022 water quality.

DEFINITIONS

MCL | Maximum Contaminant Level
The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG | Maximum Contaminant Level Goal
The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MRDL | Maximum Residual Disinfectant Level
The highest level of a disinfectant allowed in drinking water.

MRDLG | Maximum Residual Disinfectant Level Goal
The level of a drinking water disinfectant below which there is no known or expected risk to health.

ND | Not Detected

PARAMETER	STANDARDS		SAMPLE RESULTS	ADDITIONAL INFORMATION
	MCLG	MCL		Typical Source/Comments
INORGANIC SUBSTANCE				
Nitrate (ppm)	10	10	0.47	Natural deposits, fertilizer, septic tanks
SYNTHETIC ORGANIC SUBSTANCE				
PFOA (ppt)	N/A	10	ND	Run-off or leaching from firefighting foam, Industrial discharge, landfills and wastewater treatment plants
PFOS (ppt)		15		
PFHxS (ppt)		65		
PFNA (ppt)		9		
PFBS (ppt)		345		
RADIOACTIVE SUBSTANCE				
Gross Alpha		15 (PCi/L)	<3	Erosion of natural deposits
Radium 228		5 (PCi/L)	0.764	Erosion of natural deposits
OTHER MONITORED SUBSTANCE				
Chlorine Residual (ppm)	4 (MRDL)	4 (MRDLG)	Average 0.55 Range 0.42 - 0.75	Measure of disinfectant added to the water

UNIT DESCRIPTION

ppm: parts per million, or milligrams per liter (mg/l)

ppb: parts per billion, or micrograms per liter (µg/l)

ppt: parts per trillion, or nanograms per liter (ng/l)

REQUIRED HEALTH INFORMATION FROM THE EPA

HEALTH ISSUES

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. Environmental Protection Agency (EPA)/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the EPA's Safe Drinking Water Hotline at **800-426-4791**.

CONTAMINANTS AND REGULATIONS

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA Safe Drinking Water Hotline at **800-426-4791**. The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Microbial contaminants, such as viruses and bacteria, may come from septic systems, livestock and wildlife. Inorganic contaminants, such as salts and metals, can be naturally occurring or result from urban stormwater run-off, septic systems or fertilizer use. Pesticides and herbicides may come from a variety of sources such as agriculture, urban stormwater run-off and residential uses. Organic chemical contaminants, including synthetic and volatile organic chemicals, are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater run-off, and septic systems. Radioactive contaminants can be naturally occurring or be the result of oil and gas production and mining activities. Perfluorooctanoic acid (PFOA), Perfluorooctanesulfonic acid (PFOS), Perfluorohexanesulfonic acid (PFHxS), Perfluorononanoic acid (PFNA) and Perfluorobutanesulfonic acid (PFBS), belong to a larger group of chemicals called per- and polyfluoroalkyl substances (PFAS), which have been extensively utilized in both industrial and consumer products. PFAS have been found to persist in the environment and have the ability to accumulate in the human body over an extended period and may have potential health effects. In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations set limits for contaminants in bottled water that are intended to provide similar protection for public health.

FLUORIDE

The City of Auburn does not add fluoride to your drinking water at Hidden Valley Acres. If you have questions about fluoride for dental use, please consult with your doctor or dentist. For more information on fluoride in drinking water, visit the Environmental Protection Agency (EPA) website at **epa.gov.**

WATER USE EFFICIENCY

The main components of the City of Auburn Water Use Efficiency (WUE) program are managing the water distribution system to minimize water loss, and encouraging responsible use of water by our customers.

Water loss is the difference between the total water produced and the water used by our customers, presented here as a percentage of water produced. The City of Auburn Water Utility goal since 1999 has been to maintain water loss at or below 10%. In 2022, the Hidden Valley Acres water loss was approximately **6.6%**, below the 10% target. The rolling 3-year average was **5.1%**, meeting the WUE rule of at-or-below 10%.

Responsible water use by our customers is promoted by the Utility through educational programs for school children and homeowners. Quantifying the benefit of educational programs and corresponding behavioral changes is difficult, but reductions in water use and/or waste can have a significant impact on the amount of water use as a whole. The City of Auburn is committed to efficiently managing the water distribution system and encourages you to use water wisely.

CROSS CONNECTION

CROSS CONNECTION CONTROL PROGRAM: PROTECTING OUR WATER SYSTEM FROM CONTAMINATION

A cross connection is a connection between a water pipe and a source of contamination. Examples of cross connections within the home include hose ends submerged in pools, hot tubs or buckets, irrigation systems and most hose-end spray applicators. Cross connections are extremely dangerous because they provide opportunities for contaminated fluids to be pulled back into the water system.

To protect our water supply, avoid using hose-end sprayers and maintain an air gap by keeping the hose end above the water surface when filling containers. Irrigation systems are required to have a backflow assembly. Backflow assemblies require a plumbing permit, must be inspected by a cross connection specialist, and must be tested by a certified tester when installed, and yearly thereafter.
For more information or a list of certified testers, see **auburnwa.gov/water** or call the Water Division at **253-931-3048**.

LEAD AND COPPER

RESIDENTIAL LEAD AND COPPER MONITORING:

Residential lead and copper sampling was conducted in Summer 2021 to determine the concentrations of lead and copper that leach from residential water pipes and fixtures. Lead results ranged from <1 ppb to 1 ppb. Copper from 0.035 ppm to 0.16 ppm. The 90th percentile results for lead and copper were 1 ppb and 0.16 ppm respectively. The Action Level for lead is 15 ppb and for copper is 1.3 ppm. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Auburn Water Utility is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for thirty seconds to two minutes before using water for drinking or cooking.

If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at **800-426-4791** or at **epa.gov**.

HIDDEN VALLEY ACRES' WATER SOURCE

Hidden Valley Acres gets its water from a well 6 inches in diameter and 352 feet in depth located in the neighborhood. The City of Auburn refers to this separate source and its distribution system as Braunwood Water System. The well which was drilled in 1989 has a capacity of 20 gallons per minute. The pump house building consists of a well, pumps, pipes, controls and other mechanical and electrical equipment. The site is also equipped with a generator for emergency power.

A 33,000-gallon concrete storage tank 20 feet in diameter and 15 feet in depth is located adjacent to the pump house. Sensors control when the well pump turns on to fill the reservoir. High level and low level alarms are tied into the City's Supervisory Control and Data Acquisition (SCADA) system.

Water from the reservoir is pumped to 3 pressure vessels by 3 booster pumps (1 for emergency) where domestic pressure is maintained at around 60 pounds per square inch (psi) and then distributed to the customers in the neighborhood through 4 inch diameter underground ductile iron pipes.

Water quality is generally very good and requires minimal treatment and the water is soft. Inside the pump house, chlorine is added for disinfection. No fluoride is added to this water.

The annual water supply is limited by the water right certificate limit that was issued by the Department of Ecology and the system is not connected to the City's main water system and does not benefit from any other water sources. Therefore, water usage monitoring and conservation efforts are critical in the Hidden Valley Acres area to avoid emergency water restrictions, penalties, and potential shut-downs.

Braunwood Pump House

Braunwood Reservoir

Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.

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此报告包含有关您的饮用水的重要信息。请人帮您翻译出来，或请看懂此报告的人将内容说给您听。

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The Auburn Water Utility is part of the Public Works Department, which receives oversight from the Auburn City Council. Regular Council meetings occur on the first and third Mondays of the month at the Auburn City Hall at 7:00 p.m. The public is welcome to attend.

Water Utility Information	**253-931-3010**
Maintenance & Operations	**253-931-3048**
Billing Information	**253-931-3038**

City of Auburn	**auburnwa.gov**
Washington State Dept. of Health	**doh.wa.gov/community-and-environment/drinking-water**
Environmental Protection Agency	**epa.gov/ground-water-and-drinking-water**

Coliform Monitoring Plan for: City of Auburn Water Division

A. System Information

Water System Name	**County**	**System I.D. Number**
City of Auburn Water Division	King and Pierce	03350V
Name of Plan Preparer	**Position**	**Daytime Phone #**
Chris Thorn	Water Quality Programs Coordinator	(253) 804-5065
Sources: Source Name, Well Depth, Pumping Capacity	**Valley, Lea Hill, Academy Service Area Sources** Coal Creek Springs (3,500 gpm) West Hill Springs (600 gpm) Well #1 (125 feet, 2,100 gpm) Well #2 (242 feet, 2,000 gpm) Well #3A (285 feet, Emergency, 0 gpm) Well #3B (309 feet, Emergency, 0 gpm) Well #4 (296 feet, 2,600 gpm) Well #6 (237 feet, 2,100 gpm) Well #7 (234 feet, 0 gpm)) **Lakeland Service Area Sources** Well #5 (320 feet, 650 gpm) Well #5A (510 feet, 180 gpm) Well #5B (710, Emergency, 0 gpm)	
Storage: List and Describe	Reservoir #1 – 5 million gallons Reservoir #2 – 3.6 million gallons Reservoir #8A – 1.2 million gallons Reservoir #8B – 1.5 million gallons Reservoir #4A – 1 million gallons Reservoir #4B – 1.4 million gallons Reservoir #5 – 1 million gallons Reservoir #6 – 1.5 million gallons	
Treatment: Source Name & Process	The City's water treatment includes chlorination, corrosion control, and metals removal Coal Creek Springs - chlorination to achieve 4-log treatment. Corrosion control at Howard Road CCT West Hill Springs - gaseous chlorination Well #1 – hypochlorite chlorination. Corrosion	

	control at Howard Road CCT Well #2, #6. and #7 – chlorinated and corrosion control in Fulmer Field CCT Well #3A and #3B – not operated Well #4 – hypochlorite chlorination Well #5 – not chlorinated Well #5A – hypochlorite chlorination Well #5B not in service – has ability to provide chlorination. Iron and manganese treatment available.
Pressure Zones: Number and name	Academy 350 – Academy service area Academy 445- Academy service area Academy 531 - Academy service area Academy 585 - Academy service area Lakeland 330 – Lakeland service area Lakeland 390 – Lakeland service area Lakeland 440– Lakeland service area Lakeland 441 – Lakeland service area Lakeland 446 – Lakeland service area Lakeland 485 – Lakeland service area Lakeland 545 – Lakeland service area Lakeland 575 – Lakeland service area Lakeland 630 – Lakeland service area Lakeland 670 – Lakeland service area Lakeland 697 – Lakeland service area Lea Hill 299 – Lea Hill service area Lea Hill 395 – Lea Hill service area Lea Hill 405– Lea Hill service area Lea Hill 406 – Lea Hill service area Lea Hill 462 – Lea Hill service area Lea Hill 500 – Lea Hill service area Lea Hill 563 – Lea Hill service area Lea Hill 648 – Lea Hill service area Valley 242 – Valley service area Valley 288 – Valley service area
Population by Service Area (2020)	Academy – 8,807 Lakeland – 5,831 Lea Hill - 13,844 Valley - 32,973 Total – 61,455
Number of Routine Samples Required Monthly by Regulation: 100	**Number of Sample Sites Needed to Represent the Distribution System:** 70
***Request DOH Approval of Triggered** **Yes** ☐ **No** ☒	

Source Monitoring Plan?	

B. Laboratory Information

Laboratory Name Water Management Laboratories, Inc.	Office Phone # **(253) 531-3121**
Address 1515 80th Street E Tacoma, WA 98404	**After Hours #** **(253) 841-0732**
Hours of Operation Monday–Friday 8:00 a.m. to 5:00 p.m. Saturday 9:00 a.m. to 12:00 p.m.	
Contact Name Christa Garrettson	
Emergency Laboratory Name Spectra Laboratories, LLC	**Office Phone #** **(253) 272-4850**
Address 2221 Ross Way Tacoma, WA 98421	**After Hours #**
Hours of Operation Monday–Friday 8:00 a.m. to 5:00 p.m.	
Contact Name Jeffrey Cooper	

C. Wholesaling of Groundwater

	Yes	No
We are a consecutive system and purchase groundwater from another water system.	☐	☒
If yes, Water System Name: _____ Contact Name: _____ Telephone Numbers: _____		
We sell groundwater to other public water systems.	☒	☐

If yes, Water System Name: ___City of Algona_____ Contact Name: Matt Bailey_____ Telephone Numbers: (253) 833-2897 _____	

D. Routine and Repeat Sample Locations

Location/Address for Routine Sample Sites	**Location/Address for Repeat Sample Sites**	Routine Sample Site Pressure Zone
C-1. 31512 115th Pl SE	C-1a. 31515 115th Pl SE	Lea Hill 563 zone
	C-1b. 31521 115th Pl SE	
C-2. 13006 305th Pl SE	C-2a. 13002 305th Pl SE	Lea Hill 648 zone
	C-2b. 13021 305th Pl SE	
C-3. 11517 305th Pl SE	C-3a. 11522 305th Pl SE	Lea Hill 563 zone
	C-3b. 11511 305th Pl SE	
C-4. 10417 301st St SE	C-4a. 10422 301st St SE	Lea Hill 406 zone
	C-4b. 10411 301st St SE	
C-5. 1212 12th St NE	C-5a. 1208 12th St NE	Valley 242 zone
	C-5b. 1201 M St NE	
C-6. 3816 I Pl NE	C-6a. 3806 I Pl NE	Valley 242 zone
	C-6b. 3824 I Pl NE	
C-7. 3705 W Valley Hwy N (across from 1410 37th St NW)	C-7a. 3615 W Valley Hwy N	Valley 242 zone
	C-7b. 3705 W Valley Hwy N	
C-8. 311 2nd St NE	C-8a. 309 2nd St NE	Valley 242 zone
311 in front of	C-8b. 318 2nd St NE	
C-9. 2635 Forest Ridge Dr SE	C-9a. 2705 Forest Ridge Dr SE	Academy 445 zone
	C-9b. 2750 Forest Ridge Dr SE	
C-10. 3614 Orchard St SE	C-10a. 6315 37th St SE	Academy 585 zone

Location/Address for Routine Sample Sites	**Location/Address for Repeat Sample Sites**	Routine Sample Site Pressure Zone
	C-10b. 6316 37th St SE	
C-11. 3602 A St SE	C-11a. 3414 A St SE	Valley 242 zone
	C-11b. 4026 A St SE	
C-12. 810 37th St SE	C-12a. 809 37th St SE	Valley 242 zone
	C-12b. 746 37th St SE	
C-13. 5110 Mill Pond Dr SE	C-13a. 801 52nd St SE	Lakeland 575 zone
	C-13b. 5012 Mill Pond DR SE	
C-14. 5501 James Ave SE	C-14a. 5515 James Ave SE	Lakeland 630 zone
	C-14b. 5405 James Ave SE	
C-15. 1505 West Valley Hwy S	C-15a. 907 West Valley Hwy S	Valley 242 zone
	C-15b. 1602 West Valley Hwy S	
C-16. 2820 V Ct SE	C-16a. 2811 V Ct SE	Academy 350 zone
	C-16b. 2831 V Ct SE	
C-17. 5705 37th St SE	C-17a. 5805 37th St SE	Academy 585 zone
	C-17b.5702 37th St se	
C-18. 3029 Scenic Dr SE	C-18a. 3045 Scenic Dr SE	Academy 445 zone
	C-18b. 3022 Scenic Dr SE	
C-19. 5208 Nathan Loop SE	C-19a. 5207 Nathan Loop SE	Lakeland 697 zone
	C-19b. 5213 Nathan Loop SE	
C-20. 211 14th St SE	C-20a. 218 14th St SE	Valley 242 zone
	C-20b. 202 14th St SE	
C-21. 901 W Main St	C-21a. 899 W Main St	Valley 242 zone
	C-21b. 1025 W Main St	
C-22. 4430 B St NW	C-22a. 4302 B St NW	Valley 242 zone
	C-22b. 4450 B St NW	
C-23. 4002 Auburn Way N	C-23a. 3920 Auburn Way N	Valley 242 zone
	C-23b. 722 40th St NE	

Location/Address for Routine Sample Sites	**Location/Address for Repeat Sample Sites**	Routine Sample Site Pressure Zone
C-24. 931 17th St NE	C-24a. 1022 17th St NE	Valley 242 zone
	C-24b. 932 17th St NE	
C-25. 1905 19th Dr NE	C-25a. 2005 19th Dr NE	Valley 242 zone
	C-25b. 1905 19th Dr NE	
C-26. 10804 299th Pl SE	C-26a. 29821 108th Ave SE	Lea Hill 462 zone
	C-26b. 10891 299th Pl SE	
C-27. 10823 292nd St SE	C-27a. 10803 292nd St SE	Lea Hill 563 zone
	C-27b. 10827 292nd St SE	
C-28. 30510 122nd Pl SE	C-28a. 30518 122nd Pl SE	Lea Hill 563 zone
	C-28b. 12121 se 304th Ct	
C-29. 11655 323rd Pl SE	C-29a. 11643 323rd Pl SE	Lea Hill 563 zone
	C-29b. 11808 323rd Pl SE	
C-30. 31423 Lea Hill Rd	C-30a. 31261 Lea Hill Rd	Lea Hill 405 zone
	C-30b. 31929 Lea Hill Rd	
C-31. 5503 Elizabeth Ave SE	C-31a. 5407 Elizabeth Ave SE	Lakeland 630 zone
	C-31b. 5521 Elizabeth Ave SE	
C-32. 4947 Diana Ct SE	C-32a. 502 50th St SE	Lakeland 440 zone
	C-32b. 452 50th St SE	
C-33. 2808 R Pl SE	C-33a. 2819 R Pl SE	Valley 242 zone
	C-33b. 2807 R Pl SE	
C-34. 3501 Auburn Way S #1	C-34a. 3501 Auburn Way S #58	Academy 445 zone
	C-34b. 3501 Auburn Way S #5	
C-35. 2015 Fir St SE	C-35a. 2005 Fir St SE	Academy 445 zone
	C-35b. 3020 21st St SE	
C-36. 404 26th St SE	C-36a. 412 26th St SE	Valley 242 zone
	C-36b. 2614 D St SE	
C-37. 408 V Pl SE	C-37a. 410 V Pl SE	Valley 242 zone

Location/Address for Routine Sample Sites	**Location/Address for Repeat Sample Sites**	Routine Sample Site Pressure Zone
	C-37b. 411 V Pl SE	
C-38. 32013 104th Pl SE	C-38a. 31900 104th Pl SE	Valley 242 zone
	C-38b. 32023 104th Pl SE	
C-39. 11307 313th Pl SE	C-39a. 11315 313th Pl SE	Lea Hill 563 zone
	C-39b. 11209 313th Pl SE	
C-40. 31926 120th Pl SE	C-40a. 31914 120th Pl SE	Lea Hill 563 zone
	C-40b. 11901 se 320th	
C-41. 30038 125th Ct SE	C-41a. 30027 125th Ct SE	Lea Hill 563 zone
	C-41b. 30022 125th Ct SE	
C-42. 1011 Pike St NW	C-42a. 1502 10th Ct NW	Valley 242 zone
	C-42b. 1003 Pike St NW	
C-43. 21 49th St NE	C-43a. 15 49th St NE	Valley 242 zone
	C-43b. 45 49th St NE	
C-44. 2300 E St NE	C-44a. 2131 E St NE	Valley 242 zone
	C-44b. 2340 E St NE	
C-45.1101 D St NE (Fire Dept)	C-45a. 340 15th St NE	Valley 242 zone
	C-45b. 901 Auburn Way N	
C-46. 710 47th St SE	C-46a. 706 47th St SE	Lakeland 390 zone
	C-46b. 714 47th St SE	
C-47. 2001 36th St SE	C-47a. 3501 V St SE	Valley 242 zone
	C-47b. 3507 V St SE	
C-48. 3410 Olympic St SE	C-48a. 3502 Olympic St SE	Valley 242 zone
	C-48b. 3308 Olympic St SE	
C-49. 5413 33rd St SE	C-49a. 5420 33rd St SE	Academy 585 zone
	C-49b. 5401 33rd St SE	
C-50. 2610 17th St SE	C-50a. 2702 17th St SE	Academy 445 zone
	C-50b. 2513 17th St SE	

Location/Address for Routine Sample Sites	**Location/Address for Repeat Sample Sites**	Routine Sample Site Pressure Zone
C-51. 1220 20th Ct SE	C-51a. 1925 N Ct SE	Valley 242 zone
	C-51b. 1921 O Ct SE	
C-52. 921 H St SE	C-52a. 915 H St SE (Museum)	Valley 242 zone
	C-52b. 724 9th St SE	
C-53. 10 R Pl NE	C-53a. 16 R Pl NE	Valley 242 zone
	C-53b. 12 R Pl NE	
C-54. 32313 105th Pl SE	C-54a. 32406 107th ave se	Lea Hill 563 zone
	C-54b. 10517 323rd St SE	
C-55. 32307 111th Pl SE	C-55a. 32317 111th Pl SE	Lea Hill 563 zone
	C-55b. 11007 322nd St SE	
C-56. 12444 318th Way SE	C-56a. 12428 318th Way SE	Lea Hill 563 zone
	C-56b. 31709 125th Pl SE	
C-57. 30121 114th Pl SE	C-57a. 30115 114th Pl SE	Lea Hill 563 zone
	C-57b. 30216 114th Pl SE	
C-58. 29304 112th Ave SE	C-58a. 29300 112th Ave SE	Lea Hill 563 zone
	C-58b. 29401 112th Ave SE	
C-59. 1211 30th St NE	C-59a. 1212 30th St NE	Valley 242 zone
	C-59b. 1203 30th St NE	
C-60. 2001 R St NW	C-60a. 2101 R St NW	Valley 242 zone
	C-60b. 1501 20th St NW	
C-61. 2607 T St SE	C-61a. 2604 T St SE	Valley 242 zone
	C-61b. 2707 T St SE	
C-62. 30521 108th Ave SE	C-62a. 10815 305th Pl SE	Lea Hill 500 zone
	C-62b. 30441 108th Ave SE	
C-63. 4517 Kennedy Ave SE	C-63a. 4501 Kennedy Ave SE	Lakeland 390 zone
	C-63b. 4701 Kennedy Ave SE	
C-64. 2193 53rd ST SE	C-64a. 5340 Udall St SE	Lakeland 545 zone

Location/Address for Routine Sample Sites	Location/Address for Repeat Sample Sites	Routine Sample Site Pressure Zone
	C-64b. 5320 Udall St SE	
C-65. 4517 Victoria Ave SE (next to storm pond)	C-65a. 2241 53rd St SE	Lakeland 485 zone
	C-65b. 5206 Victoria Ave SE	
C-66. 2501 56th St SE	C-66a. 5602 Bennett Ave SE	Lakeland 697 zone
	C-66b. 5602 Charlotte Ave SE	
C-67. 2503 56th St SE	C-67a. 5522 Bennett Ave SE	Lakeland 630 zone
	C-67b. 5539 Charlotte Ave SE	
C-68. 29037 118th Ave SE	C-68a. 29809 118th Ave SE	Lea Hill 563 zone
	C-68b. 29040 118th Ave SE	
C-69. 104 60th St SE	C-69a. 5680 A St SE	Valley 242 zone
	C-69b. 6021 Alexander Ave SE	
C-70. 1509 51st St SE	C-70a. 1454 51st St SE	Valley 242 zone
	C-70b. 1518 51st St SE	

Important Notes for Sample Collector:

1. Collect samples early in the month and early in the week.
2. Do not collect sample(s) in a week when there is a holiday or when a key staff member is on vacation.
3. If a sample site is no longer a good sample site, substitute an acceptable site in the same area. If the condition change cannot be resolved, choose a permanent new sample site and update this CMP.
4. Always review the lab results for your coliform samples.

E. Reduced Triggered Source Monitoring Justification

Auburn is not requesting reduced triggered source monitoring approval. When Auburn is notified of a routine distribution sample that is total coliform positive in Auburn's distribution system or in one of Auburn's wholesale customers systems (and the sample is not invalidated under WAC 246-290-320 (d)), triggered source water monitoring is required within 24 hours of said notification. **Triggered source water monitoring requires collecting one sample at each groundwater source that was in use at the time the total coliform positive sample was collected.** The source samples are to be collected prior to treatment (i.e. raw water samples), and are to be analyzed for E. coli.

F. Routine Sample Rotation Schedule

Week	Routine Site(s)
1	C-1 through C-18 and C-36 through C-42
2	C-19 through C-35 and C-54 through C-61
3	C-36 through C-53 and C-1 through C-7
4	C-54 through C-70 and C-19 through C26

G. Routine Sample Locations - Month Following Unsatisfactory Samples

Location/Address for **Routine Sample Site(s) Unsatisfactory the Previous Month**	**Location/Address for the five** **Routine Sample Sites**
The month after a coliform positive sample, one hundred (100) routine samples will be submitted in accordance with Section A of this plan.	

H. *E. coli*-present response plans

Distribution System *E. coli* Response Checklist					
Background Information	**Yes**	**No**	**N/A**	**To Do List**	**To Do**
We inform staff members about activities within the distribution system that could affect water quality.	☒	☐	☐	☐	
We document all water main breaks, construction & repair activities, and low pressure and outage	☒	☐	☐	☐	

Distribution System *E. coli* Response Checklist					
incidents.					
We can easily access and review documentation on water main breaks, construction & repair activities, low pressure and outage incidents.	☒	☐	☐	☐	
Our Cross-Connection Control Program is up-to-date.	☒	☐	☐	☐	
We test all cross-connection control devices annually as required, with easy access to the proper documentation.	☒	☐	☐	☐	
We routinely inspect all treatment facilities for proper operation.	☒	☐	☐	☐	
We have procedures in place for disinfecting and flushing the water system if it becomes necessary.	☒	☐	☐	☐	
We can activate an emergency intertie with an adjacent water system in an emergency.	☒	☐	☐	☐	
We have a map of our service area boundaries.	☒	☐	☐	☐	
We have consumers who may not have access to bottled or boiled water.	☐	☒	☐	☐	
There is a sufficient supply of bottled water immediately available to our customers who are unable to boil their water.	☒	☐	☐	☐	
We have identified the contact person at each day care, school, medical facility, food service, and other customers who may have difficulty responding to a Health Advisory.	☐	☒	☐	☐	
We have messages prepared and translated into different languages to ensure our consumers will understand them.	☐	☒	☐	☒	Update
We have the capacity to print and distribute the required number of notices in a short time period.	☒	☐	☐	☐	
Policy Direction	**Yes**	**No**	**N/A**	**To Do List**	
We have discussed the issue of *E. coli*-present sample results with our policy makers.	☒	☐	☐	☒	Inform new members
If we find *E. coli* in a routine distribution sample, the policy makers want to wait until repeat test results are available before issuing advice to water system customers.	☒	☐	☐	☐	

Potential Public Notice Delivery Methods	**Yes**	**No**	**N/A**	**To Do List**	

It is feasible to deliver a notice going door-to-door.	☐	☒	☐	☐	
We have a list of all of our customers' addresses.	☒	☐	☐	☐	
We have a list of customer telephone numbers or access to a Reverse 9-1-1 system.	☒	☐	☐	☐	
We have a list of customer email addresses.	☒	☐	☐	☐	
We encourage our customers to remain in contact with us using social media.	☒	☐	☐	☐	
We have an active website we can quickly update to include important messages.	☒	☐	☐	☐	
Our customers drive by a single location where we could post an advisory and expect everyone to see it.	☐	☒	☐	☐	
We need a news release to supplement our public notification process.	☒	☐	☐	☐	

E. coli-Present Triggered Source Sample Response Checklist – All Sources

Background Information	**Yes**	**No**	**N/A**	**To Do List**	**To Do**
We review our sanitary survey results and respond to any recommendations affecting the microbial quality of our water supply.	☒	☐	☐	☐	
We address any significant deficiencies identified during a sanitary survey.	☒	☐	☐	☐	
There are contaminant sources within our Wellhead Protection Area that could affect the microbial quality of our source water, and If yes, we can eliminate them.	☐ ☐	☒ ☐	☐ ☒	☐ ☐	
We routinely inspect our well site(s).	☒	☐	☐	☐	
We have a good raw water sample tap installed at each source.	☒	☐	☐	☐	
After we complete work on a source, we disinfect the source, flush, and collect an investigative sample.	☒	☐	☐	☐	

Public Notice	**Yes**	**No**	**N/A**	**To Do List**	
We discussed the requirement for immediate public notice of an *E. coli*-present source sample result with our water system's governing body (board of directors or commissioners) and received direction from them on our response plan.	☒	☐	☐	☐	

We discussed the requirement for immediate public notice of an *E. coli*-present source sample result with our wholesale customers and encouraged them to develop a response plan.	☒	☐	☐	☒	Update
We have prepared templates and a communications plan that will help us quickly distribute our messages.	☒	☐	☐	☒	Update

E. coli-Present Triggered Source Sample Response Checklist–Source S01 Coal Creek Springs

Alternate Sources	**Yes**	**No**	**N/A**	**To Do List**	**To Do**
We can stop using this source and still provide reliable water service to our customers.	☐	☒	☐	☐	
We have an emergency intertie with a neighboring water system that we can use until corrective action is complete (perhaps for several months).	☒ for Valley	☒ for Academy	☐	☐	
We can provide bottled water to all or part of the distribution system for an indefinite period.	☒	☐	☐	☐	
We can quickly replace our existing source of supply with a more protected new source.	☐	☒	☐	☐	
Temporary Treatment	**Yes**	**No**	**N/A**	**To Do List**	
This source is continuously chlorinated, and our existing facilities can provide 4-log virus treatment (CT = 6) before the first customer. If yes, at what concentration? _0.8____ mg/L	☒	☐	☐	☐	
We can quickly introduce chlorine into the water system and take advantage of the existing contact time to provide 4-log virus treatment to a large portion of the distribution system.	☒	☐	☐	☐	
We can reduce the production capacity of our pumps or alter the configuration of our storage quantities (operational storage) to increase the amount of time the water stays in the system before the first customer to achieve CT = 6.	☐	☒	☐	☐	
We can alter the demand for drinking water (maximum day or peak hour) through conservation messages to increase the time the water is in the system prior to the first customer in order to achieve 4-log virus treatment with chlorine.	☐	☒	☐	☐	

***E. coli*-Present Triggered Source Sample Response Checklist–Source S02 West Hill Springs**					
Alternate Sources	**Yes**	**No**	**N/A**	**To Do List**	**To Do**
We can stop using this source and still provide reliable water service to our customers.	☒	☐	☐	☐	
We have an emergency intertie with a neighboring water system that we can use until corrective action is complete (perhaps for several months).	☒	☐	☐	☐	
We can provide bottled water to all or part of the distribution system for an indefinite period.	☒	☐	☐	☐	
We can quickly replace our existing source of supply with a more protected new source.	☐	☒	☐	☐	
Temporary Treatment	**Yes**	**No**	**N/A**	**To Do List**	
This source is continuously chlorinated, and our existing facilities can provide 4-log virus treatment (CT = 6) before the first customer. If yes, at what concentration? _0.8____ mg/L	☒	☐	☐	☒	
We can quickly introduce chlorine into the water system and take advantage of the existing contact time to provide 4-log virus treatment to a large portion of the distribution system.	☐	☐	☐	☒	Confirm equipment and steps required
We can reduce the production capacity of our pumps or alter the configuration of our storage quantities (operational storage) to increase the amount of time the water stays in the system before the first customer to achieve CT = 6.	☐	☒	☐	☐	
We can alter the demand for drinking water (maximum day or peak hour) through conservation messages to increase the time the water is in the system prior to the first customer in order to achieve 4-log virus treatment with chlorine.	☐	☒	☐	☐	

***E. coli*-Present Triggered Source Sample Response Checklist–Source S03 Well No. 1**					
Alternate Sources	**Yes**	**No**	**N/A**	**To Do List**	**To Do**
We can stop using this source and still provide reliable water service to our customers.	☒	☐	☐	☐	

We have an emergency intertie with a neighboring water system that we can use until corrective action is complete (perhaps for several months).	☒	☐	☐	☐	
We can provide bottled water to all or part of the distribution system for an indefinite period.	☒	☐	☐	☐	
We can quickly replace our existing source of supply with a more protected new source.	☐	☒	☐	☐	
Temporary Treatment	**Yes**	**No**	**N/A**	**To Do List**	**To Do**
This source is continuously chlorinated, and our existing facilities can provide 4-log virus treatment (CT = 6) before the first customer. If yes, at what concentration? _0.8____ mg/L	☒	☐	☐	☒	
We can quickly introduce chlorine into the water system and take advantage of the existing contact time to provide 4-log virus treatment to a large portion of the distribution system.	☐	☐	☐	☒	Confirm equipment and steps required
We can reduce the production capacity of our pumps or alter the configuration of our storage quantities (operational storage) to increase the amount of time the water stays in the system before the first customer to achieve CT = 6.	☐	☒	☐	☐	
We can alter the demand for drinking water (maximum day or peak hour) through conservation messages to increase the time the water is in the system prior to the first customer in order to achieve 4-log virus treatment with chlorine.	☐	☒	☐	☐	

E. coli-Present Triggered Source Sample Response Checklist–Source S04 Well No. 2

Alternate Sources	**Yes**	**No**	**N/A**	**To Do List**	**To Do**
We can stop using this source and still provide reliable water service to our customers.	☒	☐	☐	☐	
We have an emergency intertie with a neighboring water system that we can use until corrective action is complete (perhaps for several months).	☒	☐	☐	☐	
We can provide bottled water to all or part of the distribution system for an indefinite period.	☒	☐	☐	☐	

We can quickly replace our existing source of supply with a more protected new source.	☐	☒	☐	☐	
Temporary Treatment	**Yes**	**No**	**N/A**	**To Do List**	**To Do**
This source is continuously chlorinated, and our existing facilities can provide 4-log virus treatment (CT = 6) before the first customer. If yes, at what concentration? _0.9____ mg/L	☒	☐	☐	☒	
We can quickly introduce chlorine into the water system and take advantage of the existing contact time to provide 4-log virus treatment to a large portion of the distribution system.	☐	☐	☐	☒	Confirm equipment and steps required
We can reduce the production capacity of our pumps or alter the configuration of our storage quantities (operational storage) to increase the amount of time the water stays in the system before the first customer to achieve CT = 6.	☐	☒	☐	☐	
We can alter the demand for drinking water (maximum day or peak hour) through conservation messages to increase the time the water is in the system prior to the first customer in order to achieve 4-log virus treatment with chlorine.	☐	☒	☐	☐	

E. coli-Present Triggered Source Sample Response Checklist–Source S05 Well No. 3A (Not Operated)

Alternate Sources	**Yes**	**No**	**N/A**	**To Do List**	**To Do**
We can stop using this source and still provide reliable water service to our customers.	☐	☐	☒	☐	
We have an emergency intertie with a neighboring water system that we can use until corrective action is complete (perhaps for several months).	☐	☐	☒	☐	
We can provide bottled water to all or part of the distribution system for an indefinite period.	☐	☐	☒	☐	
We can quickly replace our existing source of supply with a more protected new source.	☐	☐	☒	☐	
Temporary Treatment	**Yes**	**No**	**N/A**	**To Do List**	**To Do**
This source is continuously chlorinated, and our existing facilities can provide 4-log virus	☐	☐	☒	☐	

treatment (CT = 6) before the first customer. If yes, at what concentration? _____ mg/L					
We can quickly introduce chlorine into the water system and take advantage of the existing contact time to provide 4-log virus treatment to a large portion of the distribution system.	☐	☐	☒	☐	
We can reduce the production capacity of our pumps or alter the configuration of our storage quantities (operational storage) to increase the amount of time the water stays in the system before the first customer to achieve CT = 6.	☐	☐	☒	☐	
We can alter the demand for drinking water (maximum day or peak hour) through conservation messages to increase the time the water is in the system prior to the first customer in order to achieve 4-log virus treatment with chlorine.	☐	☐	☒	☐	

E. coli-Present Triggered Source Sample Response Checklist–Source S06 Well No. 5

Alternate Sources	**Yes**	**No**	**N/A**	**To Do List**	**To Do**
We can stop using this source and still provide reliable water service to our customers.	☒	☐	☐	☐	
We have an emergency intertie with a neighboring water system that we can use until corrective action is complete (perhaps for several months).	☒	☐	☐	☐	
We can provide bottled water to all or part of the distribution system for an indefinite period.	☒	☐	☐	☐	
We can quickly replace our existing source of supply with a more protected new source.	☐	☒	☐	☐	
Temporary Treatment	**Yes**	**No**	**N/A**	**To Do List**	**To Do**
This source is continuously chlorinated, and our existing facilities can provide 4-log virus treatment (CT = 6) before the first customer. If yes, at what concentration? _____ mg/L	☐	☒	☐	☒	Add permanent chlorination
We can quickly introduce chlorine into the water system and take advantage of the existing contact time to provide 4-log virus treatment to a large portion of the distribution system.	☐	☐	☐	☒	Confirm equipment and steps required
We can reduce the production capacity of our	☐	☒	☐	☐	

pumps or alter the configuration of our storage quantities (operational storage) to increase the amount of time the water stays in the system before the first customer to achieve CT = 6.					
We can alter the demand for drinking water (maximum day or peak hour) through conservation messages to increase the time the water is in the system prior to the first customer in order to achieve 4-log virus treatment with chlorine.	☐	☒	☐	☐	

***E. coli*-Present Triggered Source Sample Response Checklist–Source S07 Well No. 4**					
Alternate Sources	**Yes**	**No**	**N/A**	**To Do List**	**To Do**
We can stop using this source and still provide reliable water service to our customers.	☒	☐	☐	☐	
We have an emergency intertie with a neighboring water system that we can use until corrective action is complete (perhaps for several months).	☒ for Valley	☒ for Academy	☐	☐	
We can provide bottled water to all or part of the distribution system for an indefinite period.	☒	☐	☐	☐	
We can quickly replace our existing source of supply with a more protected new source.	☐	☒	☐	☐	
Temporary Treatment	**Yes**	**No**	**N/A**	**To Do List**	**To Do**
This source is continuously chlorinated, and our existing facilities can provide 4-log virus treatment (CT = 6) before the first customer. If yes, at what concentration? _0.7____ mg/L	☒	☐	☐	☒	
We can quickly introduce chlorine into the water system and take advantage of the existing contact time to provide 4-log virus treatment to a large portion of the distribution system.	☐	☐	☐	☒	Confirm equipment and steps required
We can reduce the production capacity of our pumps or alter the configuration of our storage quantities (operational storage) to increase the amount of time the water stays in the system before the first customer to achieve CT = 6.	☐	☒	☐	☐	
We can alter the demand for drinking water (maximum day or peak hour) through conservation messages to increase the time the water is in the system prior to the first customer in order to achieve 4-log virus	☐	☒	☐	☐	

treatment with chlorine.					

***E. coli*-Present Triggered Source Sample Response Checklist–Source S08 Well No. 3B (Not Operated)**					
Alternate Sources	**Yes**	**No**	**N/A**	**To Do List**	**To Do**
We can stop using this source and still provide reliable water service to our customers.	☐	☐	☒	☐	
We have an emergency intertie with a neighboring water system that we can use until corrective action is complete (perhaps for several months).	☐	☐	☒	☐	
We can provide bottled water to all or part of the distribution system for an indefinite period.	☐	☐	☒	☐	
We can quickly replace our existing source of supply with a more protected new source.	☐	☐	☒	☐	
Temporary Treatment	**Yes**	**No**	**N/A**	**To Do List**	**To Do**
This source is continuously chlorinated, and our existing facilities can provide 4-log virus treatment (CT = 6) before the first customer. If yes, at what concentration? _____ mg/L	☐	☐	☒	☐	
We can quickly introduce chlorine into the water system and take advantage of the existing contact time to provide 4-log virus treatment to a large portion of the distribution system.	☐	☐	☒	☐	
We can reduce the production capacity of our pumps or alter the configuration of our storage quantities (operational storage) to increase the amount of time the water stays in the system before the first customer to achieve CT = 6.	☐	☐	☒	☐	
We can alter the demand for drinking water (maximum day or peak hour) through conservation messages to increase the time the water is in the system prior to the first customer in order to achieve 4-log virus treatment with chlorine.	☐	☐	☒	☐	

***E. coli*-Present Triggered Source Sample Response Checklist–Source S10 Well No. 5A**					
Alternate Sources	**Yes**	**No**	**N/A**	**To Do List**	**To Do**
We can stop using this source and still provide reliable water service to our customers.	☒	☐	☐	☐	
We have an emergency intertie with a neighboring water system that we can use until corrective action is complete (perhaps for several months).	☒	☐	☐	☐	
We can provide bottled water to all or part of the distribution system for an indefinite period.	☒	☐	☐	☐	
We can quickly replace our existing source of supply with a more protected new source.	☐	☒	☐	☐	
Temporary Treatment	**Yes**	**No**	**N/A**	**To Do List**	**To Do**
This source is continuously chlorinated, and our existing facilities can provide 4-log virus treatment (CT = 6) before the first customer. If yes, at what concentration? _0.7____ mg/L	☒	☐	☐	☒	
We can quickly introduce chlorine into the water system and take advantage of the existing contact time to provide 4-log virus treatment to a large portion of the distribution system.	☐	☐	☐	☒	Confirm equipment and steps required
We can reduce the production capacity of our pumps or alter the configuration of our storage quantities (operational storage) to increase the amount of time the water stays in the system before the first customer to achieve CT = 6.	☐	☒	☐	☐	
We can alter the demand for drinking water (maximum day or peak hour) through conservation messages to increase the time the water is in the system prior to the first customer in order to achieve 4-log virus treatment with chlorine.	☐	☒	☐	☐	

***E. coli*-Present Triggered Source Sample Response Checklist–Source S11 Well No. 7**					
Alternate Sources	**Yes**	**No**	**N/A**	**To Do List**	**To Do**
We can stop using this source and still provide reliable water service to our customers.	☒	☐	☐	☐	
We have an emergency intertie with a neighboring water system that we can use until corrective action is complete (perhaps for	☒	☐	☐	☐	

several months).					
We can provide bottled water to all or part of the distribution system for an indefinite period.	☒	☐	☐	☐	
We can quickly replace our existing source of supply with a more protected new source.	☐	☒	☐	☐	
Temporary Treatment	**Yes**	**No**	**N/A**	**To Do List**	**To Do**
This source is continuously chlorinated, and our existing facilities can provide 4-log virus treatment (CT = 6) before the first customer. If yes, at what concentration? _0.9____ mg/L	☒	☐	☐	☒	
We can quickly introduce chlorine into the water system and take advantage of the existing contact time to provide 4-log virus treatment to a large portion of the distribution system.	☐	☐	☐	☒	Confirm equipment and steps required
We can reduce the production capacity of our pumps or alter the configuration of our storage quantities (operational storage) to increase the amount of time the water stays in the system before the first customer to achieve CT = 6.	☐	☒	☐	☐	
We can alter the demand for drinking water (maximum day or peak hour) through conservation messages to increase the time the water is in the system prior to the first customer in order to achieve 4-log virus treatment with chlorine.	☐	☒	☐	☐	

E. coli-Present Triggered Source Sample Response Checklist–Source S012 Well No. 6

Alternate Sources	**Yes**	**No**	**N/A**	**To Do List**	**To Do**
We can stop using this source and still provide reliable water service to our customers.	☒	☐	☐	☐	
We have an emergency intertie with a neighboring water system that we can use until corrective action is complete (perhaps for several months).	☒	☐	☐	☐	
We can provide bottled water to all or part of the distribution system for an indefinite period.	☒	☐	☐	☐	
We can quickly replace our existing source of supply with a more protected new source.	☐	☒	☐	☐	
Temporary Treatment	**Yes**	**No**	**N/A**	**To Do List**	**To Do**
This source is continuously chlorinated, and our existing facilities can provide 4-log virus	☒	☐	☐	☒	

treatment (CT = 6) before the first customer. If yes, at what concentration? _0.9____ mg/L					
We can quickly introduce chlorine into the water system and take advantage of the existing contact time to provide 4-log virus treatment to a large portion of the distribution system.	☐	☐	☐	☒	Confirm equipment and steps required
We can reduce the production capacity of our pumps or alter the configuration of our storage quantities (operational storage) to increase the amount of time the water stays in the system before the first customer to achieve CT = 6.	☐	☒	☐	☐	
We can alter the demand for drinking water (maximum day or peak hour) through conservation messages to increase the time the water is in the system prior to the first customer in order to achieve 4-log virus treatment with chlorine.	☐	☒	☐	☐	

E. coli-Present Triggered Source Sample Response Checklist–Source S013 Well No. 5B (Seasonal)

Alternate Sources	**Yes**	**No**	**N/A**	**To Do List**	**To Do**
We can stop using this source and still provide reliable water service to our customers.	☐	☐	☒	☐	
We have an emergency intertie with a neighboring water system that we can use until corrective action is complete (perhaps for several months).	☐	☐	☒	☐	
We can provide bottled water to all or part of the distribution system for an indefinite period.	☐	☐	☒	☐	
We can quickly replace our existing source of supply with a more protected new source.	☐	☐	☒	☐	
Temporary Treatment	**Yes**	**No**	**N/A**	**To Do List**	**To Do**
This source is continuously chlorinated, and our existing facilities can provide 4-log virus treatment (CT = 6) before the first customer. If yes, at what concentration? _____ mg/L	☐	☐	☒	☐	
We can quickly introduce chlorine into the water system and take advantage of the existing contact time to provide 4-log virus treatment to a large portion of the distribution system.	☐	☐	☒	☐	
We can reduce the production capacity of our pumps or alter the configuration of our storage quantities (operational storage) to increase the	☐	☐	☒	☐	

amount of time the water stays in the system before the first customer to achieve CT = 6.					
We can alter the demand for drinking water (maximum day or peak hour) through conservation messages to increase the time the water is in the system prior to the first customer in order to achieve 4-log virus treatment with chlorine.	☐	☐	☒	☐	

Distribution System *E. coli* Response Plan

If we have E. coli in our distribution system we will immediately:

1. Call DOH.
2. Collect repeat and triggered source samples per Part D. Collect additional investigative samples as necessary.
3. Inspect our water system facilities, including wholesale interties, for proper operation.
4. Interview staff to determine whether anything unusual was happening in the water system service area, especially since the previous month's sample(s).
5. Review new construction activities, water main breaks, and pressure outages that may have occurred during the previous month.
6. Review Cross-Connection Control Program status.
7. Discuss with DOH whether to issue a Health Advisory based on the findings of steps 3-6.

E. coli–Present Triggered Source Sample Response Plan – Source S01 Coal Creek Springs

If we have E. coli in Source S01 Coal Creek Springs water we will immediately:

1. Call DOH.
2. Distribute required notice, including to City of Algona and KC WD#111.
3. Interview staff. Inspect spring facilities for signs of contamination source.
4. Ask DOH to review our Contact Time analysis and acknowledge that we provide 4-log virus treatment before the first customer.

E. coli–Present Triggered Source Sample Response Plan – Source S02 West Hill Springs

If we have E. coli in Source S02 West Hill Springs water we will immediately:

1. Shutdown S02 West Hill Springs
2. Call DOH.
3. Distribute required notice, including to City of Algona and KC WD#111.
4. Interview staff. Inspect spring facility and transmission main for signs of contamination source.
5. In concert with DOH, begin work on corrective action plan to provide 4-log virus treatment before the first customer.

E. coli–Present Triggered Source Sample Response Plan – Source S03 Well No. 1

If we have E. coli in Source S03 Well No. 1 water we will immediately:

1. Shutdown S03 Well No. 1
2. Call DOH.
3. Distribute required notice, including to City of Algona and KC WD#111.
4. Interview staff. Inspect well facility for signs of contamination source.
5. In concert with DOH, begin work on corrective action plan to provide 4-log virus treatment before the first customer.

E. coli–Present Triggered Source Sample Response Plan – Source S04 Well No. 2

If we have E. coli in Source S04 Well No. 2 water we will immediately:

1. Shutdown S04 Well No. 2
2. Call DOH.
3. Distribute required notice, including to City of Algona and KC WD#111.
4. Interview staff. Inspect well facility, including Well 6, for signs of contamination source.
5. In concert with DOH, begin work on corrective action plan to provide 4-log virus treatment before the first customer.

E. coli–Present Triggered Source Sample Response Plan – Source S05 Well No. 3A

If we have E. coli in Source S05 Well No. 3A water we will immediately:

1. Shutdown S05 Well No. 3A
2. Call DOH.
3. Distribute required notice, including to City of Algona and KC WD#111.
4. Interview staff. Inspect well facility for signs of contamination source.
5. Keep contaminated well off-line until 4-log virus treatment is designed, approved, and installed.

E. coli–Present Triggered Source Sample Response Plan – Source S06 Well No. 5

If we have E. coli in Source S06 Well No. 5 water we will immediately:

1. Shutdown Source S06 Well No. 5.
2. Call DOH.
3. Distribute required notice.
4. Interview staff. Inspect well facility for signs of contamination source.
5. In concert with DOH, begin work on corrective action plan to provide 4-log virus treatment before the first customer.

E. coli–Present Triggered Source Sample Response Plan – Source S07 Well No. 4

If we have E. coli in Source S07 Well No. 4 water we will immediately:

1. Shutdown S07 Well No. 4
2. Call DOH.
3. Distribute required notice, including to City of Algona and KC WD#111.
4. Interview staff. Inspect well facility for signs of contamination source.
5. In concert with DOH, begin work on corrective action plan to provide 4-log virus treatment before the first customer.

E. coli–Present Triggered Source Sample Response Plan – Source S08 Well No. 3B

If we have E. coli in Source S08 Well No. 3B water we will immediately:

1. Shutdown S08 Well No. 3B
2. Call DOH.
3. Distribute required notice, including to City of Algona and KC WD#111.
4. Interview staff. Inspect well facility for signs of contamination source.
5. Keep contaminated well off-line until 4-log virus treatment is designed, approved, and installed.

E. coli–Present Triggered Source Sample Response Plan – Source S10 Well No. 5A

If we have E. coli in Source S10 Well No. 5A water we will immediately:

1. Shutdown S10 Well No. 5A
2. Call DOH.
3. Distribute required notice.
4. Interview staff. Inspect well facility for signs of contamination source.
5. In concert with DOH, begin work on corrective action plan to provide 4-log virus treatment.

E. coli–Present Triggered Source Sample Response Plan – Source S11 Well No. 7

If we have E. coli in Source S11 Well No. 7 water we will immediately:

1. Shutdown Source S07 Well No. 7.
2. Call DOH.
3. Distribute required notice, including to City of Algona and KC WD#111.
4. Interview staff. Inspect well facility for signs of contamination source.
5. Keep contaminated well off-line until 4-log virus treatment is designed, approved, and installed.

E. coli–Present Triggered Source Sample Response Plan – Source S12 Well No. 6

If we have E. coli in Source S12 Well No. 6 water we will immediately:

1. Shutdown S12 Well No. 6
2. Call DOH.
3. Distribute required notice, including to City of Algona and KC WD#111.
4. Interview staff. Inspect well facility, including Well 2, for signs of contamination source.
5. In concert with DOH, begin work on corrective action plan to provide 4-log virus treatment.

E. coli–Present Triggered Source Sample Response Plan – Source S13 Well No. 5B

If we have E. coli in Source S13 Well No. 5B water we will immediately:

1. Shutdown S13 Well No. 5B
2. Call DOH.
3. Distribute required notice.
4. Interview staff. Inspect well facility for signs of contamination source.
5. Keep contaminated well off-line until 4-log virus treatment is designed, approved, and installed.

E. coli–Present Triggered Source Sample Response Plan – Howard Road CCF (TW-S01-CCS)

If we have E. coli in Howard Road CCF (TW-S01-CCS) water we will immediately:

1. Call DOH.
2. Distribute required notice, including to City of Algona and KC WD#111.
3. Interview staff. Inspect Howard Road CCF and Coal Creek Springs.
4. If contamination is from Howard Road CCF, begin work on corrective action plan.
5. If contamination is from Coal Creek Springs, then keep the contaminated source off-line until 4-log virus treatment is designed, approved, and installed.

E. coli–Present Triggered Source Sample Response Plan – Fulmer CCF (TW-S14-WF)

If we have E. coli in Fulmer CCF (TW-S14-WF) water we will immediately:

1. Shutdown S04 Well No. 2, SO11 Well No. 6, and SO12 Well No. 7.
2. Call DOH.
3. Distribute required notice, including to City of Algona and KC WD#111.
4. Interview staff. Inspect Fulmer CCF, Well No.2, Well No. 6, and Well No. 7 for signs of contamination source.
5. If contamination is from Fulmer CCF, begin work on corrective action plan.
6. If contamination is from a well, then keep the contaminated well off-line until 4-log virus treatment is designed, approved, and installed. In concert with DOH, determine if contamination source can be isolated and allow non-contaminated wells to be brought on-line.

I. System Map

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water
DOH 331-464
December 2011

Stage 2 DBP Monitoring Plan - Groundwater (Reduced Monitoring)

System Name	City of Auburn
PWSID#	03350V
Date	3/6/2018
Completed by	Chris Thorn
Population	55000

Initial Stage 2 Sampling Period First sampling period following **March 7, 2018**

Number of Samples Required 2 Dual Sample Sets per Year

Samples must be a dual sample set: one at the location and during the quarter with the highest TTHM single measurement and one at the location and during the quarter with the highest HAA5 single measurement.

	Stage 2 Compliance Monitoring Site ID	Projected Sampling Date
Highest TTHM Site	3705 West Valley Hwy N (C-7)	August
Highest HAA5 Site	3615 Orchard St SE (C-10)	August
Backup High TTHM	710 47th St SE (C-46)	
Backup High HAA5	5208 Nathan Loop SE (C-19)	

If any annual or triennial sample exceeds the MCL (0.080 ug/l for TTHM or 0.060 ug/l for HAA5) you must begin quarterly monitoring for both TTHM and HAA5 for at least four consecutive quarters to determine if you exceed the MCL.

To remain on reduced monitoring:

The TTHM LRAA must be less than or equal to 0.060 mg/l AND the HAA LRAA must be less than or equal to 0.045 mg/l at each monitoring location.

What happens if you exceed any of the above levels?

You must return to routine monitoring.

Determining Compliance

Our system is required to monitor annually (triennially). For compliance, we will determine that each sample taken is less than the MCL. If any sample exceeds the MCL, we must increase monitoring to dual sample sets once per quarter (taken every 90 days) at all locations. If the locational running annual average (LRAA) exceeds the MCL for either TTHM (0.080 mg/l) or HAA5 (0.060 mg/l), an MCL violation will have occurred. The LRAA is calculated based on four consecutive quarters of monitoring. Compliance will then be achieved if the TTHM and the HAA5 LRAA at each monitoring location for the four most recent quarters is less than or equal to 0.080 mg/l for TTHM and less than or equal to 0.060 mg/l for HAA5.

Disinfectant Monitoring for TTHM and HAA5

Chlorine residuals must be measured at the same time and place as routine or repeat coliform samples
MRDL for chlorine and chloramines = 4.0 mg/l as Cl_2

Determining Compliance for disinfectant residuals

Compliance is based on the running annual average (RAA) of 12 consecutive months
Daily residual measurements will / will not be included in the compliance calculations (circle one)

Attach a distribution map with sample locations

Comments

You will need to print a hard copy for your records and make it available upon request. You do not need to submit a copy to DOH.

If you need this publication in an alternate format, call (800) 525-0127. For TTY/TDD call (800) 833-6388.

Washington State Department of Health
Division of Environmental Health
Office of Drinking Water
DOH 331-464
Updated July 2012

Stage 2 DBP Monitoring Plan - Groundwater (Routine Monitoring)

System Name	Braunwood Estates
PWSID#	03336E
Date	7/30/2013
Completed by	Chris Thorn
Population	30

Initial Stage 2 Sampling Period First sampling period following **October 1, 2013**

Number of Samples Required 2 Samples per Year (1 TTHM and 1 HAA5)

You are required to take individual TTHM and HAA5 samples (instead of a dual sample set at the locations with the highest TTHM and HAA5 concentrations, respectively. If the highest TTHM and HAA5 concentrations occur at the same location (and month, if monitored annually) only one location with a dual sample set per monitoring period is needed.

	Stage 2 Compliance Monitoring Site ID	Projected Sampling Date
Highest TTHM Site	4431 47th St SE (A-8)	August
Highest HAA5 Site	4431 47th St SE (A-8)	August

If any annual sample exceeds the MCL (0.080 ug/l for TTHM or 0.060 ug/l for HAA5) you must begin quarterly monitoring for both TTHM and HAA5 for at least four consecutive quarters to determine if you exceed the MCL.

Determining Compliance for TTHM and HAA5

Our system is required to monitor annually. For compliance, we will determine that each sample taken is less than the MCL. If any sample exceeds the MCL, we must increase monitoring to dual sample sets once per quarter (taken every 90 days) at all locations. If the locational running annual average (LRAA) exceeds the MCL for either TTHM (0.080 mg/l) or HAA5 (0.060 mg/l), an MCL violation will have occurred. The LRAA is calculated based on four consecutive quarters of monitoring. Compliance will then be achieved if the TTHM and the HAA5 LRAA at each monitoring location for the four most recent quarters is less than or equal to 0.080 mg/l for TTHM and less than or equal to 0.060 mg/l for HAA5.

Disinfectant Monitoring

Chlorine residuals must be measured at the same time and place as routine or repeat coliform samples
MRDL for chlorine and chloramines = 4.0 mg/l as Cl_2

Determining Compliance for disinfectant residuals

Compliance is based on the running annual average (RAA) of 12 consecutive months
Daily residual measurements will / will not be included in the compliance calculations (circle one)

Attach a distribution map with sample locations

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ENGINEERING DESIGN STANDARDS

City of Auburn
Engineering Services
Public Works Department
25 West Main Street
Auburn, WA 98001-4998

Approved By:

Jacob Sweeting, P.E. — 2/15/2024

Jacob Sweeting, P.E.
Assistant Director of Engineering Services/City Engineer

Date

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ENGINEERING DESIGN STANDARDS

TABLE OF CONTENTS

Chapter 1: General Information 13
1.00 Preface 13
1.01 Definitions 13
1.02 Contact Information 19
1.03 City Reference Material 19
1.03.01 City of Auburn Surface Water Management Manual (SWMM) 20
1.03.02 City of Auburn Engineering Construction Standards (ECS) 20
1.03.03 Planning Documents 20
1.03.04 Informational Handouts 20
1.03.05 Additional Technical Information 20
1.03.06 Other Reference Material 21
1.04 Deviation from Standards 21
1.04.01 General Deviations 22
1.04.02 Surface Water Management Manual (SWMM) Deviations 22
1.04.03 Appeal of City Engineer's Decision 22
1.04.04 Changes to Standards 23
Chapter 2: Plan Approval Process 25
2.00 Preface 25
2.01 Types of Plans 25
2.01.01 Grading (GRA) Plans 25
2.01.02 Building Site Plans 25
2.01.03 Public Facility Extension (FAC) Plans and Agreement 25
2.01.04 Other Plans 25
2.02 Review and Approval Process 25
2.02.01 Submittals 26
2.02.02 City Review 27
2.02.03 Plan Approval 27
2.02.04 Construction Plan Revision 28
2.02.05 Project Close Out 28

Chapter 3: Plan Preparation Requirements 31
3.00 Preface 31
3.01 General Requirements 31
3.02 Plan Format 31
3.03 General Plan Requirements 32
3.03.01 Standard Plan Format 32
3.03.02 Drafting Standards 33
3.04 Plan Sheet Elements 33
3.04.01 Cover Sheet 33
3.04.02 Temporary Erosion and Sediment Control (TESC) Plan Sheet 35
3.04.03 Grading and Private Storm Drainage Plan Sheet 35
3.04.04 Cross-Section Sheet 37
3.04.05 Detail Sheet 37
3.04.06 Utility Plan Sheets 37
3.04.06.A Water 38
3.04.06.B Sanitary Sewer 38
3.04.06.C Storm Drainage 39
3.04.07 Utility Profile Sheet 40
3.04.07.A Storm Drainage 40
3.04.07.B Water 41
3.04.07.C Sanitary Sewer 41
3.04.08 Public Street Plan and Profile Sheet 41
3.04.08.A Plan View 41
3.04.08.B Profile 42
3.04.08.C Intersections 43
3.04.08.D Typical Roadway Sections 43
3.04.08.E Striping and Signing 44
3.04.08.F Signalization 44
3.04.08.G Illumination 46
3.04.08.H Streetscape 47
3.04.08.I Other Features 48
3.04.09 Site and Landscape Plan Sheet 48

3.04.10 Site Irrigation Plan sheet 49
3.04.11 Critical Area Restoration/Mitigation 49
3.04.12 Phasing Plans 49
Appendix A – Approval Blocks 51
Appendix B – Standard Notes 52
Appendix C – Deviations, Maximum Extents Feasible, and Deferral/Fee-In-Lieu 57
Appendix D – Survey Standards 59
Appendix D – Survey Standards (continued) 60
Appendix E – Minor Grading Permit Criteria 61
Appendix F – AutoCAD Layers Standards 62
Appendix F – AutoCAD Layers Standards (continued) 63
Chapter 4: Report Preparation Requirements 65
4.00 Preface 65
4.01 General Requirements 65
4.02 Report Types and Requirements 65
4.02.01 Geotechnical Reports 65
4.02.02 Stormwater Site Plan Report 66
4.02.03 Critical Area Report 66
4.02.04 Traffic Impact Analysis 67
4.02.05 Construction Stormwater Pollution Prevention Plan (SWPPP) 67
4.02.06 Other Reports 67
Chapter 5 TESC, Clearing and Grading 69
5.00 Preface 69
5.01 Temporary Erosion and Sediment Control (TESC) 69
5.02 Grading 69
5.03 Cut and Fill 70
5.04 Retaining Walls 70
5.04.01 Underdrains 71
5.04.02 Rock Walls 71
5.04.03 Block Retaining Walls 71
5.04.04 Reinforced Concrete Walls 72
5.04.05 Mechanically Stabilized Earth Walls (MSE Walls) 72

5.05 Construction Sequence 72
Chapter 6: Placement and Easement Requirements for City Facilities 75
6.00 Preface 75
6.01 Easements 75
6.01.01 Easement Width 75
6.01.02 Easement Form 76
6.01.03 Location of Facilities within Easement 76
6.02 Utility Pipe Separation 76
6.02.01 Potable and Non-Potable Separation Requirements 76
6.02.02 General Separation Requirements 77
6.03 Utility Access Roads 78
Chapter 7: Water Facilities 79
7.00 Preface 79
7.01 Water Mains and Appurtenances 79
7.01.01 Materials 79
7.01.02 Water Main Sizing and Main Extensions 79
7.01.03 Water Main Upsizing 80
7.01.04 Water Main Velocities 81
7.01.05 Water Main Pressure 81
7.01.06 Water Main Location 81
7.01.07 Water Main Appurtenances and Fittings 81
7.02 Water Services 82
7.02.01 Domestic Services 82
7.02.02 Other Services 83
7.02.03 Service Abandonment 84
7.03 Water Valves 84
7.04 Cross Connection Control 84
7.04.01 Domestic Services 85
7.04.02 Irrigation Services 85
7.04.03 Fire Line Connections 85
7.04.04 General 85
7.05 Fire Systems 86

7.05.01 Fire Hydrant Assemblies 86
7.05.02 Private Fire Hydrants and Water Mains 87
7.05.02 Fire Sprinkler Systems 88
7.05.03 Fire Flows 89
7.05.04 Fire Authority and Hydrant Access 89
7.06 Hydraulic Analysis 89
7.06.01 General 89
Chapter 8: Sanitary Sewer and Storm Drainage Facilities 93
8.00 Preface 93
8.01 Sanitary Sewer and Storm Mains 93
8.01.01 Sizing/Slope 93
8.01.02 Location 94
8.01.03 Material 95
8.02 Sanitary Sewer and Storm Drainage Structures 96
8.02.01 Type and Size 96
8.02.02 Structure Locations 97
8.03 Sanitary Side Sewers 98
8.04 Oil/Water Separators 100
8.05 Pressurized Sewer Systems 101
8.06 Sanitary Sewer Meters 101
8.07 Storm Drainage System Requirements 102
Chapter 9: Facilities in the Right of Way 103
9.00 Preface 103
9.01 Franchise/Public Way Agreement Requirement 103
9.02 Construction Permit Requirement 103
9.03 Design Criteria 103
9.04 Pavement Trenching and Restoration 104
9.04.01 Perpendicular Trenching in Asphalt Pavement 104
9.04.02 Longitudinal Trenching in Asphalt Pavement 105
9.04.03 Trenching in Cement Concrete Pavement 106
9.05 Non-Pavement Trenching 106
9.06 Aboveground Facilities 106

9.07 Building and Structure Related Facilities 107
9.08 Small Wireless Facilities 108
9.08.01 General Requirements 108
9.08.02 Attachments to City Facilities 109
9.08.03 General Pole Requirements 109
9.08.04 Wiring and Conduit 109
9.08.05 Concealment 110
9.08.06 Pole Mounted Antennas and Equipment 110
9.08.07 Non-Pole Mounted Equipment 111
9.08.08 Strand Mounted Small Wireless Facilities 111
Chapter 10: Transportation 113
10.00 Preface 113
10.01 Development Activity Requirements 113
10.01.01 Traffic Impact Analysis 113
10.01.01.A When Traffic Impact Analyses are Required 113
10.01.01.B Elements of a Traffic Impact Analysis 114
10.01.01.C Mitigation Identification and Recommendation 115
10.01.02 Neighborhood Circulation Plan 115
10.01.03 Half Street Improvements 116
10.01.03.A Half-Street Triggers 116
10.01.03.B Half-Street Extents 116
10.01.03.C Half-Street Width 117
10.01.03.D Required Half-Street New Improvements 117
10.01.03.E Required Half-Street Existing Improvements 117
10.01.03.F Half-Street ROW Dedication 117
10.01.03.G Alley Half-Streets 118
10.01.04 Additional Public Improvements 118
10.01.05 Deferred Public Improvements 118
10.02 Right of Way 118
10.03 Roadway Network 119
10.03.01 Connections and Vehicle Volumes 119
10.03.02 Intersection Layout and Spacing 120

10.03.03 Intersection Control (Local Residential Streets) 120
10.03.04 Intersection Control (Traffic Signals and Roundabouts) 120
10.03.05 Dead End Streets and Cul-De-Sacs 120
10.03.06 Street Classifications 121
10.03.06.A Principal Arterial 122
10.03.06.B Minor Arterial 123
10.03.06.C Residential Collector 124
10.03.06.D Non-Residential Collector 125
10.03.06.E Local Residential 126
10.03.06.F Local Non-Residential 128
10.03.06.G Rustic Streets 129
10.03.07 Alleys 130
10.03.08 Private Streets 130
10.03.09 Downtown Urban Center Standards 131
10.04 Road Design Geometrics 132
10.04.01 Sight Distance 132
10.04.02 Posted and Design Speeds 132
10.04.03 Curves 132
10.04.04 Vertical Grades 133
10.04.05 Cross Slopes 133
10.04.06 Intersection Landings 134
10.04.07 Curb and Right-of-Way Radius 134
10.05 Pavement Design 134
10.05.01 Simplified Asphalt Pavement Design 135
10.05.02 AASHTO Asphalt Pavement Design 136
10.05.03 Pavement Design Report 137
10.05.04 Permeable Pavements 137
10.05.05 Pavement Surface Restoration and Preservation 138
10.06 Roadside Design 138
10.06.01 Roadway Edge 138
10.06.02 Clear Zone – Lateral Separation from Fixed Objects 138
10.06.03 Traffic Barriers 139

10.07 On-Street Parking 139
10.08 Driveways 140
10.08.01 Number of Driveways 141
10.08.02 Driveway Classifications, Widths, and Spacing 141
10.08.03 Driveway Lay Out 141
10.08.04 Driveway Locations 142
10.08.05 Driveway Alignment (Horizontal and Vertical) 143
10.08.06 Driveway Sight Distance 144
10.08.07 Shared Driveway Access Roads 144
10.08.08 Controlled Driveways 146
10.08.09 Restricted Access Driveways 146
10.08.10 Emergency Vehicle Access Driveways 146
10.09 Sidewalks 146
10.09.01 Downtown Sidewalks 147
10.09.02 Meandering Sidewalks 148
10.09.03 Accessibility 148
10.09.04 Curb Ramps 148
10.09.05 Crosswalks 149
10.09.06 Downtown Crosswalks 151
10.10 Bikeways 151
10.10.01 Class I Bikeway 151
10.10.02 Class II Bikeway 152
10.10.03 Class III Bikeway 152
10.11 Landscape Strips 152
10.12 Street Trees 153
10.12.01 Species Selection, Placement, and Spacing 153
10.12.02 Root Direction Devices 155
10.13 Ground Cover 155
10.14 Irrigation Systems 156
10.15 Mailboxes 156
10.16 Illumination 157
10.16.01 Street Lighting Design 157

10.16.02 Luminaries 157
10.16.03 Light Poles 158
10.16.04 Service Cabinet, Foundation, Conduit 158
10.17 Junction Boxes 159
10.18 Survey Monuments 159
10.19 Bollards 159
10.20 Bus Transit Facilities 160
10.20.01 Bus Stops Locations 160
10.20.02 Bus Stops Features 160
10.20.03 Bus Pullout Lanes 161
10.21 Traffic Control Facilities 161
10.21.01 Median Islands 161
10.21.02 Mountable Curbs 162
10.21.03 “Pork Chop” Islands 162
10.21.04 Signage 162
10.21.05 Left Turn Lane Channelization 163
10.21.06 Right Turn Lane Channelization 163
10.21.07 Lane Division 163
10.21.08 Painted Islands 163
10.21.09 Other Pavement Markings 163
10.21.10 Construction Area Temporary Traffic Control 164
10.21.11 Roadway Barricades 164
10.21.12 Traffic Signals 164
10.21.13 Traffic Calming 165
10.22 City Telecommunication Facilities 165
10.22.01 Preface 165
10.22.02 Design Criteria 165
10.22.03 Conduits 165
10.22.04 Splice Vaults and Pull Boxes 166

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Chapter 1: General Information

1.00 Preface

Per Auburn City Code (ACC) 12.04.020, all public work construction contracts of the City, including but not limited to streets and sidewalks, storm water and sanitary sewer systems, and water systems, and all work within City public right-of-way performed by the City and others shall conform to the Engineering Design Standards (EDS). The EDS applies to City capital projects and for work performed by developers and others under construction permits (CON), grading permits (GRA), storm permits (STM), other utility permits, and public facility extensions (FAC). The City of Auburn has adopted the EDS to require the standardization of design and construction elements for consistency, to assure that public safety needs are met, and to comply with Local, State, and Federal regulations.

The design requirements contained within this manual do not set legal standards of care but provide guidance for possible engineering treatment under some circumstances.

Compliance with these standards does not alleviate the design engineer from using sound professional engineering practices and meeting the requirements of the specific utility in question. The design criteria contained herein are the minimum acceptable under standard conditions. Special conditions may require more stringent requirements that will be addressed during the plan review process.

1.01 Definitions

Note that additional definitions are included in the documents referenced in **Section 1.03.**

AASHTO – American Association of State Highway and Transportation Officials.

Access Point – A driveway or private street that connects to the general public street system. A public street is not considered an access point.

ACC – Auburn City Code.

Activity Centers – Locations such as schools, parks, retail areas and shopping centers, places of employment, or public service areas that attract people.

Accessible – Meeting Americans with Disabilities Act (ADA) requirements as established by the City's ADA Transition Plan.

ADT – Average Daily Traffic. The total two-directional volume of traffic passing through a given point during a given time period, divided by the number of days in that time period.

Aggregate – A mixture of various soil components (e.g., sand, gravel, and silt).

Alley – Right-of-way, usually narrower than a street with an all-weather surface, which provides access to the rear boundary of 2 or more residential or non-residential properties and is not intended for general traffic circulation. An alley is considered to be a classification of roadway/street.

Apartment – See ACC Chapter 18.04**.**

Applicant – The owner or their agent seeking approval from the city for any land use or other related permit or approval referenced in City of Auburn Code and which requires utilization of these Standards. References: See Developer.

Appurtenance – Equipment and/or accessories that are a necessary part of an operating utility system or subsystem.

APWA – American Public Works Association.

ASTM – American Society for Testing and Materials.

Backfill – Replacement of excavated material with suitable material compacted as specified.

Backwater – Water held back by some obstruction, natural or artificial.

Backwater Curve – A plot of depth versus location along the channel containing backwater.

Bicycle Facilities – A general term referring to improvements that accommodate or encourage bicycling, including parking facilities, bike racks, bicycle route mapping and bicycle route development.

Boring/Jacking – Grade and alignment-controlled mechanical or other method of installing a pipe or casing under a street without disturbing the surrounding medium.

Breakaway Structure or Breakaway Design – A structure or installation that has been crash tested in accordance with National Cooperative Highway Research Program procedures. (NCHRP 230).

Capacity – (1) The maximum number of vehicles that have a reasonable expectation of passing over a given roadway or section of roadway in one direction during a given time period under prevailing roadway and traffic conditions. (2) The volume of liquid or gas that can be transported by a pipe. (3) The load-carrying limit of a structure.

Casing – A larger pipe enclosing a another pipe that directly encloses a transmitted fluid or gas for the purpose of providing structural or other protection to the carrier and/or to allow for carrier replacement without re-excavation, jacking or boring.

CF – Cubic Feet.

Channelization – The separation or regulation of conflicting traffic movements into definite paths of travel by the use of pavement markings, raised islands or other suitable means to facilitate the safe and orderly movement of both vehicles and pedestrians.

Check – A short section of built-up channel placed in a canal or irrigation ditch and provided with gates or flashboards to control flow or raise upstream level for diversion.

City – The City of Auburn.

City Council – The City legislative authority.

City Engineer – The City Engineer for the City of Auburn. References: See Engineer.

Clean-Out – A pipe through which plumbing snakes can be pushed to unplug a sewer.

Clear Zone – The total streetside border area, starting at the edge of traveled way, available for safe use by errant vehicles. This area may consist of a shoulder, a recoverable slope, a non-recoverable slope, and/or a clear run-out area. The desired width is dependent upon the traffic volumes, speeds, and the streetside geometry.

Coating – Protective material applied to the exterior of a pipe or conduit to prevent or reduce abrasion and/or corrosion damage.

Commercial Property Use – Property with residential developments with four or more dwelling units per parcel or commercial developments. This is consistent with building permit administration in City of Auburn.

Conduit – An enclosed tubular runway for protecting wires or cables.

Contractor – The individual, partnership, firm, corporation or joint venture, contracting with the Developer to do prescribed work.

Concrete Thrust Blocking – Concrete that is used to support fittings in water mains.

Control Zone – That streetside area defined by the "Control Zone Distance Table"; found in Appendix 5 of the WSDOT Utilities Manual, within the street right-of-way in which placement of utility objects is controlled.

Corporation Stop – A brass fitting used to connect service lines to a water main.

Cover – Depth to top of pipe, conduit, casing, or gallery below the grade of a street or ditch.

Cross Connection – Connecting fire, irrigation and drinking water supplies together, or connecting storm and sanitary sewers together.

Cul-de-sac – A street closed at one end by widened pavement of sufficient width for vehicles to turn around.

CSBC – Crushed Surfacing Base Course.

CSTC – Crushed Surfacing Top Course.

CTP – The City of Auburn's current Comprehensive Transportation Plan. See **Section 1.03.03.**

CY – Cubic Yard.

Dead End Street – Street that accesses the roadway system only at one end. See also Stub End Street.

Dedication – The transfer of land or the interest of land by the owner of such land to the City for public uses, reserving no other rights than such are compatible with the full exercise and enjoyment of the uses the property has been dedicated.

Design Speed – Design speed is the maximum safe speed that can be maintained when conditions are so favorable that the design features of the highway govern.

Detention Tanks and Vaults – Detention tanks and vaults are underground facilities for the storage of surface water.

Developer – The Owner and any agent of the Owner authorized to represent the Owner. References see Applicant.

Development – All structures and other modifications of the natural site above and below ground on a particular site.

Domestic Water Service – Any service that connects directly to plumbing within a structure and is used for drinking, cooking, washing, and other standard uses of potable water.

Drain – Appurtenances to discharge accumulated liquids from casings or other enclosures.

Driveway – An access point providing motorized access to/from property(s), shared driveway or alleys to a street (public or private) or shared driveway. Driveway access roads and aprons are considered parts of a driveway.

Driveway Access Road – Driveway driving surface, including approach and adjacent non-motorized facilities (where present).

Driveway Approach – The portion of a driveway access road that connects the driving surface on the property(s), private street, or alley to the driveway apron.

Driveway Apron – The improved area that connects a driveway approach to a street, alley, or shared driveway which includes, when present, the sloped areas (wings) to the adjacent sidewalk or landscape strip, and also includes the area between the curb or edge of pavement and the back of the pedestrian pathway. Flush curbs across commercial driveway aprons are considered to be part of the driveway apron.

Easement – A right to use or control the property of another for designated purposes.

Edge of Traveled Way – The face of curb for streets that are or will be constructed to urban standards and the edge of pavement (not shoulder) for streets that are, or will be constructed to rural standards.

Embankment – A raised structure constructed of natural soil from an excavation or borrow source.

Encroachment – Occupancy of City right-of-way by non-roadway structures or other objects of any kind.

Engineer – The City Engineer for City of Auburn or any designee thereof.

Fixed Object – Any object that is not intended to move or break away upon impact.

Franchise – Occupancy and use document granted by the City required for occupancy of street rights of way.

Geometrics – The arrangement of the visible elements of a street such as alignment, grade, sight distance, widths, and slopes.

Grade – Rate or percent of change in slope, either ascending or descending from or along the roadway. It is measured along the centerline of the roadway or access point.

Gravity Distribution – A water supply that uses natural flow from an elevated tank or mountain reservoir to supply pressure.

Hazard – A side slope, an object, water, or a drainage device that, if impacted, would apply unacceptable impact forces on the vehicle occupants or place the occupants in a hazardous position. It may be either natural or man-made.

Hydraulic Analysis – A report that details the engineering process used to analyze water pressures, flow requirements, and velocities, for a development and the impacts on the system network as a result of the development.

Hydraulic Jump – The rapid change in the depth of flow from a low stage to a high stage resulting in an abrupt rise of water surface.

Impervious Layer – A geologic layer through which no water can pass.

Infiltration – (1) The act of stormwater permeating into the ground. (2) Groundwater that enters sewer pipe through cracks and joints, or the movement of water through the upper soil.

Interception – Rain that falls on vegetation and other impervious objects, which evaporates without contributing to the runoff.

Intersection – The connection of two or more public or private streets excluding alleys, driveways, and shared access roads.

Intersection Sight Distance – The distance required for a vehicle, traveling at or near the design speed to reduce its speed to avoid overtaking another vehicle, which has entered the intersection from another street. The entering vehicle can be making right, left-turning movements or crossings.

Island – A defined area between traffic lanes for control of vehicle movements and/or for pedestrian refuge.

Joint Use Driveway Tract – A jointly owned and maintained tract or easement serving 2 properties.

Landing – A road or driveway approach area to any public or private road.

Lateral – A sewer line that goes off at right angles to another.

Manhole – An opening in an underground utility system into which workers or others may enter for the purpose of making installations, inspections, repairs, connections, cleaning, and testing.

Main – A principal pipe in a system that distributes water or collects sewage.

Median – That portion of a divided roadway separating the traveled ways for traffic in opposite directions.

MPH – Miles per hour.

MSE Walls – Mechanically Stabilized Earth Walls.

MUTCD – Refers to the latest edition of the Manual of Uniform Traffic Control Devices as adopted by the Washington State Department of Transportation and as modified by applicable WAC and RCW.

Neighborhood – For the purposes of these design standards, a neighborhood is considered to be one or more residential subdivisions and parcels that are interconnected by local residential streets and typically bound by arterial and collector streets or other boundaries such as rivers, critical slopes, or jurisdictional boundaries.

Nonpotable – Fluid that is not for human consumption, but may be used for other purposes, such as sewage and stormwater runoff. Gas mains are also considered nonpotable.

Outfall – The pipe that discharges completely treated wastewater or stormwater runoff into a lake, stream, or river.

Pavement – The combination of gravel base, crushed rock, and asphalt concrete pavement placed on a subgrade to support the traffic load and distribute it to the subgrade.

Pavement Width – The distance measured from face of curb to face of curb for curbed sections of roadway or the distance measured from outside edge of shoulder to outside edge of shoulder for shouldered sections of roadway.

PC – Point of Curvature.

Peak-Hour – That period experiencing the highest volume of traffic.

Peak Period – Two hours during any a.m. or p.m. period when vehicle arrival and departure from the site or corridor is the highest.

Pipe – A structural tubular product designed, tested, and produced for the transmittance of specific liquids and gases under specific conditions.

Posted Speed – Is the signed speed limit along a street.

Potable – Water that is Drinkable.

PRC – Point of reverse curvature.

Pressure – Internal gage pressure in a pipe in pounds per square inch, gage (psig).

Private Street – A privately owned and maintained access provided for by a tract, easement or other legal means.

Professional Engineer – An engineer licensed to practice in the State of Washington.

Professional Land Surveyor – A surveyor licensed to practice in the State of Washington.

Public Street – A publicly owned facility that provides access, including the roadway and all other improvements.

Relocation – Planned change of location of an existing facility to a more advantageous place without changing the character or general physical nature of the facility.

Redevelopment – See ACC 13.48.010.

Replacement – Installation of a like element of a utility system or subsystem in the same or near-same physical location normally due to damage, wear or obsolescence of the element.

Restoration – All work necessary to replace, repair or otherwise restore the right-of-way and all features contained within to the same or equal condition as before any change or construction thereto.

Right-of-way (R/W) – All property in which the City has any form of ownership or title, and which is held for public street purposes, regardless of whether or not any street exists thereon or whether or not it is used, improved, or maintained for public travel.

Riprap – Pieces of broken stone used to protect the sides of waterways from erosion.

Roadway Intersection – location where two or more roadways intersect, including private roads but excluding alley's, driveways, shared driveways, and access tracts.

Rural – All lands regardless of current comprehensive plan designation not meeting the definition of Urban.

Separate Turn Lane – An auxiliary lane for traffic in one direction which has been physically separated from the intersection area by a traffic island or stripe. Separate turn lanes may be included within intersections or separated from intersection areas by traffic islands.

SF – Square Feet.

Shared Driveway – Driveway that provides access from a public or private street to more than one parcel or a driveway that provides access from a public or private street to a single parcel across one or more other parcels and/or an access tract or easement.

Shared Driveway Access Road – Shared driveway driving surface, including approach and non-motorized facilities (where present), but excluding parking lot drive aisles.

Shoulder – That portion of the roadway contiguous with the traveled way for accommodating stopped vehicles, for emergency use, and for lateral support of base and surface courses.

Slab – A cast concrete member of uniform thickness.

Standards – The City of Auburn Engineering Design Standards.

Stopping Sight Distance – The distance needed for a vehicle traveling at or near to stop before reaching a stationary object in its path.

Street or Roadway – A public way open for the passage of vehicles and persons. Limits include the outside edge of sidewalks, or curbs and gutters, or side ditches, including the appertaining shoulder and all slopes, ditches, channels, waterways, and other features necessary for proper drainage and protection within the right-of-way.

Street Frontage – Any part of private or public property that borders a public street.

Street Tree – A tree placed within the public right-of-way.

Substantial – In the sole opinion of the City Engineer, of ample or considerable amount, quantity, or size.

Surface Retention – That part of a storm that does not immediately appear as infiltration or surface runoff. Retention is made up of depression storage, interception, and evaporation.

Traffic Control – Those activities necessary to safeguard the general public, as well as all workers, during the construction and maintenance of roadway and other facilities within the right-of-way.

Traveled Way – That portion of the roadway intended for the movement of vehicles, exclusive of shoulders.

Trenched – Installation of a utility in an open excavation.

Trip – A one-direction movement that begins at the origin and ends at the destination. For example, a trip movement from a residence to a work place is a trip from home to work.

Trip Generation – A general term describing the analysis and application of the relationships that exist between the trip makers, the traffic study area, and the trip making. It relates to the number of trip ends in any part of the traffic study area.

Uniform Flow – Flow that has a constant depth, volume, and shape along its course.

Unopened Right-of-way – A City right-of-way that exists by dedication or deed, but for which no vehicular roadway has been constructed by the City or other parties, and the street is not maintained by the City.

Utility – A company providing such public services as gas, electric power, telephone, water, sewer, or cable television, whether or not such company is privately owned or owned by a governmental entity.

Wetpond – A stormwater pond that has been designed to retain a permanent pool of water "wetpool" to provide treatment of storm runoff.

Wetpool – The permanent pool of water retained in a wetpond or wetvault.

Wetvault – A stormwater vault that has been designed to retain a permanent pool of water "wetpool" to provide treatment of storm runoff.

1.02 Contact Information

Permit Center
Physical address:
Auburn Professional Plaza – Customer Service Center (2nd Floor)
One East Main Street
Mailing address:
25 West Main Street
Auburn, Washington 98001-4998
Email address: permitcenter@auburnwa.gov

Public Works Department – Engineering Services:
Phone:(253) 931-3010

Department of Community Development:
Building Phone: (253) 931-3020
Planning Phone: (253) 931-3090
Email address: development@auburnwa.gov and/or permitcenter@auburnwa.gov

1.03 City Reference Material

Unless noted otherwise, reference material referred to herein may be obtained from the City of Auburn's website or by clicking on the hyperlink below:

Auburn Reference Material

1.03.01 City of Auburn Surface Water Management Manual (SWMM)

The City of Auburn Surface Water Management Manual (SWMM) is the 2019 Department of Ecology Stormwater Management Manual for Western Washington (DOE SWMMWW) and the City of Auburn Supplemental Manual. The SWMM is a manual of specific requirements related to storm drainage management. See **Section 8.07** for more information.

1.03.02 City of Auburn Engineering Construction Standards (ECS)

The Engineering Construction Standards (ECS) sets forth the standards used during the construction of all civil projects within the City's jurisdiction, including the extension of public water, sanitary sewer, storm drainage, and transportation facilities by private developments. The ECS includes three separate documents: General Special Provisions, Technical Special Provisions, and Standard Details. The General and Technical Special Provisions supplement and modify the current "Washington State Department of Transportation (WSDOT/APWA) Standard Specifications for Road, Bridge and Municipal Construction." The Standard Details, are comprised of the City's construction and design detail drawings for temporary erosion control, grading, water, sanitary sewer, storm drainage, and street work within the City. The Standard Details are supplemented by the "Washington State Department of Transportation's (WSDOT) Standard Plans."

The referenced details and plans in these Design Standards shall be the standard except as modified by the General and Technical Special Provisions and by this document, the Design Standards.

1.03.03 Planning Documents

The following planning documents can be found on the City's website or by clicking on the hyperlinks below:

Auburn Comprehensive Plan

Transportation Improvement Program

Comprehensive Transportation Plan

2016 Comprehensive Sewer Plan

2015 Comprehensive Water Plan

2015 Comprehensive Storm Drainage Plan

1.03.04 Informational Handouts

Handouts are currently available from the City to aid the public in planning and constructing development projects within the City of Auburn. Contact the Permit Center or see the City's website by clicking on the hyperlink below (select 'Information Handouts') for the most current list available:

https://www.auburnwa.gov/city_hall/public_works/standards_publications

1.03.05 Additional Technical Information

Additional design guidance and standards for specialized facilities such as pump stations, pressure reducing stations, and others are not included herein, but may be provided by the City as guidance to supplement efforts during design discussions.

1.03.06 Other Reference Material

The following publications are to be used for design applications and can typically be found on the publishing agency's website. In case of conflict between City publications and those referenced below, the City publication will take precedence:

A. Auburn City Code (ACC) related to development requirements.

B. Washington State Department of Transportation (WSDOT) "Standard Specifications for Street, Bridge and Municipal Construction" as amended by the City's Special Provisions (Part 1 of the Construction Standards). These will be referred to in City publications as the "WSDOT Standard Specifications."

C. Washington State Department of Transportation (WSDOT) "Design Manual" (latest edition).

D. Washington State Department of Transportation (WSDOT) "Standard Plans."

E. American Association of State Highway and Transportation Officials' (AASHTO) "A Policy on Geometric Design of Highways and Streets" (latest edition).

F. FHWA and Washington State Department of Transportation, MUTCD.

G. Transportation Research Board's (TRB) Roundabouts: An Informational Guide, 2nd Edition (NCHRP 672).

H. State of Washington Department of Ecology's "Criteria for Sewage Works Design" (latest edition).

I. State of Washington Department of Health (DOH) "Water Systems Design Manual" (latest edition).

J. American Water Works Association (AWWA) Standard Specifications (latest edition).

K. "IES Lighting Handbook" (Illuminating Engineering Society of North America) (latest edition).

L. American National Standard for Roadway Lighting ANSI/IESNA RP-8-00 (latest edition).

1.04 Deviation from Standards

In some cases, City standards may not best address a particular engineering application. In these instances, a design deviation from the City's standards may be requested from the City Engineer. Except deviations for City capital improvement projects, deviations shall be made using the City's Deviation Request Application and shall include applicable engineering justification for the deviation. Deviation requests and supporting justification must be sealed by a professional engineer. The City Engineer will evaluate the request and notify the applicant of a decision within 15 working days upon receipt of a complete deviation request or with the completion of the first review of the development review plans or plats (for Short Plats, Plats, FAC's and Grading Permits), whichever is later. Additional City review time may be required in certain circumstances and will be coordinated with the applicant. For deviation applications that are associated with a preliminary plat application submitted in compliance with ACC 17.10, the deviation application and a recommendation from the City Engineer must accompany the preliminary plat to the hearing examiner. The hearing examiner must obtain the concurrence of the City Engineer for any requests to modify any City of Auburn design or construction standard. Approved deviations must be shown on the final civil site improvement plans as specified in **Chapter 3.**

Deviations for City capital improvement projects will be reviewed and approved by the City Engineer during design review. The City Engineer signing the final plans as approved for construction constitute approval of any deviations from these Standards.

1.04.01 General Deviations

General deviations apply to all engineering design standards except for the Surface Water Management Manual's Minimum Requirement deviations.

The engineering design deviation, with compelling supporting justification, shall clearly demonstrate the engineering design standard for which the deviation is being sought is not physically or technically possible, would have undesirable impacts to public or private infrastructure and property, or would impact critical areas.

Additionally, the proposed deviation will meet or exceed the corresponding City standard for the following applicable criteria:

A. The functional intent of the design element.

B. Safety factors associated with the design element.

C. Operational concerns associated with the design element.

D. Maintenance concerns associated with the design element.

E. Liability concerns associated with the design element.

F. The capacity and/or efficiency of the design element.

G. The design life, historical performance, and durability of the design element.

H. The aesthetic and visual impacts of the design element.

I. The cost effectiveness and availability of any replacement components or materials.

J. Consistency with the spirit and purpose of the corresponding City design standard.

K. Demonstration that the environment will not be adversely affected.

L. Supported by published industry standards.

M. The effect on buildable lands within the City of Auburn.

1.04.02 Surface Water Management Manual (SWMM) Deviations

A deviation request from any of the 10 Minimum Requirements in the SWMM goes through a different process which includes a public notice requirement. This is to ensure that the Department of Ecology mandated surface water regulations are complied with. The 10 Minimum Requirements of the SWMM can be found in **Section 8.07**.

Requests for deviations from the 10 Minimum Requirements of the SWMM shall be in accordance with ACC 13.48.226 and these standards.

1.04.03 Appeal of City Engineer's Decision

Appeal of the City Engineer's decision shall follow the following procedure:

The applicant shall have 15 working days from the date of receipt of the City Engineer's decision in which to submit a written notice to the Public Works Director contesting the decision of the City Engineer. The Public Works Director shall then have 15 working days to notify the applicant

of a decision to uphold or modify the City Engineer's decision. For appeals of engineering deviations requests, the Public Works Director's determination shall be final.

1.04.04 Changes to Standards

Per ACC 12.04.010, the City Engineer is authorized to make any additions, deletions, or modifications stated in these Standards with consultation with the City Council on policy issues or broad Citywide implications.

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Chapter 2: Plan Approval Process

2.00 Preface

This Chapter contains standards and procedures that apply to the review and approval process for civil engineering plans. Development or redevelopment of property within the City of Auburn, and/or within the limits of Auburn's Utility Service Area, that require civil engineered plans to support a development action must follow the processes outlined in the subsections below.

2.01 Types of Plans

This section contains information regarding the types of civil engineering plans submitted to the City. Specific plan requirements are described in detail in **Chapter 3**.

2.01.01 Grading (GRA) Plans

Grading plans are required prior to the issuance of a Grading Permit and before commencement of construction, if triggered per ACC 15.74.

2.01.02 Building Site Plans

A Building Site Plan includes all civil site development requirements including site layout, building location, site access, parking, code required landscaping, utility service, and storm drainage control. An approved Site Plan is required prior to the issuance of a Building Permit and before commencement of construction.

A building Site Plan is required for all new non-residential developments and residential construction of 3 units or more per lot.

2.01.03 Public Facility Extension (FAC) Plans and Agreement

City of Auburn approved Public Facilities Extension (FAC) Plans and an executed FAC Agreement are required prior to construction of City of Auburn infrastructure (sanitary sewer, water, storm drainage, and/or transportation facilities) by any party other than the City of Auburn.

2.01.04 Other Plans

Some projects may also require other types of plans. The requirements for these additional plans will usually be addressed early in the submittal process. These plans could include, but are not limited to, the following:

A. Landscape plans, prepared in accordance with ACC 18.50.

B. Land clearing plans, prepared in accordance with ACC 15.74.

C. Irrigation plans, prepared in accordance with ACC 18.50.

D. Critical Area restoration/enhancement plans, prepared in accordance with ACC 16.10.

E. Retaining Wall Plans and Structural Calculations.

F. Illumination/Site Lighting Plans, prepared in accordance with ACC 18.55.

2.02 Review and Approval Process

2.02.01 Submittals

When submitting civil engineering plans to the City for review, the following steps are required to insure a complete submittal and timely approval of civil engineering plans:

A. Applicants are encouraged to meet with City staff prior to plan submittal. Information on applying for a Pre-Application Meeting is available through the City of Auburn Permit Center. All plans and associated documents submitted to the City will be assigned a project number and receive a preliminary review to make sure they adequately address the minimum requirements of a complete application. Any such plans and associated documents not meeting these requirements will be returned to the applicant or the applicant's designee as unacceptable for review, with a written explanation of necessary corrections required prior to the subsequent resubmission.

B. Prior to preparing civil engineering plans for submittal, the applicant shall review the submittal requirements outlined in the Civil Submittal Handout (FAC & GRA) on the City's website under Forms. This packet provides a summary of the Engineering Design Standard sections that apply to civil plan preparation but does not substitute for a thorough review of the Engineering Design Standards.

C. Civil Engineering plans and associated documents are to be submitted to the City for processing. All submittal documents (Reports & Plans) must be single .pdfs and not require collating, with file names that clearly state the document type and may be submitted through www.MyBuildingPermit.com. If you have any questions regarding the application process or submittal requirements please contact the City Permit Center at permitcenter@auburnwa.gov, (253) 931-3020 or Development Engineering at development@auburnwa.gov, (253) 876-1969, or in person at the City of Auburn Permit Center on the Second Floor of the Auburn Professional Plaza, One East Main Street.

D. After the receipt of a completed Civil Submittal, the City will make a preliminary review of the plans and supporting data to verify the scope of the proposed extension(s) and check for completeness of the application. The City requires 28 calendar days from the date of initial submittal, to determine if the application is complete. However, typical review times are generally shorter than this. Once the City is satisfied with the completeness of the application, the applicant will receive payment instructions, and once the application fees have been paid, the 1st detailed civil submittal review will begin.

E. Once the length of the public extension(s) and/or hours required for review/inspection have been verified/calculated, 30% of the review and inspection fees are due with the application for 2nd review. Detailed FAC Plan review work for the 2nd review will not continue until 30% of the review and inspection fee is paid. If no 2nd review is needed, then payment of the full review and inspection fee is due before the City signs the facility extension agreement.

F. All proposed public right-of-way dedications shall be dedicated to the City prior to start of construction with the exception of plats and short plats. A title report pulled within 30 calendar days of the application will be required to confirm property ownership and to verify that the portions of the property dedicated as right-of-way and/or easements have been cleared of encumbrances. The applicant is responsible for clearing all encumbrances the City determines to be inconsistent or in conflict with the intended purpose of the dedications. Title insurance shall be provided to the City for right-of-way dedications in the amount of $50.00 per square foot of right-of-way area dedicated, or other amount as proposed by the Developer

and accepted by the City Engineer. Refer to the Right-of-Way Dedication Handout on the City's website under Forms for additional information. Easements shall be executed by the Applicant prior to start of construction. Easement documents will be held by the City until the end of construction, at which time the easement exhibits and descriptions may need to be updated by the Applicant, based on as-built conditions, except easements that are being granted by someone other than the Applicant which will be recorded prior to the start of construction. Once the easements are confirmed to match field conditions, the easements will be recorded by the City.

G. The following applicable information may be required along with the plan submittal:

   1. Title report.
   2. The final biologist report, including the wetland mitigation plan, when appropriate.
   3. Traffic reports.
   4. A copy of other applicable applications (Short Subdivisions, Subdivisions, etc.).
   5. Letter indicating how SEPA and/or other applicable application conditions have been accounted for in the development/plan process.

H. All final plans, calculations, or reports submitted for review shall be stamped by a Professional Engineer. Electronically signed seals will only be accepted if they meet the requirements of WAC 196-23-070.

I. Where the plan review process is running concurrent with other applications (SEPA, Subdivisions, etc.), the above-referenced information may not be available at time of plan submittal. In such instances, other required applications shall be provided prior to final plan approval.

J. All final approved Plan submittals shall include the associated electronic AutoCAD files.

K. If the project is to be phased, phasing plans must be submitted per the requirements specified herein.

2.02.02 City Review

The City will review plans and associated calculations, reports, and AutoCAD files for conformance with City development requirements, standards, and policies. Marked up construction drawings, calculations, reports, and written plan review comments will be returned to the applicant's designated contact person for revisions. The applicant's engineer shall revise construction drawings, calculations, or reports to address City plan review comments and provide comprehensive comment responses in a unique color directly on the marked-up documents along with the updated documents or in other formats as determine to be acceptable by the City Engineer, or designee. The revised drawings (the required number will be determined by the City) and associated calculations and reports, along with the redline comments, shall be resubmitted to the City for additional review.

2.02.03 Plan Approval

Once the plan review process is completed and all City review comments have been addressed, the City will request that one electronic copy of the sealed plans and reports be submitted for approval.

Final reproducible plans shall be produced in .pdf format, signed and stamped by a professional engineer and provided to the City for approval signatures, along with the final AutoCAD files. Electronically signed seals must meet the requirements of WAC 196-23-070 and also provide permissions for City staff to apply signatures to the approved plans. The City will return the signed and approved plans to the Applicant.

All applicable AutoCAD files shall be submitted to the City on a compact disk or electronically transferred to development@auburnwa.gov for integration into the City's Geographic Information System (GIS). For more information on AutoCAD file submittal, please see **Appendix F** of **Chapter 3**.

2.02.04 Construction Plan Revision

If after plan approval the applicant desires to make changes to the approved plan(s), a revised plan(s) reflecting such changes shall be required. In some cases, minor changes may be considered and approved by the City Engineer without a formal plan revision. City Inspectors may not authorize changes to the approved plans. The following is the general process required for submitting revisions to the approved plans after plan approval:

A. Provide a written summary of the proposed plan/report changes to the Development Review Engineer assigned to the project and include development@auburnwa.gov on the email correspondence.

B. Submit for City review, comment, and approval, the revised plans.

C. Changes on the plans can be clouded for ease of review but will need to be removed prior to approval of the construction plan revision.

D. Provide the text "REVISION" in 0.2" height bold text above the **Approval Block (B-3) in Appendix A** on all sheets that are being revised and submitted for review.

E. Provide a date and brief revision description in the revision title block.

F. Include the cover sheet of the plans even if revisions are not proposed on the cover sheet as the cover sheet is the sheet that has approval lines for the Planner and City Engineer.

The following list are examples of changes that would require a formal plan revision process (Note that this list does not include all potential changes that would require a plan revision process):

A. Alternative pavement section;

B. Revised structural elements such as walls;

C. Revised City utility location of 2 feet or more horizontally or vertically;

D. Addition of structures such as catch basis and manholes;

E. Revised driveway location, width, or alignment;

F. Change in storm pond facility embankment slopes;

G. Addition of temporary irrigation;

H. Phasing Construction.

2.02.05 Project Close Out

The following is the general process required for accepting construction completion on a project:

Construction Record Drawings (also referred to as the Construction Redlines) refer to the field changes the Applicant clearly tracks and marks on the final approved and signed plans that are retained throughout construction, in accordance with the requirements specified in the Construction Standards.

After completion of construction, the Applicant shall submit the Construction Record Drawings to the City electronically for review and comment. After the City has concurred the Construction Record Drawings reflect the as-built conditions and meet City record drawing standards, as described in the City Construction Standards, the Applicant shall utilize them to produce the Final As-built Record Drawing set for submission to the City. A copy of the "Record Construction Document Packet" which outlines the complete record drawing process in detail can be obtained from the City.

The Applicant shall also provide the City the current AutoCAD drawing files to reflect any revisions that occurred after plan approval and submit an electronic PDF set to the City.

The City will apply an 'As-Built' stamp on each sheet of the submitted Final As-built Record Drawing set and apply a "Record Drawing Certification" block on the Cover sheet. The Record Drawing Certification will be signed by the City and the Final As-built Record Drawings will be archived and imported into the City's GIS database.

A final Stormwater Site Plan certification letter shall be stamped, signed and submitted by the Engineer of Record to the City verifying that the storm facilities were installed as designed or note any minor changes during construction that require no changes to the Stormwater Site Plan report.

Submit an electronic copy of the Stormwater Site Plan report and Geotechnical Report if there have been changes during construction.

The following shall also be completed for projects prior to project close out:

A. All legal documents, including Utility Easements, shall be updated as needed, executed, and recorded.

B. FAC Agreement shall be recorded.

C. For all FACs, a "Developer Contributions Document" for all public transportation, water, sewer, and storm facilities constructed as part of the project shall be obtained from the City, completed, and returned electronically to the City.

D. All Warranty Bonds or Assignments of Funds for the 1 to 2-year warranty period shall be in place.

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Chapter 3: Plan Preparation Requirements

3.00 Preface

This Chapter describes City requirements for plans submitted to the City for review and approval. Civil engineering plans must meet these standards in order to move through the review process in an efficient manner and in order to receive approval.

3.01 General Requirements

The following general requirements apply to civil engineering plans submitted for review and approval by the City:

A. The general construction requirements for the City shall be those contained in the City of Auburn's current Engineering Construction Standards Manual which supplements or modifies the "Washington State Department of Transportation (WSDOT) Standard Specifications for Road, Bridge and Municipal Construction," except where supplemented or modified by the City in this manual.

B. The civil engineering plans shall reference City Standard Specifications, Standard Details, and WSDOT Standard Plans as necessary. The City's Standard Specifications and Standard Details are contained in the Engineering Construction Standards, a copy of which shall be on-site during construction.

C. All civil engineering plans and reports shall be prepared and sealed by a professional engineer.

D. Property surveys shall be performed and prepared per WAC 332-130-145, sealed and signed by a professional land surveyor and be tied to the current City datum (NAVD 88) and horizontal control datum shall be NAD83 (1991) as officially adjusted and published by the National Geodetic Survey. (WAC 332-160-060 and RCW 58.20). A list of City Benchmarks is available upon request.

E. All civil engineering plans and calculations shall be neat, uncluttered, legible, and in conformance with the requirements herein.

F. All plans shall be prepared utilizing AutoCAD software in accordance with the standards specified herein.

G. For a Development project, all deviations from City's Engineering Design and Construction Standards must be shown on the plans with a note call-out and description that references the City assigned deviation number and deviation approval date. The format of these callouts and note descriptions shall be as shown in **Appendix C** of this Chapter.

H. Except as approved otherwise by the City Engineer, a project may qualify for a Minor Grading Permit Submittal. Refer to **Appendix E** for project thresholds to quality for a Minor Grading Permit and the submittal requirements.

3.02 Plan Format

The City requires that plan sets be submitted in an order consistent with this section. Depending on the complexity or simplicity of the project, the amount of detail and content required will be subject to change. Depending on the scope of the project the civil site improvement plans may be comprised of a combination of the grading, site and facility extension (FAC) plan elements outlined below to create a set of Civil Site Improvement Plans.

Civil Site Improvement Plans shall consist of the following sheets:

A. Cover sheet (See **Section 3.04.01**).

B. Temporary Erosion and Sediment Control (TESC)/Demo Sheet (Land Clearing when applicable) (See **Section 3.04.02**).

C. Grading and Private Storm Drainage Plan (See **Section 3.04.03**).

D. Utility Plan and Profiles if applicable (See **Sections 3.04.07 & 3.04.09**).

E. Street and/or Storm Plan and Profiles if applicable (See **Sections 3.04.08 & 3.04.09**).

F. Street Cross-Sections and Additional Street Elements if applicable (See **Section 3.04.09**).

G. Cross-Sections (See **Section 3.04.04**).

H. Details (See **Section 3.04.05**).

I. Street and/or Site and Landscape Plan (See **Section 3.04.10**).

J. Irrigation Plan if applicable (See **Section 3.04.11**).

If a separate associated grading plan has been submitted and approved, those areas covered under the grading plans will not need to be readdressed in the building site plans.

3.03 General Plan Requirements

3.03.01 Standard Plan Format

Applicable information in this section shall be shown on the plan set.

A. Each sheet of the plan set shall be stamped by a professional engineer.

B. North arrow.

C. The title block shall include the development/Capital project title (in bold print), the name, address and phone number of the firm preparing the plan and the owner/developer, a revision block (showing the date of the latest revision), page of pages numbering, and sheet title (e.g., road and storm drainage, grading, erosion/sedimentation control, water and sanitary sewer).

D. Indicate units of measurement for all slope callouts as either percent (%) or feet per foot (ft./ft.). Do not mix units of measurement on a plan set.

E. Provide all match lines with matched sheet numbers (stationing).

F. The street classification shall be provided under the street name on all plan views.

G. For the approved Development project plans, a City of Auburn approval block (4”x2”) shall be provided in lower right corner of each plan sheet except for the cover sheet which shall be per Section 3.04.01. Show project reference numbers (BLD for Building Permit, FAC for Public Facility Extension Plan, STM for Storm Permit and/or GRA for Grading/Erosion Control Permit) in the approval block area. A blank Auburn Engineering approval block is shown as **Approval Block (B-1) in Appendix A** of this Chapter.

H. The locations of the title blocks, approval blocks, and engineer’s stamp shall remain consistent throughout all the plan sheets.

I. All survey monuments as defined by WAC 332-120-020 within 25 feet of proposed ground disturbing activities shall be shown on the plans and the plans shall indicate the Department of Natural Resources permit number(s) issued for disturbance and re-setting/replacement of the monuments in accordance with Section 10.18 of the Engineering Design Standards. In addition to those typically found marking the City's Right of Way, survey monuments include, but are not limited to, set property corners, curb pins, reference or offset points, etc.

3.03.02 Drafting Standards

Drafting requirements are as follows:

A. Plan sheets should be formatted to print on 22"x34" size paper. Any variation must be approved by the City prior to plan submittal. Approved plans shall be produced per **Section 2.02.03** of the Engineering Design Standards. Margins should be set to provide for ½ size drawings to fit on 11"x 17" sheet size.

B. Lettering size shall be no smaller than one tenth (1/10) of an inch in height and shall be uppercase. Callouts and other information shall be printed horizontally in most cases.

C. Existing features shall be shown with dashed lines and/or screened back APWA line types and symbols (screening 45%).

D. Proposed features shall be shown with APWA symbols and line types. The intent is to clearly distinguish existing features from proposed improvements.

E. Minimum scale shall be:

- Site work: 1" = 40' horizontal.
- Public facility work: 1" = 20' horizontal.

Vertical scales are to be 1/10th the horizontal scale except for public facility work in areas with steep slopes, 1" = 5' may be used in place of 1" = 2'.

Use a scale that best utilizes paper space and gives the best overall view of the site.

F. Use APWA AutoCAD symbols and line types in the legend to identify both existing and proposed improvements and utilities.

G. Electronic AutoCAD files shall be prepared in accordance with the Layers Standard included in **Appendix F** of this Chapter. A .dwt file containing the AutoCAD layers can be found on the City's website or by clicking on the following hyperlink: Development AutoCAD Layers and Linetypes

H. Electronic AutoCAD files shall be geo-referenced per the standards specified herein.

3.04 Plan Sheet Elements

The following section covers the basic elements that are required to be shown on the different plan sheets. While all plan sets will have a cover sheet, there are other sheets covered here that may or may not be included in a particular projects plan set.

3.04.01 Cover Sheet

The Cover Sheet and General Information Sheet(s) shall incorporate all the requirements listed in **Section 3.02**, plus the following applicable items:

A. A general scaled site plan covering an area approximately 10 inches square.

B. Vicinity map (approximate scale) with north arrow covering an area approximately 5 inches square.

C. Site address.

D. Owner/Applicant, address, contact, phone number, and e-mail address.

E. Engineer/Surveyor/Architect address, contact, phone number, and e-mail address.

F. Elevations with City datum (NAVD 88) tied to City benchmarks with reference to the benchmarks' numbers and locations indicated. Horizontal control information (NAD83). See **Appendix E** of this Chapter for more information on survey requirements.

G. Monuments used for horizontal control per the City's horizontal control datum NAD83 (1991) with a description of the monument and northing and easting.

H. The permit number in 1 inch bold lettering shall be above the title block (located on the right side of the sheet) on the cover sheet only.

I. Sheet Index with reference to all civil, landscape, critical area mitigation and lighting plan sheets.

J. Legend of all existing and proposed lines and symbols used on the plans.

K. Full legal description(s) including quarter section, section, township, and range.

L. Parcel number(s).

M. Site zoning and adjacent zoning (may be shown on a separate vicinity map sheet).

N. Applicable plat name and lot numbers.

O. Applicable site information including the number of parking spaces required and the number of parking spaces provided.

P. Type of building construction as defined by the adopted Building Code and the building height as defined in **Appendix D** of the International Fire Code.

Q. Site access including adjacent driveways, roadways, and intersections that may have an impact on the location and type of site access.

R. An overall site plan key map shall be shown if the scope of work requires that the site plan be divided between 4 or more plan sheets, unless otherwise directed by the city.

S. Construction Sequence outlining a basic construction schedule for all elements of the project. (See **Section 5.05** for a sample construction sequence related to storm and TESC elements) In addition, depending upon the nature of the project, the construction of some public facilities may also dictate separate construction sequencing requirements that will also need to be indicated on the plans.

T. The City of Auburn General Notes as shown in **Appendix B** of this Chapter.

U. Provide a list of the additional non-building permits required for this project. The City will update this list with the 1st review comments.

V. Indicate approximate fill and excavation quantities in CY. Refer to the Civil Submittal Handout (FAC & GRA) located on the City's website for required format.

W. Storm drainage related quantities and information required to support calculation of System Development Charges (SDC). Refer to the Civil Submittal Handout (FAC & GRA) located on the City's website for required format.

X. The City of Auburn Engineering Approval Block, (min size 2" x 8.5") as shown in **Appendix A** of this Chapter. A blank Auburn Engineering approval block is shown as **Approval Block (B-3) in Appendix A** of this Chapter.

3.04.02 Temporary Erosion and Sediment Control (TESC) Plan Sheet

TESC design shall be in accordance with **Chapter 5 – TESC, Clearing, and Grading**, and include the following applicable items:

A. Marked clearing work limits, environmentally sensitive areas and their buffers, and trees that are to remain.

B. Indicate the location of the construction entrance.

C. Provide onsite stormwater facilities during construction.

D. Indicate the minimum temporary erosion control measures to be used on the site during construction, this may include, silt fencing, interceptor ditches, detention or retention facilities, flow control structures, etc.

E. Show containment locations for storing pollutants, including waste materials and demolition debris, prior to their removal from site.

F. All existing site features and conditions shall be shown on this sheet including the existing topography.

G. This sheet may also function as a demolition site plan and indicate all existing features and structures to be removed/demolished and those that will remain.

H. Provide the Auburn Grading and Erosion Control Notes as shown in **Appendix B** of this section.

3.04.03 Grading and Private Storm Drainage Plan Sheet

The Grading design shall be in accordance with **Chapter 5 – TESC, Clearing, and Grading**, and include the following applicable items:

A. Indicate slope of any fill or cut slopes.

B. Show or provide reference for type of fill material and associated compaction requirements or provide a reference to the approved Geotechnical Report with a date of the report, the firm that prepared it and the section in the report to reference.

C. Show existing significant trees and their dripline (6 inches in diameter and larger for evergreens and 4 inches in diameter or larger for deciduous). Indicate if tree is to either be retained or removed.

D. Provide storm drainage retention or detention facilities including City control structure, water surface (W.S.) elevations, seasonal high groundwater elevation, orifice sizes, design storms for the W.S. elevations, and release rates.

E. Show horizontal setback between the bottom of any fill placement and the top of the bank of a defined drainage channel per requirements noted in **Section 5.03**.

F. Show typical ditch sections.

G. Show connections of building roof and foundation drains to the site drainage system.

H. Show the existing topography shaded back and overlaid by the proposed grades.

I. Show existing and finished elevations and contours. Spot elevations may be required for relatively flat sites to supplement the contour elevations as necessary to adequately reflect existing and finish grades. Provide spot elevations along property line and a minimum of 30 feet beyond property line (at least 50-foot intervals).

J. Provide notes to protect and maintain erosion control facilities during grading operations.

K. Provide arrows to indicate drainage flow direction on paved surfaces.

L. Show layout of the entire storm drainage pipe with length, slope, and material type labeled and direction of flow indicated.

M. Provide site specific details and cross-section sheets for storm drainage detention or retention facilities.

N. Indicate the emergency overflow to the public storm system.

O. Show berm dimensions, materials, compaction requirements for ditches and detention ponds where applicable. When projects include storm ponds, include a storm pond profile sheet with seasonal high groundwater elevation, or reference to Geotechnical Engineering report detailing an accepted alternative analysis.

P. Show locations of manholes and catch basins, indicating type, stationing, offset, lid type, rim, and invert elevations. Number manholes and catch basins consecutively.

Q. Show existing and proposed sanitary sewers and water mains, identifying crossing and minimum vertical distance between utilities.

R. Provide type of material and size of energy dissipaters (riprap, etc.).

S. Provide details and cross sections of all low impact development, water quality, and flow control facilities for stormwater runoff.

T. Show trash racks, if applicable.

U. Show locations, widths, and types of easements.

V. Show locations and types of pumps, if applicable.

W. Provide planting and seeding requirements with establishment procedure in construction sequence for water quantity and quality systems.

X. Show finish floor elevations.

Y. Show the controlling downstream storm drainage elevations including the associated design conditions.

Z. For ponds, provide: aesthetics, fencing, power (if applicable), maintenance access, control structure, critical water surface elevations, and other items, such as walls and liners.

AA. Address bypass surface flows.

BB. Address subsurface flows and indicate water surface elevations.

3.04.04 Cross-Section Sheet

The Cross-Section plan sheet(s) shall be provided for projects that propose grading activities 10 feet or closer to the property line, excavations over 5 feet or fill over 8 inches in depth or more and have the following applicable items:

A. Cross-sections for fill and grading shall be shown through all properties to at least 30 feet beyond the property lines. Adequate cross-sections shall be shown to represent the site. At a minimum this shall include one shown in the north direction (west-east from left to right) and one shown in the east direction (south-north from left to right) cross-section.

B. This sheet may also contain cross-sections for the temporary storm drainage pond.

C. The scale used for the site cross-sections on this sheet should match the scale on the other sheets.

D. Some projects may be able to combine the cross-section sheet with the grading sheet depending on the complexity of the project.

3.04.05 Detail Sheet

The Detail sheet(s) shall have the following applicable items:

A. Any detail that is specific to this project.

B. City of Auburn Standard Details are not to be shown on this sheet unless they need to be modified for a project specific application, in which case the detail would be shown with the modifications explicitly called out/labeled and shall not include the City Engineer's signature from the original detail.

C. Storm control manholes shall be shown on this sheet.

D. This sheet shall contain cross-sections for the storm facility.

E. City of Auburn Standard Details and WSDOT Standard Plans are to be called out on the applicable plan sheet using the detail or standard plan number.

3.04.06 Utility Plan Sheets

The plan set shall include an overall utility plan that shows the private connections to the public water and sanitary sewer systems, together with the storm drainage system and proposed landscaping, and any required extensions of the public water and sanitary sewer systems. The overall utility plan shall be clearly visible on one to two plan sheets, with a maximum scale of 1"=100'. The overall utility plan is required in addition to plan/profile sheets prepared at the minimum scale defined in Section 3.03.02.E.

The scale of the plans may need to be increased to improve visibility. Construction Note Callouts shall be shown in the plan view (e.g., manholes, catch basins, etc.).

The more detailed Utility Plan sheet(s) shall have the applicable items identified in the following

sections.

3.04.06.A Water

Water system design shall be in accordance with **Chapter 7 – Water Facilities**, and shall include the following items:

A. Water pipe and fitting size, location, and type of material.

B. Details of connections to existing water mains, including details on the type(s) of connection fittings used.

C. Valve size, locations, type, and fittings.

D. Fire hydrant location(s).

E. Air/vacuum relief valve and blow-off locations.

F. Pressure reducing stations and associated valves, vaults and bypass piping as required.

G. Concrete blocking, mechanical or flanged joint, or restrained joint or locking gasket.

H. Water main, water meter, air and vacuum relieve valve, blowoff assembly, fire hydrant easements, and all appurtenances.

I. Meter size and service line size, material type, and location.

J. Irrigation meter size and service line size, material type, and location.

K. Proposed fire line, FDC line, and PIV locations. Provide a note with the underground fire line noting that a separate fire permit will be required for the underground fire line between the connection to the public water main to the building.

L. Backflow prevention assembly and detector check meter size, type and location.

M. For buildings requiring fire sprinklers, the fire sprinkler notes shall be shown on the plan, as shown in **Appendix B** of this Chapter.

N. Table or call out showing physical separation in feet between water lines and other utilities at crossings, when a profile is not required.

O. Cross connection control notes included in **Appendix B** of this Chapter.

P. For plat or road projects, provide unique stationing down the center of the road with the appropriate offset at all water main appurtenances. For all other projects, provide unique stationing down the center of the water main tied into known survey control.

Q. Private water mains and hydrants are labeled as “Private” or “PVT” when applicable.

3.04.06.B Sanitary Sewer

Sanitary sewer system design shall be in accordance with **Chapter 8 – Sanitary Sewer and Storm Drainage Facilities**, and include the following items:

A. Sanitary sewer pipe size, locations, and type of material.

B. Location of manholes. Indicate type of manhole, stationing, offset, and number manholes consecutively. During the City review process, manhole numbers shall be assigned by the City to be incorporated into the next submittal.

C. Indicate knockouts in manholes for future connections.

D. The direction of sewage flow shall be indicated with an arrow at the manhole. Proposed sewer shall have solid arrowheads while existing pipe and manholes shall be shown in ghost or screened lines with the arrowhead and manhole not filled. The location of the frame and cover on the manhole, positioned over the widest part of the shelf and not over a flow channel, shall be shown.

E. Drop manholes, if approved, are to be detailed on the plans.

F. Length, slope, type and class of material, and inverts for side sewers.

G. Stationing for side sewers, measured from downstream manholes.

H. Connection of a side sewer to the City's sanitary sewer pipe shall be indicated with a tee.

I. Locations of sanitary sewer cleanouts.

J. Locations of sanitary sewer easements.

K. Clearly define right-of-way and adjacent property lines. Parcel numbers for all lots adjacent to the improvements shall be indicated, with existing or proposed finished floor elevations.

L. Floor drains, drains from other covered areas potentially subject to pollutants, and wash areas within parking lots shall be connected to the sanitary sewer through an approved oil/water separator.

3.04.06.C Storm Drainage

Grading and Storm Drainage system design shall be in accordance with **Chapter 5 – TESC, Clearing, and Grading**, and **Chapter 8 – Sanitary Sewer and Storm Drainage Facilities** (which incorporates by reference the SWMM), and include the following applicable items:

A. The layout of all the storm drainage pipes with the length, slope, and material type indicated in the labeling of the storm drainage pipes. Provide arrows to indicate the direction of flow into the structures.

B. Typical ditch section.

C. Location of manholes and catch basins. Indicate type, stationing, offset, type of lid, rim and invert elevations, and number manholes and catch basins consecutively.

D. Existing and proposed sanitary sewers and water mains. Identify crossings and minimum distance between utilities.

E. Building downspouts or footing drain locations, inverts and connections to the storm drain system.

F. For single-family home sites, indicate means for collection and discharge of water from roof, foundation drains, wall drains, and driveways.

G. Provide arrows to indicate drainage direction in parking lots, roadway intersections and cul-de-sacs.

H. Reference to the detail/BMP and/or cross-section sheets for storm drainage detention or retention facilities such as the control discharge structure and pond cross-sections. Indicate water surface elevations, allowable discharge rates, and design storms.

I. Show an emergency overflow to the public storm drainage system.

J. Berm dimensions, material, and compaction requirements for ditches and detention ponds.

K. Indicate type of material and size of energy dissipaters (riprap, etc.).

L. Provide details of the storm drainage water quality facility.

M. Limits of surface water ponding within parking lots.

N. Trash racks.

O. Location and widths of easements.

P. Location and type of pumps.

Q. Stormwater treatment/quality control facility location, length, width, slopes, and cross-section.

R. Planting and seeding requirements with establishment procedure (construction sequence) for water quantity or quality systems.

S. Finish floor elevations of all buildings.

T. Indicate separation from any pipe, infiltration trench, open ditch, water quality and stormwater facilities to any property line, structure and obstruction.

U. For ponds, provide landscaping, fencing, maintenance access, critical water surface elevations, and other items, such as walls and liners.

V. Number the storm drain structures (Numbers will be provided by the City prior to final plan approval).

W. Low Impact Development (LID) facility location, length, width, slopes, and cross-section.

X. Provide the Auburn Storm Drainage Detention Pond Notes as shown in **Appendix B** of this Chapter when public detention ponds are proposed.

3.04.07 Utility Profile Sheet

Utility Profiles are to be included on the associated utility plan sheet(s) with plan view above the profile view and corresponding unique stationing. All existing and proposed parallel and crossing utilities shall be shown on the profile.

3.04.07.A Storm Drainage

Profiles shall be created for all designed storm systems. These profiles are to include the following items where applicable:

A. Structure size, location, type, station, invert elevation, type of lid or grate, rim elevation, stationing and offset.

B. Pipe size, type of material, slope (ft./ft.), and lineal footage.

C. Utility crossings shall identify size and type of utilities involved.

D. Ditches, size, type, and slope.

E. Existing and finished grade along pipe centerline.

F. Connections to existing structures.

3.04.07.B Water

Profiles shall be provided for all public water systems, including on-site systems and systems within the street/City right of way and easements, These profiles shall include the following items where applicable:

A. Pipe size, type of material, lineal footage, cover, stationing and offset.

B. Utility crossings shall identify size and type of utility involved.

C. Existing and finished grade along pipe centerline.

D. Connections to existing mains and fittings.

E. Label fittings and valves, including concrete blocking.

3.04.07.C Sanitary Sewer

A profile will be required for all public sanitary sewer mains. These profiles are to include the following items where applicable:

A. Structure size, location, type, station, invert elevations, type of lid, rim elevation, stationing and offset.

B. Pipe size, type of material, slope (ft./ft.), and lineal footage.

C. Utility crossings shall identify size and type of utility involved.

D. Existing and finished grade along pipe centerline.

E. Connections to existing structures.

F. Side sewer locations, stationing and offset.

3.04.08 Public Street Plan and Profile Sheet

When a project includes construction within a public street, excluding utility connections, both a plan and a profile shall be included in the plan set. The Public Street Plan and Profile sheet(s), when required, shall have the applicable items identified below:

3.04.08.A Plan View

The plan view shall include the following items where applicable:

A. Plan views shall be drawn at a 1” = 20’ scale.

B. Existing and proposed rights-of-way.

C. Existing and proposed contours and elevations.

D. Existing and proposed street names.

E. Existing and proposed centerline bearing and distance.

F. Existing and proposed signs and traffic control devices.

G. Existing and proposed storm drainage systems.

H. Existing and proposed sewers and water mains. Identify crossings and minimum distances between utilities.

I. Horizontal curves.

J. Horizontal stationing.

K. Location of curbs, sidewalks, wheelchair ramps, and driveways (by station).

L. Locations of monuments at all centerline intersections, cul-de-sacs, PCs, and PTs by station.

M. Street luminaires, conduit for street lights, traffic signals, and traffic signal loop detectors located within the vicinity of the project.

N. Mailbox types and locations where new or relocated mailboxes are proposed. Submit to postmaster for approval.

O. Address any horizontal utility conflicts in plan.

P. Street landscaping, if required.

Q. Construction limits.

R. Slope excavation and/or embankment limits.

S. Pavement and lane tapers.

T. Identify any non-standard street cross slopes.

U. ADA Maximum Extent Feasible (MEF) documented on the Plans with a notation indicating the deficiency and that the curb ramp was designed to the MEF.

V. All proposed and existing underground and overhead utilities shall be shown and labeled on the plan in grayscale. The locations shall be coordinated and approved through the appropriate utility purveyor.

3.04.08.B Profile

The profile shall include the following items where applicable:

A. Profiles shall be drawn using 1” = 20’ horizontal and 1” = 2’ vertical scales. 1” = 5’ vertical scale may be used in place of 1” = 2’ in areas with steep slopes.

B. Existing and proposed centerline road grade.

C. Existing and proposed storm drainage systems.

D. Existing and proposed sewers and water mains (use ghost lines). Identify crossings and minimum distances between utilities.

E. Existing and proposed flowline grades.

F. Finish grade elevations every 50 feet and every 25 feet for vertical curves along design centerlines.

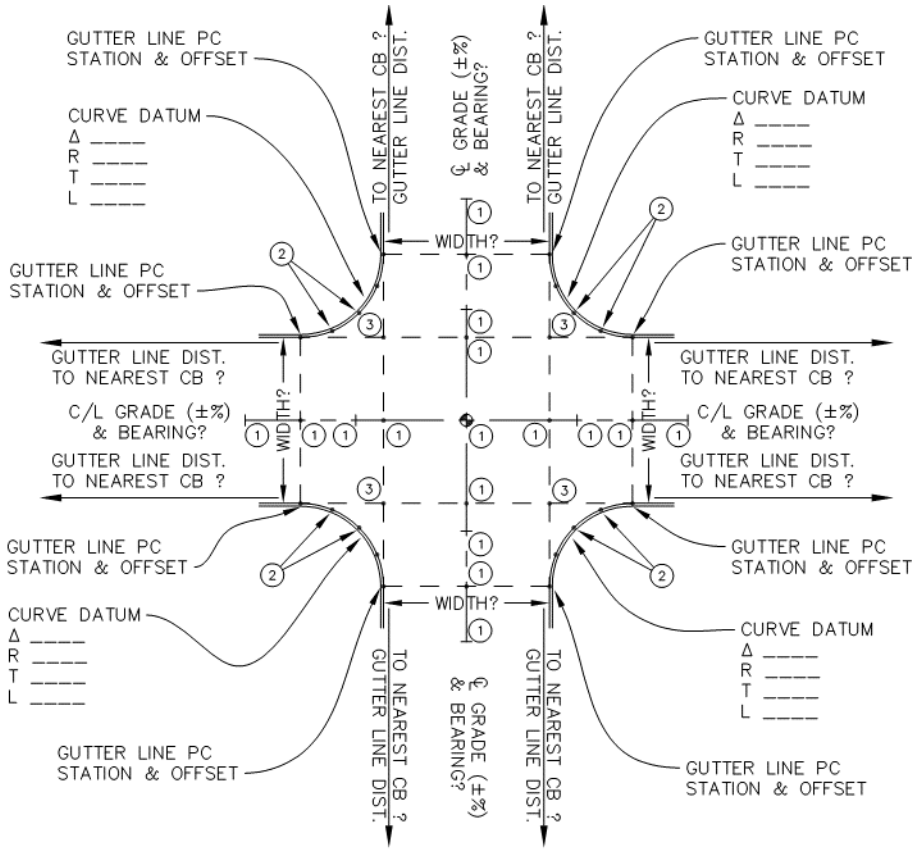
G. Vertical curve information in profile section.

H. Address vertical utility conflicts in profile.

3.04.08.C Intersections

Intersection plans shall be 20 scale drawings in conformance with **Figure 3-1** below:

Figure 3-1 Intersection Plan Sheet Requirements



NOTES:

A. LABEL INTERSECTION & STATIONING. SHOW FINISH ELEVATIONS AT:

(1) CENTER LINES, AS SHOWN.

(2) GUTTER LINE RADII: PC'S, PT'S, ¼ POINTS, & HIGH/LOW POINTS.

(3) GUTTER LINE PI'S.

B. IF RADIUS POINT FOR R.O.W. & GUTTER LINE DIFFER, PROVIDE DATA OF R.O.W. CURVE.

C. LABEL CENTERLINE INTERSECTION EQUATION STATIONS (IF APPLICABLE).

3.04.08.D Typical Roadway Sections

Typical roadway sections shall show pavement depths, widths and materials, cross-slopes of pavement (%), centerline, dimensioned right-of-way lines, curb and gutter, ditches, embankment and excavation slopes (1H:1V), walls, etc. Typical sections will be labeled within identified station ranges.

3.04.08.E Striping and Signing

Provide maximum 40 scale plans per these Standards, Auburn City Code, WSDOT and MUTCD, including lane markers, pavement markings, and signing.

3.04.08.F Signalization

Provide 20 scale separate detailed signalization plan per City of Auburn Standards, including poles, bases, conduits, and traffic loops.

Signal Plan Sheet

1. The plan sheet shall conform to the following requirements:
    a. For areas that require greater detail (such as the corner that has the controller), a blown-up detail may be necessary at a 1″=10′ scale.
    b. All proposed signal equipment, including signal poles, mast arms, heads, signs, junction boxes, conduit, loops, controller, and service cabinet shall be shown as bold.
    c. All existing and proposed right-of-way information shall be shown and labeled on the plan, including easements needed for signal equipment. The line type shall be different for easements and right-of-way.
    d. All proposed curb, sidewalk, proposed striping, and existing curb/striping (to remain) information shall be shown on the plan in gray scale (screened back).
    e. Sight triangle lines shall be shown on plans in gray scale.
    f. All proposed and existing underground and overhead utilities shall be shown and labeled on the plan in gray scale.
    g. Provide on the plan signal construction notes as shown in **Appendix B** of this chapter.
2. Construction notes shall contain, but not be limited to:
    a. Signal pole and foundation installation (including pole type, mast arm length, and installation of items on the pole).
    b. Controller cabinet and foundation installation.
    c. Coordination of utility removal/relocation.
    d. Coordination of connection of power, and power source type.
    e. Interconnect connection to other signals.
    f. Removal of existing signal and/or street light equipment.
3. Displays: The plan sheet shall include the following displays:
    a. Phase diagram display.
    b. Signal display showing signal layout of all vehicle signal heads and pedestrian heads.
4. Detection: The plan sheet shall include:
    a. Stop bar, intermediate and advanced loop location, and numbering.
    b. Pedestrian push button location.
    c. Preemption detection location and numbering.
5. Signal Poles and Associated Equipment: The plan sheet shall contain, but not be limited to:

a. Signal Pole Locations and Numbering: The locations shall be called out by the major arterial station and offset.
b. Signal head location and numbering.
c. Pedestrian head location and numbering.

6. Controller and Service Location:

   At least one corner of the controller/service foundation shall be called out by the major arterial station and offset. The footprint of the foundation shall be shown on the plans with the controller and service cabinets oriented on the foundation as they would be placed in the field. If the information required to show all the controller/service conduit connections and foundation footprint makes the plan too cluttered, a blown-up detail of the corner containing this information is needed at a 1″=10′ scale.

7. Power Source Location:

   The location of the power source shall be identified on the plans.

8. Wire Schedule:

   a. A wire schedule table shall include run numbers, conduit size, wire type, and comments.
   b. Comments shall include, but not be limited to, number of twisted loop pairs for runs between the detection loops and adjacent junction box, identification of spare conduits, conduits utilized only by interconnect or illumination, and power cables.
   c. For designs that include modifications to an existing signal, all existing wire runs affected by the design shall be shown on the wire schedule.

9. Junction box type and approximate location.

10. Signing:

    a. Signs shall be shown on all mast arms. Signs that are post mounted but are signal related (such as a “signal ahead” sign) shall be shown on the signal plan.
    b. A sign display shall be shown on the plan with the MUTCD sign designation, dimensions, and lettering type for all signs.
    c. Indicate removal of existing stop signs after signal is in operation.
    d. Installation of “New Signal Ahead” or “Signal Revision Ahead” signs.

11. Other Illumination:

    a. Proposed illumination that will use the signal service cabinet, but is located outside the four quadrants of the intersection, shall be shown as proposed on a separate illumination plan sheet. On the signal plan sheet, the illumination shall be shown as gray scale and labeled as “proposed illumination, see illumination plans.” However, once the illumination enters the quadrants of the intersection (i.e., when it is using the same junction box as the signal equipment), it shall be shown as proposed on the signal plan and gray scale on the illumination plan.
    b. Indicate the circuit that street lights are on.

Wire Diagram Plan

In general, the wire diagram shall include the following:

1. All signal heads, pedestrian heads, pedestrian push buttons, luminaires, preemption detectors, loops, and junction boxes drawn in schematic forms.

2. All termination points in the controller cabinet. The wire diagram shall include every termination point the controller will have, including those that may not be used for this particular signal design.

3. All wiring associated with the items above, as well as the wiring for interconnect. The wire diagram shall show how these items are connected to the controller.

4. Location of wire splices.

5. All termination numbering at each end of each wire. For example, the 5-conductor cable connecting a signal head to the controller shall have the termination numbering called out at the signal head and in the termination points in the controller.

6. All wire colors at each end of the wire.

7. A call out to each wire run noting the number and type of each wire.

8. Intersection schematic with a north arrow showing approach phase.

9. Pole, signal head, pedestrian head, preemption detection, and loops shall be numbered on the wire diagram.

Pole Schedule Plan

The pole schedule shall include the following:

1. A signal standard detail chart.

2. Pole orientation attachment and base detail, pole foundation detail, and signal standard detail.

3.04.08.G Illumination

A. Street Light Plans shall be labeled as Street Light Plans, and shall be prepared, stamped, signed, and dated by a professional engineer.

B. Street Light Plans will include references to all applicable City of Auburn Standard Details and/or Washington State Department of Transportation (WSDOT) Standard Plans, or copies of other specific details applicable to the project shall be shown on the plans.

C. Plans should show any proposed street trees and underground utilities in the background.

D. Street Light Plans shall be provided on separate and uncluttered sheets that do not show unrelated street, utilities, or on-site improvements. Street Light Plans shall be drawn to a maximum engineer's scale of 1" = 40'.

E. Street Light Plans shall at a minimum include the following applicable items for new or existing street lighting system:

1. Lighting schedule with the following information in a table format:
    a. Luminaire make and model
    b. Lamp/Ballast type
    c. Lamp wattage
    d. Uniformity Ratio
    e. Minimum Light Level
    f. Average Maintained Light Level
    g. Light standard type
    h. Mounting height (ft.)
    i. Bracket or davit arm length (ft.)
    j. Light distribution pattern
    k. Luminaire spacing distance (ft.)
2. Light standard locations by station and offset from the centerline of the street to the center of the light standard. Show all existing street lights for a distance of 500 feet in both directions from the limits of the project site, including both sides of the street(s) and in medians.

F. Wiring/Conduit schedule with the following information in a table format:

1. Circuit number
2. Conduit size, material, and purpose (street lighting, traffic signal interconnect, spares, etc.).

G. Location of points of service (the PSE connection or service location and the new or existing City Electrical Service Cabinet(s).

H. Location of junction boxes. Indicate junction box type and purpose (lighting, traffic signal, etc.).

I. Existing topography, including but not limited to the location of driveways, street trees (including species), street intersections, overhead utilities (including maximum and minimum heights), underground utilities (including sizes), medians, curb, and lane widths (pavement markings).

3.04.08.H Streetscape

Provide information on planting of the public landscape strips along the street frontage. Information shall include the following:

A. Type and size of trees.

B. Tree spacing.

C. Type of ground cover.

D. Root control/barrier.

E. Irrigation if applicable.

F. Show all proposed and existing surface features and underground utilities.

3.04.08.I Other Features

Include locations of any other feature including mailboxes and bus stops. Any mailbox placement that requires approval from the postmaster shall include the Postmaster **Approval Block (B-2) in Appendix A** of this chapter.

3.04.09 Site and Landscape Plan Sheet

The site and landscape sheets (separate plans may be more appropriate), when required, shall have the following applicable items:

A. Demonstrate conformance with ACC 18.50, “LANDSCAPING AND SCREENING” and ACC 18.52 “OFF-STREET PARKING AND LOADING”.

B. Label name, classification, and boundary of adjacent streets both public and private.

C. Pavement types with unique hatching.

D. Site signage and striping.

E. The boundaries and dimensions of site.

F. Show and label any easements.

G. Show and label any critical areas and buffers affecting the site.

H. The location of on-site buildings and their eaves or protrusions (decks, porches, covered entries, etc.) and other site features (generators, compressors, retaining walls, fuel tanks, etc.).

I. The location of on-site parking stalls, drive aisles, and loading/unloading areas and required fire lanes with dimensions.

J. The location and size of landscape areas (measured to the inside of curbs).

K. Landscape area calculations as required by ACC 18.50.040, “Landscape development standards.”

L. The species (common and scientific name), condition (bare root, balled & bur lapped) or containerized) and size of planting materials (shown within a “planting schedule”).

M. Notation of which species are native to, or adapted to the Pacific Northwest (minimum 50%).

N. Site preparation specifications (removal of construction debris, soil amendment, fertilizer, etc.).

O. The location and type of non-vegetated groundcovers such as rock, mulch, etc.

P. The location, size, and proposed screening of outdoor storage areas and dumpster/refuse areas.

Q. The location, species, and size (diameter at DBH) of all existing trees and measures to protect them.

R. Show all proposed and existing surface features and underground and above-ground utilities affecting the site.

S. Landscaping notes, including:

   a. Plant materials list substitutions requiring city approval and possibly “as-built plans.”

   b. Planting notes (e.g., when to remove tree stakes).

   c. Soil quality and installation.

   d. Maintenance after installation.

T. Site furnishings such as light posts, bike racks, benches, trash cans, and shopping cart racks.

3.04.10 Site Irrigation Plan sheet

The site irrigation sheets, when required, shall have the following applicable items:

A. The connection point to the City system, together with the water meter size.

B. The size, location, and type of the backflow prevention.

C. The proposed layout of the irrigation system.

D. Be consistent with the site’s building and landscaping plans.

E. Show the existing and/or proposed location of all parcel lines.

3.04.11 Critical Area Restoration/Mitigation

A critical area restoration or mitigation sheet, when required, shall include the items as required by the City pursuant to ACC 16.10 and 15.68.

3.04.12 Phasing Plans

Applications that propose to complete projects in phases shall submit a phasing plan which incorporates all required conditions of approval and details infrastructure improvements and sequencing of the phases. Prior to occupancy of any buildings within a phased project, complete construction, inspection, acceptance, and transfer of ownership to the City via Bill of Sale as well as recorded easements are required for all public utilities (water, sewer, & storm) serving the building and public road improvements/right of way dedications must be complete. If the private utilities are proposed to be constructed in phases, the points of connection between phases and how the future phases will be constructed without affecting the operation of the previous phases must be shown.

Phasing plans are subject to approval by the City Engineer and Building Official and shall include the following information:

1. Illustrative maps for each proposed phase which clearly mark in heavy lines the boundaries of the subject phase, label the phase alphabetically (to avoid confusion with lot numbers), and depict roads, lots, infrastructure, easements, dedications and open space which are included within the subject phase. The plan shall also illustrate those proposed improvements which mitigate impacts associated with the unbuilt portions of the project which are not located within the boundaries of the subject phase. Previously established phases, including roads, lots, infrastructure, easements, dedications, and open space, should be shown on the map shaded or gray-scaled. All phasing maps shall be drawn at the same scale.

2. A narrative description or table which describes each phase and its associated improvements. In addition, the narrative or table shall demonstrate that each phase would comprise a “stand-alone” development which, should no subsequent phases be constructed, would meet or exceed City standards and all other conditions of approval. The narrative should also describe the proposed timeline for completion of the entire project. The narrative must address emergency access, street improvements, and alternative construction access.

Appendix A – Approval Blocks

Sample Approval Block (B-1):

PROJECT REF: _____

THESE PLANS ARE APPROVED FOR CONFORMANCE WITH THE CITY OF AUBURN'S REQUIREMENTS.

DEV. REVIEW ENGINEER: _____

DATE APPROVED: _____

Sample Postmaster Approval Block (B-2):

CITY OF AUBURN POSTMASTER APPROVAL

APPROVED BY: _____

TITLE/POSITION: _____

DATE APPROVED: _____

Sample Engineering Approval Block (B-3):

CITY OF AUBURN APPROVALS

THIS PLAN SET FOR PROJECT _____, SHEETS ___ TO ___ ARE APPROVED FOR CONSTRUCTION BY:

_____ , P.E., CITY ENGINEER: _____ DATE: _____

_____, DEV. REVIEW ENGINEER: _____ DATE: _____

_____, PLANNER: _____ DATE: _____

Appendix B – Standard Notes

The following General Notes shall apply to Development projects:

GENERAL NOTES

1. CONSTRUCTION SHALL CONFORM TO THE CITY OF AUBURN'S ENGINEERING DESIGN AND CONSTRUCTION STANDARDS, EXCEPT AS OTHERWISE APPROVED BY DEVIATION, AND BE IN ACCORDANCE WITH THE APPROVED PLANS. ANY CHANGES FROM THE APPROVED PLAN WILL REQUIRE APPROVAL FROM THE OWNER, ENGINEER OF RECORD, AND THE CITY.

2. ALL WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE "WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT) STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION (CURRENT EDITION)," EXCEPT WHERE SUPPLEMENTED OR MODIFIED BY THE CITY'S CONSTRUCTION STANDARDS MANUAL. THE ABOVE DOCUMENTS SHALL BE AVAILABLE AT THE JOB SITE DURING CONSTRUCTION.

3. A PRE-CONSTRUCTION MEETING SHALL BE REQUIRED PRIOR TO THE START OF ALL CONSTRUCTION. CONTACT THE PUBLIC WORKS DEPARTMENT AT (253) 931-3010, TO SCHEDULE A MEETING.

4. UNLESS STATED OTHERWISE, LOCATIONS SHOWN FOR EXISTING UTILITIES ARE APPROXIMATE. THE CONTRACTOR IS CAUTIONED THAT OVERHEAD UTILITY LINES MAY NOT BE SHOWN ON THE DRAWINGS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE TRUE ELEVATIONS AND LOCATIONS OF ALL UNDERGROUND UTILITIES AND THE EXTENT OF ANY HAZARD CREATED BY OVERHEAD UTILITY LINES. IDENTIFICATION, LOCATION, MARKING, AND RESPONSIBILITY FOR UNDERGROUND FACILITIES OR UTILITIES, IS GOVERNED BY THE PROVISIONS OF SECTION 19.122 REVISED CODE OF WASHINGTON (RCW). PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL CALL ONE-CALL (811) FOR UTILITY LOCATIONS (WATER, SANITARY SEWER, STORM SEWER, GAS, POWER, TELEPHONE, AND CABLE).

5. IF A PROPOSED ROUTE IS NOT INCLUDED ON THESE PLANS, A PROPOSED ROUTE AND SCHEDULE FOR HAULING MATERIAL TO THE SITE SHALL BE SUBMITTED TO THE CITY FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION. IF THE CITY BELIEVES THAT THE PROPOSED HAUL ROUTE WILL ADVERSELY IMPACT THE STREET NETWORK, A SEPA AMENDMENT MAY BE REQUIRED TO EVALUATE THE IMPACTS AND DETERMINE MITIGATION REQUIREMENTS BEFORE BEGINNING WORK. HAULING MAY BE LIMITED TO APPROPRIATE OFF-PEAK HOURS OR ALTERNATIVE ROUTES, AS DETERMINED BY THE CITY.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PUBLIC SAFETY ON AND AROUND THE PROJECT. PRIOR TO THE START OF WORK, ALL METHODS AND EQUIPMENT USED FOR TRAFFIC CONTROL AND STREET MAINTENANCE SHALL BE SUBMITTED TO THE CITY FOR APPROVAL. CONTRACTORS AND THEIR SURETY SHALL BE LIABLE FOR INJURIES AND DAMAGES TO PERSONS AND PROPERTY SUFFERED BECAUSE OF CONTRACTORS OPERATIONS OR NEGLIGENCE CONNECTED WITH THEM.

7. ALL CONSTRUCTION SURVEYING FOR EXTENSIONS OF PUBLIC FACILITIES SHALL BE DONE UNDER THE DIRECTION OF A WASHINGTON LICENSED LAND SURVEYOR OR A WASHINGTON LICENSED PROFESSIONAL CIVIL ENGINEER.

8. CERTIFIED DRAWINGS ARE REQUIRED PRIOR TO PROJECT ACCEPTANCE. REFER TO THE CITY'S "DEVELOPMENT RECORD CONSTRUCTION DOCUMENT" HANDOUT.

GRADING AND EROSION CONTROL NOTES

1. WITHIN THE CITY OF AUBURN, ALL REQUIRED SEDIMENTATION AND EROSION CONTROL FACILITIES INDICATED ON THE PLANS MUST BE CONSTRUCTED AND IN OPERATION PRIOR TO LAND CLEARING AND/OR OTHER CONSTRUCTION ACTIVITIES. THESE FACILITIES SHALL BE MAINTAINED AND UPGRADED, IF NECESSARY, TO ENSURE THAT SEDIMENT-LADEN WATER AND STORM DRAINAGE RUNOFF DOES NOT IMPACT THE ADJACENT PROPERTIES, NATURAL DRAINAGE WAYS, OR THE EXISTING CITY STORM DRAINAGE SYSTEM.

2. THE SOURCES FOR ALL MATERIAL IMPORTED TO THE SITE SHALL BE APPROVED BY THE CITY.

3. THE STORM DRAINAGE DETENTION (RETENTION IF INFILTRATION SYSTEM IS USED), SEDIMENTATION AND EROSION CONTROL FACILITIES DEPICTED ON THE APPROVED DRAWINGS ARE INTENDED TO BE MINIMUM REQUIREMENTS TO MEET ANTICIPATED SITE CONDITIONS. ADDITIONAL DRAINAGE AND EROSION CONTROL FACILITIES MAY BE REQUIRED AS SITUATIONS WARRANT DURING CONSTRUCTION. THE IMPLEMENTATION, MAINTENANCE, REPLACEMENT AND ADDITIONS TO THESE CONTROL SYSTEMS SHALL BE THE RESPONSIBILITY OF THE PERMITEE.

4. THE TEMPORARY EROSION CONTROL FACILITIES, INCLUDING ALL PERIMETER CONTROLS AND THE DETENTION (RETENTION IF INFILTRATION SYSTEM IS USED), CONTROL PONDS, SHALL REMAIN IN PLACE UNTIL FINAL SITE CONSTRUCTION IS COMPLETED. AFTER CITY APPROVAL, THE CONTRACTOR WILL BE RESPONSIBLE FOR REMOVING ALL TEMPORARY FACILITIES.

5. THE CONTRACTOR WILL BE REQUIRED TO WATER THE SITE, AS NECESSARY, TO REDUCE DUST EMISSIONS AS A RESULT OF CONSTRUCTION ACTIVITY.

6. NO TRACKING IN THE ROADWAY IS ALLOWED. IF SEDIMENT IS TRACKED ONTO THE ROAD, THE ROAD SHALL BE THOROUGHLY AND IMMEDIATELY CLEANED BY SHOVELING OR PICKUP SWEEPING. TRANSPORT SEDIMENT TO A CONTROLLED SEDIMENT DISPOSAL AREA. KEEP STREETS CLEAN AT ALL TIMES.

7. ALL AREAS OF ACTIVE EARTHWORK WHICH HAVE THE POTENTIAL FOR EROSION AND SEDIMENTATION IMPACTS ON ADJACENT PROPERTIES, NATURAL DRAINAGE WAYS, OR THE EXISTING CITY STORM DRAINAGE SYSTEM MUST BE STABILIZED ACCORDING TO THE FOLLOWING SCHEDULE: FROM MAY 1 TO SEPTEMBER 30, AREAS AT FINAL GRADE AND THOSE THAT ARE SCHEDULE TO REMAIN UN-WORKED FOR MORE THAN SEVEN (7) DAYS SHALL BE STABILIZED. FROM OCTOBER 1 TO APRIL 30 EARTHWORK ACTIVITIES SHALL BE CONDUCTED IN STAGES IN ORDER TO MINIMIZE SOIL EXPOSURE. EXPOSED

SOILS THAT WILL REMAIN UN-WORKED FOR MORE THAN TWO (2) DAYS SHALL BE STABILIZED IMMEDIATELY.

STORM DRAINAGE DETENTION POND NOTES

PUBLICLY OWNED AND MAINTAINED DETENTION FACILITIES SHALL MEET THE FOLLOWING REQUIREMENTS:

1. ALL POND CONSTRUCTION, LANDSCAPING, AND TEMPORARY IRRIGATION, IF USED AS NOTED BELOW, SHALL BE COMPLETED PRIOR TO SCHEDULING AN INITIAL PUNCHLIST INSPECTION. THE GRASS SHALL HAVE SPROUTED OVER AT LEAST 80% OF THE AREA TO BE SEEDED.

2. ALL POND ACCESS RAMPS SHALL BE CONSTRUCTED WITH A MINIMUM OF 8" COMPACTED BASE COURSE TOPPED WITH A MINIMUM OF 2" COMPACTED TOP COURSE. THE POND RAMP SUBGRADE SHALL BE COMPACTED TO A MINIMUM OF 95% MODIFIED PROCTOR.

3. THE POND SIDE SLOPES SHALL BE SCARIFIED, AND ALL VEGETATIVE AND CONSTRUCTION DEBRIS AND ROCKS LARGER THAN 2 INCHES SHALL BE REMOVED PRIOR TO HYDROSEEDING. HYDROSEEDING SHALL BE APPLIED OVER THE ENTIRE DETENTION POND BOTTOM (OR ON THE SLOPES ABOVE THE WATER QUALITY ELEVATION FOR WETPONDS) UP TO THE TOP OF THE BERM.

4. THE POND BOTTOM AND ALL INTERIOR SIDE SLOPES PER REQUIREMENT 3 ABOVE SHALL BE SEEDED WITH THE FOLLOWING GRASS MIXTURE:

TURF-TYPE TALL FESCUE AT	40%;
TURF-TYPE PERENNIAL RYE AT	30%;
RED FESCUE AT	25%;
COLONIAL BENTGRASS AT	5%

5. APPLICATION RATE: HYDROSEED AT 60 LBS/ACRE; HAND SEED AT 2 LBS/1,000 SQUARE FEET.

6. THE NEED FOR WATERING TO ESTABLISH THE HYDROSEEDING WILL DEPEND ON WHAT TIME OF YEAR THE HYDROSEEDING IS APPLIED AND HOW LONG IT TAKES FOR THE SEED TO BE ESTABLISHED. IF A TEMPORARY IRRIGATION SYSTEM IS USED, IT SHALL BE ATTACHED TO THE FENCE OR PLACED AT LOCATIONS THAT DO NOT INTERFERE WITH MOWING.

7. THE CONTRACTOR IS RESPONSIBLE FOR WEED CONTROL AND REMOVAL OF LITTER PRIOR TO PLANTING AND THROUGHOUT THE PLANT ESTABLISHMENT PERIOD.

8. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY IRRIGATION SYSTEM PRIOR TO EXPIRATION OF THE 1-YEAR WARRANTY PERIOD.

FIRE SPRINKLER SYSTEMS NOTES

SPRINKLER SYSTEMS SHALL MEET CITY OF AUBURN STANDARD 7.06.02 AND THE FOLLOWING REQUIREMENTS:

1. PROPOSED FIRE LINE TO BE SIZED BY A FIRE PROTECTION ENGINEER.

2. BACKFLOW PROTECTION IS REQUIRED ON FIRE SPRINKLER LINES.

3. A SEPARATE DETAILED PLAN OF THE UNDERGROUND FIRE SPRINKLER SUPPLY LINE SHALL BE APPROVED BY THE FIRE MARSHAL AND INSTALLED BY A WASHINGTON STATE CERTIFIED LEVEL "U" CONTRACTOR IN ACCORDANCE WITH WAC 212-80-010.

4. A POST INDICATOR VALVE SHALL BE INSTALLED ON THE FIRE SPRINKLER SUPPLY LINE TO ISOLATE THE SYSTEM FROM THE CITY'S WATER SYSTEM WHEN REQUIRED FOR REPAIR.

5. BLOCKING, PIPING, AND RODDING DETAILS SHALL BE PROVIDED WITHIN THE SUBMITTAL.

6. APPROVAL OF THE CIVIL PLANS DOES NOT APPROVE THE INSTALLATION OF THE SPRINKLER SYSTEM SUPPLY PIPING.

CROSS CONNECTION CONTROL NOTES

CROSS CONNECTION CONTROL SHALL MEET THE FOLLOWING REQUIREMENTS:

1. ALL BACKFLOW PREVENTION ASSEMBLIES SHALL BE INSTALLED IN A MANNER THAT WILL ALLOW PROPER OPERATION, AND IN-LINE TESTING AND MAINTENANCE.

2. A BACKFLOW ASSEMBLY PERMIT IS REQUIRED FOR ALL ASSEMBLIES INSTALLED WITHIN THE CITY OF AUBURN, AND/OR THE CITY'S WATER DISTRIBUTION SYSTEM.

3. BACKFLOW ASSEMBLIES MUST BE ON THE CURRENT WASHINGTON STATE DEPARTMENT OF HEALTH – BACKFLOW ASSEMBLIES APPROVED FOR INSTALLATION LIST.

4. BACKFLOW ASSEMBLIES MUST BE TESTED BY A STATE CERTIFIED BACKFLOW ASSEMBLY TESTER, AND INSPECTED AND APPROVED BY A CITY OF AUBURN CROSS CONNECTION CONTROL SPECIALIST.

5. UPON RECEIVING APPROPRIATE FEE PAYMENTS AND VERIFYING THAT REDUCED PRESSURE BACKFLOW ASSEMBLY (RPBA) HAS BEEN INSTALLED (NOT BY CITY), THE CITY WILL INSTALL THE DOMESTIC METER INSIDE THE DOMESTIC METER BOX. THE PASSING TEST REPORT FOR THE RPBA MUST BE RECEIVED BY THE CITY WITHIN 72 HOURS OF THE INSTALLATION OF THE DOMESTIC METER.

6. UPON RECEIVING APPROPRIATE FEE PAYMENTS AND VERIFYING THAT DOUBLE CHECK VAULT ASSEMBLY (DCVA) HAS BEEN INSTALLED (NOT BY CITY), THE CITY WILL INSTALL THE IRRIGATION METER INSIDE THE IRRIGATION METER BOX. THE PASSING TEST REPORT FOR THE DCVA MUST BE RECEIVED BY THE CITY WITHIN 72 HOURS OF THE INSTALLATION OF THE IRRIGATION METER.

7. DOUBLE CHECK VALVE ASSEMBLY (DCVA, NOT BY CITY) TO BE INSTALLED BY THE CONTRACTOR ONTO THE FIRE SERVICE LINE, THE PASSING TEST REPORT FOR THE DCVA MUST BE RECEIVED BY THE CITY WITHIN 72 HOURS OF THE CONNECTION OF THE BUILDING FIRE SERVICE LINE TO THE CITY MAIN.

SIGNAL CONSTRUCTION NOTES

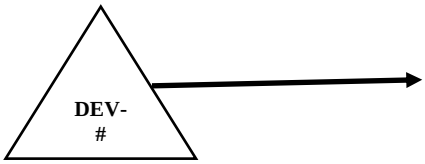
1. THE LOCATION OF ALL CONDUIT, JUNCTION BOXES, AND CABINETS SHOWN ON THIS PLAN ARE FOR GRAPHIC PRESENTATION ONLY AND FINAL LOCATION SHALL BE DETERMINED BY THE ENGINEER.

2. ALL TRAFFIC SIGNAL AND PEDESTRIAN HEADS AND PUSH BUTTONS SHALL BE SECURELY AND COMPLETELY COVERED WHILE SIGNAL IS NOT IN OPERATION.

3. ALL CONDUCTORS FOR SIGNAL HEADS, LOOPS, PEDESTRIAN HEADS, PUSH BUTTONS AND STREET LIGHTS SHALL BE LABELED IN EACH JUNCTION BOX.

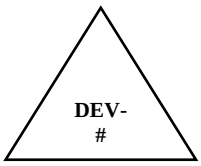
Appendix C – Deviations, Maximum Extents Feasible, and Deferral/Fee-In-Lieu

Plan Sheet Deviation Call-Out:



- Leader arrow points to deviation location.
- DEV-# is the City assigned deviation number.

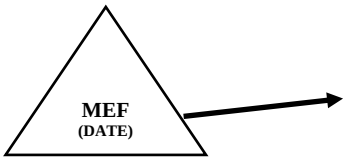
Plan Sheet Deviation Description:



SECTION X.X.X OF THE _____, APPROVED _____.

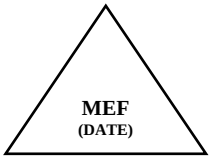
- Description is included with the construction notes on the plan sheet where the deviation is located.
- Description includes a specific citation to the Construction Standards, Design Standards, or SWMM Supplement, as applicable to the Deviation Request.
- Includes approval date in mm/dd/yyyy format.
- Includes a brief description stating why the deviation was allowed, as provided by the City.

Plan Sheet Maximum Extents Feasible (MEF) Call-Out:



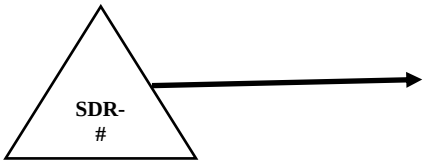
- Leader arrow points to the MEF location. Date is City approval date in mm/dd/yyyy format.

Plan Sheet MEF Description:



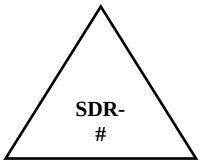
- Description is included with the construction notes on the plan sheet where the MEF is located.
- Description explains what aspect of the facility does not meet ADA requirements and what is constraining it from meeting requirements.
- Includes approval date in mm/dd/yyyy format.

Plan Sheet Deferral (Street Delay) or Fee-In-Lieu Call-Out:



- Leader arrow points to deviation location.
- SDR-# is the City assigned street delay number.

Plan Sheet Deferral (Street Delay) or Fee-In-Lieu Description:



- Description is included with the construction notes on the plan sheet where the deferred improvements would have been located.
- Description includes a summary of the deferred improvements.

Appendix D – Survey Standards

COA Horizontal Datum & Basis of Bearing Information (Ref RCW 58.09.060; WAC 332-130-050)

The City of Auburn's horizontal datum is NAD83(1991), Washington State Plane Coordinates, North Zone, 4601

Basis of Bearings: Provide the observed or calculated bearing between two existing, recoverable monuments, along with NAD83(1991) coordinates and an accurate physical description of the monuments, including type, size and date visited. Clearly depict on the survey map ties to the project site from the basis of bearings.

For Example:

HORIZONTAL DATUM
NAD83(1991), Washington State Plane Coordinates, North Zone, 4601
Basis of Bearings:
The monumented centerline of 17th Street NE from COA Mon 509-036 at the intersection of Auburn Way North to COA Mon 509-010 at the intersection of I Street NE = S 89°04'04" E
COA Mon 509-036 **COA Mon 509-010**
N: 121004.23 **N: 120994.54**
E: 1296131.38 **E: 1296726.97**
DESC: Encased brass disk with "X" **DESC: Encased brass disk with punch**

COA Vertical Datum & Benchmark Information (Ref WAC 332-130-050)

The City's vertical datum is NAVD88

Provide Project Benchmark information that includes a physical description of the benchmark, date visited and elevation. Clearly depict the project benchmark on the survey map. If the project benchmark is located a significant distance from the project site, it is recommended that a site benchmark be established in close proximity to the project site and also clearly labeled and depicted on the survey map.

For example:

VERTICAL DATUM
NAV88
Project Benchmark: COA 509-036 (BM B19)
Brass disk in concrete in monument case at SI of Auburn Way North & 17th St NE
Elevation = 65.99 (NAVD88)

Appendix D – Survey Standards (continued)

-- Existing Conditions – Topographic Map Checklist (Ref. WAC 332-130-145)

Topographic elements on maps—Requirements. For the purposes of this section, topographic elements consist of information shown on a map which depicts the horizontal and vertical positions of natural and/or fabricated features and existing terrain surfaces.

The following requirements shall apply to maps that include topographic elements, prepared by professionals registered under chapters 18.43 and 18.210 RCW.

The following elements must be included on every map that includes topographic elements:

☐	1	Name, stamp and dated signature of professional land surveyor licensed in State of Washington who prepared the map drawing.
☐	2	Contact information including company name, address, email address and phone number
☐	3	Location of site, including address (if applicable), tax parcel number, and quarter, quarter section, township and range
☐	4	Legend of symbols used. Symbol size matches in legend and in depiction.
☐	5	North Arrow.
☐	6	Map scale and graphic scale bar
☐	7	Legal description of the subject real property
☐	8	**Horizontal datum**: NAD83(1991), Washington State Place Coordinates (WSPC), North Zone.
☐	9	**Basis of Bearings statement:** Provide the observed or calculated bearing between two existing, recoverable monuments, along with NAD83(1991) coordinates and an accurate physical description of the monuments, including type, size and date visited. Clearly depict on the survey map ties to the project site from the basis of bearings.
☐	10	**Vertical Datum:** NAVD88
☐	11	**Basis of elevations statement:** a listing of reference benchmarks shall be included on the topographic map including elevations, descriptions and date visited.
☐	12	Listing of project benchmarks established on-site or in vicinity including descriptions and elevations clearly labeled and depicted in the map.
☐	13	Statement of horizontal control accuracy per WAC 332-130
☐	14	Clearly depict and label contours and intervals.
☐	15	Statement of elevation and contour accuracy.
☐	16	Statement on intended use and limitations of topographic elements shown on the map.
☐	17	Statement on the source of boundary information and methods used to relate area mapped to said boundaries. Provide indexing information for all record documents referenced.
☐	18	Statement specifying the source of all utilities depicted on the map (such as “surface markings”, “as-built drawings”, “potholing” or “field measurements”)
☐	19	Statement specifying the accuracy of all utilities depicted on the map (such as “locations of underground utilities shown hereon are based upon field measurements” or “…based upon City of Auburn Project CP1099 As-Built drawings”)
☐	20	Statement specifying the scope of work between the project owner and professional land surveyor regarding the comprehensiveness, exclusions, and limits of the utility investigations leading to utility depictions.

Appendix E – Minor Grading Permit Criteria

Except as approved otherwise by the City Engineer, projects meeting all of the following criteria qualify for a Minor Grading Permit Submittal:

A. The project is located on a single family parcel with an existing home, and does not include the construction of a new single family home (accessory dwelling unit is not considered a single family home) or the project is a remodel/tenant improvement on a non-residential project with all work occurring inside the existing building that is not exempt from a grading permit per ACC 15.74.

B. The project does not include the construction of public improvements and right of way dedications.

C. Project does not construct walls that are over 7-feet tall that are within a setback area (typically within 10 feet from the property line).

D. Combined cut and fill earthwork is less than 200 CY. Earthwork is calculated by adding cut and fill quantities together, no net earthwork volume.

E. Grading activities do not change existing drainage patterns and are not within 10-feet of the property line.

F. Project disturbs less than 1 acre of area.

G. Total area of new and/or replaced hard surfaces is less than 5,000 SF.

H. The project is a remodel/tenant improvement on a non-residential project that is inside of a building that is not exempt from a grading permit per ACC 15.74.

A project proposing 2,000 SF or more of new and/or replaced hard surfaces may qualify for a Minor Grading Permit in circumstances where the 2,000 SF threshold is exceeded due to utility work. Restoration associated with the utility work must replace the ground surface with in-kind materials with similar runoff characteristics. Applicability of this criteria to be determined at the discretion of the City Engineer, or designee.

Submittal Requirements – Refer to the Minor Grading Permit Guide on the City's website under Forms for minimum submittal requirements.

Contact the Development Engineering team at development@auburnwa.gov for a plan template, if eligible for the scope of work proposed.

All other projects requiring a Grading Permit shall submit a Grading Permit per the Civil Submittal Handout.

Appendix F – AutoCAD Layers Standards

FORMAT: Digital files shall be provided in AutoCAD 2019 (2018 format) or older ".DWG" format. All support files required to display or plot the files in the same manner as developed shall be delivered along with these files. Scanned hard copy drawings using raster-to-vector conversion will not be an acceptable digital format. AutoCAD files shall be prepared in accordance with the Layers Standard included in Appendix F, Chapter 3 of the City of Auburn Engineering Design Standards and the latest version of the United States National CAD Standard (NCS).

MEDIA: Digital files shall be submitted via an electronic delivery method acceptable to the City of Auburn. Disks and/or drives shall be clearly labeled with the project name, drawing name(s), name of the drafting/engineering company or individual(s), date, and appropriate City of Auburn identifiers (e.g., BLD#, FAC#, etc.).

SPATIAL REFERENCES: Drawings will be at full scale and shall be accurately located in State Plane Coordinates Washington North Zone, 4601, and tied to two existing and recoverable City of Auburn horizontal control monuments. Datum will be noted on the drawings. All drawings shall use survey control datum NAD 83/91 for horizontal control and NAVD 88 for vertical control.

CONTENTS: The digital drawing files shall include, at a minimum, the following:

The overall project site plan showing new and existing construction, property lines, easements, and survey references.
New and existing water, sanitary sewer, and storm drainage elements showing location, size, and material of utility lines and structures.
Separate layering showing existing impervious surfaces, new impervious surfaces, and annotation on the area of each in square foot units. Layer features for impervious surfaces shall be created from closed polylines to aid in verifying calculations of impervious surface area.

DOCUMENTATION: Final recorded changes shall be clearly reflected when Certified Record Construction Drawings are processed. Proposed features shall use the layer names and descriptions given below. Any layers included that do not meet the descriptions below shall be accompanied by a detailed list of layers and layer descriptions.

Appendix F – AutoCAD Layers Standards (continued)

Proposed Feature	AutoCAD Layer Name
Commercial Fiber - Polyline	C-COMM-FIBR
Conduit: Polyline	C-COMM-CDNT
Easements - Polygon	C-PROP-ESMT
Power Service Cabinets - Point	C-POWR-VALT
Sewer Cleanouts - Point	C-SSWR-SSCO
Sewer Laterals - Polyline	C-SSWR-LATR
Sewer Mains: Polyline	C-SSWR-PIPE
Sewer Manholes - Point	C-SSWR-MHOL
Sidewalks - Polygon	C-PVMT-CONC-SDWK
Storm Catch Basins - Point	C-STRM-STRC
Storm Culverts - Polyline	C-STRM-CULV
Storm Manholes - Point	C-STRM-MHOL
Storm Pipes - Polyline	C-STRM-PIPE
Street Lights - Point	C-POWR-LITE
Street Painted Lines - Polyline	C-ROAD-MRKG
Traffic Signal Cabinets - Point	T-POWR-SGNL-CBNT
Traffic Signal Poles - Point	T-POWR-SGNL-POLE
Traffic Signs - Point	C-SITE-SIGN
Traffic Vaults	T-POWR-VALT
Utility Poles - Point	C-POWR-POLE
Water Auxiliary Equipment - Point	C-WATR-FTTG
Water Hydrants - Point	C-WATR-FHYD
Water Laterals - Polyline	C-WATR-LATR
Water Mains - Polyline	C-WATR-PIPE
Water Meters - Point	C-WATR-METR
Water Valves - Point	C-WATR-VALV
Wetlands - Polygon	C-WETL-DELN

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Chapter 4: Report Preparation Requirements

4.00 Preface

This Chapter describes how technical engineering reports are to be laid out to meet City requirements and provide a format that is easy to follow and understand. Reports need to meet these basic standards in order to move through the review process in an efficient manner.

4.01 General Requirements

The following general requirements shall be met for all technical engineering reports being submitted for review and approval:

A. All reports and calculations shall be prepared, stamped, signed, and dated by a professional engineer.

B. The topographic map prepared for the project shall be prepared, stamped, signed, and dated by a professional land surveyor.

C. All reports and calculations shall be neat, uncluttered, legible, and in conformance with the requirements herein.

D. All engineering reports shall be bound with the civil engineer's stamp clearly visible.

E. Reports shall reference City Standards as necessary.

F. All reports shall be provided in electronic format (PDF).

4.02 Report Types and Requirements

The following are basic types of reports submitted as supporting project information. Depending on the complexity or simplicity of the project and its location, the amount of detail, and the number and types of reports required will be subject to change. The examples given are the typical reports required for a standard project, there may be other reports required that are specific to a particular project.

4.02.01 Geotechnical Reports

Geotechnical reports are required to support the design and construction of various facilities as specified in the ACC, these design standards, the SWMM, the Engineering Construction Standards, and other documents. The geotechnical report format shall include (at a minimum) the following applicable items:

A. Title page including project name and address.

B. General information, which includes existing site conditions.

C. Site history including any prior grading.

D. Subsurface soil information and conditions including seasonal high groundwater and impermeable layer elevations. Seasonal groundwater levels shall be determined using groundwater monitoring well(s) and shall be required where consideration of groundwater levels is a design consideration.

E. Soil log information and locations of explorations.

F. Soil characteristics including suitability for fill and compaction requirements.

G. Slope stability analysis.

H. Seismic hazards.

I. Geological hazard areas as defined in the ACC 16.10.

J. Site plan showing the topography and proposed structures and paving.

K. Grading information including depth of cuts and recommended slopes.

L. Recommendations on temporary erosion and sediment control.

M. Conclusions and recommendations for foundations.

N. Appendix with test pit and boring logs.

O. Information on infiltration rates for use in designing low impact design facilities, retention ponds and infiltration trenches.

P. California Bearing Ratio (CBR) information for pavement design per Section 10.05 or AASHTO Pavement Design.

Q. Additional requirements for geotechnical reports are included in Volume I of the SWMM.

4.02.02 Stormwater Site Plan Report

The Stormwater Site Plan Report shall contain the information as noted in Appendix I-I of Volume I of the SWMM.

4.02.03 Critical Area Report

A. Title Page including project name, contact information for property owner, applicant, and preparer, a description of the proposal, site address, and the parcel number.

B. Identify all local, state, and other critical area related permits/approvals required for the proposal.

C. Indicate accuracy of the report.

D. Documentation of field work (such as field data sheets, and rating worksheets in the case of wetlands).

E. Description of methodologies used in the study.

F. Identify and characterize all critical areas including wetlands, streams, water bodies, buffers, regulatory floodplain, wildlife habitat, groundwater protection areas, critical erosion hazard areas, landslide hazard areas, seismic hazard and volcanic hazard areas on or adjacent (within 300 feet of the project boundaries) to the proposed project area.

G. Provide location and critical area rating/classification (if applicable) and required buffers based on a professional survey. Provide the classification according to ACC 16.10.080, “Classification and rating of critical areas” and identify the classification according to other agency standards for which permits/approvals are required.

H. A description of proposed actions, including estimated area of impacts to the critical area(s), and the impact to buffer(s).

I. An assessment of probable temporary, permanent, and cumulative impacts to the critical area(s) and buffer(s).

J. Mitigation measures proposed and relationship to applicable mitigation standards.

K. Scaled site plan.

L. Qualifications of person(s) preparing the report.

4.02.04 Traffic Impact Analysis

A. Title Page including project name and address.

B. Executive Summary.

C. Table of Contents.

D. Introduction consisting of a description of the project, location, site plans with access to city streets, circulation network, land use and zoning, phasing plan, project developer and contact person, reference other studies.

E. Traffic Analysis to include assumptions, existing and projected traffic volumes, project trip generations, trip distribution, level of service (LOS), and warrant analysis.

F. Appendix with all calculations.

G. Information as specified in **Section 10.01** of these design standards.

4.02.05 Construction Stormwater Pollution Prevention Plan (SWPPP)

See **Section 5.01.03** of these design standards and Section 2 of Volume II of the SWMM.

4.02.06 Other Reports

Other reports may be required on a site-specific basis. The specific information required in these reports shall be determined during the SEPA process or by the department requiring the report. These reports shall include the following basic items:

A. Title page including project name and address.

B. General information, which includes existing site conditions.

C. Site plan showing the topography, proposed structures, and paving.

D. Conclusions and recommendations.

E. Appendix with collected field information.

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Chapter 5 TESC, Clearing and Grading

5.00 Preface

Temporary Erosion and Sediment Control (TESC), clearing, and grading shall conform to the requirements herein.

Compliance with these standards does not alleviate the design engineer from using sound professional engineering practices. The design criteria contained herein are the minimum acceptable under standard conditions. Special conditions may require more stringent requirements that will be addressed during the plan review process.

The purpose of these requirements is to provide the design criteria necessary to preserve the City of Auburn's water courses; minimize surface and ground water quality degradation; control sedimentation in creeks, streams, rivers, ponds, lakes, and other water bodies; protect adjacent and downstream property owners from increased runoff rates which could cause erosion and flooding; and ensure the safety and stability of City of Auburn's roads and rights-of-way.

5.01 Temporary Erosion and Sediment Control (TESC)

TESC design requirements shall meet design criteria requirements as identified in Volume II of the City of Auburn Surface Water Management Manual (SWMM), and follow City of Auburn grading requirements.

All TESC measures regardless of design and implementation must meet the latest Nephelometric Turbidity Units (NTU) test requirements. The City may conduct tests and if the applicable limits are not met, the project will be halted until such time as it is brought into compliance.

The temporary sedimentation facilities (ponds and traps) shall be defined as the active storage available a minimum of 1 foot above the seasonal high ground water.

Any project with exposed soil meeting the requirements of the Chapter 2 of Volume II of the SWMM shall prepare a Stormwater Pollution Prevention Plan (SWPPP). The plan shall follow the SWPPP Template (available at the Dept. of Ecology's website) or City of Auburn Short Form (where approved by the City) from the SWMM.

For land clearing requirements see ACC 15.74 Plans for Land Clearing shall follow the requirements for Grading.

The TESC plan shall also include a construction sequence element which clearly identifies the timing and methodology required to:

A. Contain areas of active earthwork to prevent uncontrolled discharge of storm drainage.

B. Minimize erosion and the extent and time soils are exposed on-site.

C. Prevent tracking of sediment onto City streets.

D. Protect permanent on-site and off-site storm drainage systems.

5.02 Grading

The following section establishes the requirements for grading. These requirements do not supersede nor are they intended to be inconsistent with any landscaping requirement established by the Zoning Ordinance or other City action. A grading permit shall be required except for the situations described in ACC 15.74.050 and the following scenario:

A. The City Engineer may approve the broadcasting of less than 500 CY of topsoil, peat, sawdust, mulch, bark, chips, or solid nutrients used for landscaping or soil conditioning on a lot, tract or parcel of land during any 24-month period, provided the finished depth does not increase the grade from the existing grade by more than 8 inches.

5.03 Cut and Fill

Cut and fill slopes are subject to the requirements of ACC 16.10. Permanent cut and fill slopes shall be constructed no steeper than two horizontal to one vertical (2:1). Permanent cut and fill slopes within the public right of way or within 5 feet of a roadway shall be no steeper than three horizontal to one vertical (3:1). See **Section 5.04** for additional information.

Temporary fills, such as fill material placed for preloading of building pads, may use a slope one and one-half horizontal to one vertical (1.5:1).

Slopes shall be stabilized by terracing, cat tracking, jute mat, grass sod, hydro-seeding, or by other planting or surfacing materials acceptable to the City.

The City Engineer may require geotechnical analysis for the following:

A. As supporting documentation for deviation from these standards.

B. Cut or fill existing slopes of greater than five horizontal to one vertical (5:1).

C. Slopes with sub-surface or surface water flows.

D. In areas of questionable soils conditions or slope stability.

E. Where the length of the slope requires terracing.

Additional requirements for placement of fill material are as follows:

A. A minimum horizontal setback of 5 feet shall be provided between the bottom of any fill placement and the top of the bank of any defined drainage channel.

B. When filling a site, particular care shall be taken to prevent impeding the existing upstream surface drainage flow.

C. Prior to any fill being placed all vegetation, topsoil and other unsuitable material shall be removed unless dictated otherwise by the geotechnical engineer.

D. Fill material shall be placed in lifts of no more than 12 inches and compacted to 90% or greater of the maximum dry density as determined by ASTM D1557 Modified Proctor or as directed by the geotechnical engineer.

5.04 Retaining Walls

Except retaining walls built with City capital projects or through deviation, retaining walls will be located outside the public right-of-way such that they do not support the public right-of-way, be privately owned and maintained, and are subject to ACC Title 15. In addition to the standard deviation criteria, a deviation request for a wall in the right-of-way or supporting the right-of-way would need to address the risk to the right-of-way if the wall was not adequately maintained or was otherwise compromised and digging restrictions associated with the wall that could complicate or compromise use of the right-of-way for utilities, street lighting, and other use. Walls within or adjacent to the right-of-way shall be placed to address clear zone and vehicle recovery requirements per WSDOT Design Manual M 22-01 Chapter 1600.

Retaining wall systems with a vertical difference of 30-inches or greater require protective fencing along the top edge for safety. Per ACC 12.12.232, maintaining barriers or fences

between the edge of pavement or back of curb along any public street and the abutting property (defined by ACC 12.12.020 as “sidewalk”), where the sidewalk is elevated more than two feet above the abutting property is the responsibility of the abutting property owner.

Retaining walls require the wall owner to have property rights of sufficient terms and area, in the opinion of the City Engineer, to allow for construction, access, maintenance, repair, removal, and reconstruction of the wall. The minimum easement width required for walls that are less than 10 feet tall is 10 feet centered on the wall face and a minimum of 5 feet beyond any and all structural elements behind the wall. The minimum easement width required for walls 10 feet and taller is 15 feet and shall include a maintenance road along the wall base that is fenced and gated.

Public walls shall be reinforced concrete walls or block walls as directed by the City Engineer. Other wall types require deviation to be considered for City ownership and maintenance.

Tiebacks, pins, geogrids, anchors, footings, and any other elements of private walls are not allowed within the right-of-way.

5.04.01 Underdrains

Underdrains are required for all retaining walls over 4 feet in height (i.e., concrete walls, MSE walls, soil nail walls, block retaining walls, etc.).

A minimum 6-inch diameter perforated or slotted drainpipe shall be placed in a shallow excavated trench located along the inside edge of the keyway. The pipe shall be bedded on and surrounded by “Gravel Backfill for Drains” (WSDOT/APWA 9-03.12(4)) to a minimum height of 18 inches above the bottom of the pipe. A filter fabric shall surround the gravel backfill and shall have a minimum of 1 foot overlap along the top surface of the gravel. The perforated pipe shall be connected to a storm drain system or to an acceptable outfall.

5.04.02 Rock Walls

Rock Walls may be used for containment of cut slopes or fill embankment up to a maximum height of 8 feet. Rock Walls over 4 feet in height, surcharged, or in areas of questionable soil stability will require an engineered design. The engineered design shall include a soils investigation and report by a geotechnical engineer and calculations to support the rockery design.

The rock material shall be as rectangular as possible. No stone shall be used that does not extend through the wall. The quarried rock shall be hard, sound, durable, and free from weathered portions, seams, cracks, and other defects. The rock density shall be a minimum of 160 pounds per CF, measured accordingly to WSDOT test method 107 (Bulk Specific Gravity – S.S.D. basis).

5.04.03 Block Retaining Walls

Block retaining walls, (e.g., Keystone, Allan Block, Ecology Block) may be used for containment of cut slopes or fill embankment. Block retaining walls over 4 feet in height, surcharged, or in areas of questionable soil stability will require an engineered design. The engineered design shall include a soils investigation and report by a geotechnical engineer and structural calculations to support the block wall design.

Blocks used for retaining walls shall be in good condition and structurally sound; cracked and/or broken blocks are not acceptable. Unless designed as a gravity wall (ecology blocks), block walls over 4 feet in height shall employ geo-grid type material to increase the structural stability of the wall.

5.04.04 Reinforced Concrete Walls

Reinforced concrete walls or cast-in-place concrete walls may be used for containment of cut slopes or fill embankment. Concrete retaining walls over 4 feet in height, surcharged, or in areas of questionable soil stability will require an engineered design. The engineered design shall include a soils investigation and report by a geotechnical engineer and structural calculations to support the concrete wall design.

A minimum 3,000-psi structural reinforced concrete shall be used in the design of concrete retaining walls.

5.04.05 Mechanically Stabilized Earth Walls (MSE Walls)

MSE walls may be used in conjunction with other retaining walls or as a stand-alone application when constructing fill slopes. MSE walls will require an engineered design. The engineered design shall include a soils investigation and report by a geotechnical engineer and calculations to support the MSE wall design.

MSE walls shall employ well-draining structural soil compacted to the geotechnical engineer's specifications.

MSE walls are not allowed in the right-of-way.

5.05 Construction Sequence

A construction sequence is intended to ensure that the timing and installation of storm drainage and erosion control measures are in place prior to activities that may cause erosion to occur. The following elements are to be included in a construction sequence:

A. Establishment of clearing and grading limits.

B. Construction of temporary construction entrance.

C. Construction of perimeter ditches, filter fabric fences, and other erosion control devices as shown.

D. Construction of storm drainage control (applicant to be specific) facilities including emergency overflow as applicable.

E. Construction of ditches and swales as necessary to direct all surface water to the storm drainage control (be specific) facilities as clearing and grading progress. Prevention of uncontrolled surface water being allowed to leave the site at any time during the grading operations.

F. Establishment of at what point grading activities can begin, which is usually only after all perimeter drainage and erosion control measures are in place.

For sites with a final development plan, the following shall also be addressed when applicable:

A. Installation of on-site permanent storm drainage, sanitary sewer, and water facilities.

B. Site paving.

C. Indicate at what point building construction may begin.

D. A description of how to transition from the temporary to permanent storm facilities.

E. The possibilities of any phased construction.

F. Any off-site public or private improvements including the general timing and duration.

G. The removal of all TESC measures at project completion upon City approval.

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Chapter 6: Placement and Easement Requirements for City Facilities

6.00 Preface

This chapter includes placement and easement standards for all three City utilities (water, sanitary sewer, and storm drainage), City telecommunications, street lighting and other facilities such as power service cabinets, traffic signal poles, and traffic signal controller cabinets. Additional standards for City utilities are included in **Chapters 7, 8, and 9** of this document and in the Surface Water Management Manual (SWMM). **Chapter 9** describes specific additional requirements for City and non-City facilities, including utilities, within the public right-of-way. Chapter 10 includes specific requirements for street lighting and other street related facilities.

Compliance with these standards does not alleviate the design engineer from using sound professional engineering practices. The design criteria contained herein are the minimum acceptable under standard conditions. Special conditions may require more stringent requirements that will be addressed during the plan review process.

6.01 Easements

Public Utility Easements are required for the placement, operation, and maintenance of City facilities located outside the public right-of-way and not in tracts/parcels owned by the City for the specific use of the City facility. Easements shall encompass all portions of the facilities including, but not limited to, valves, manholes, hydrants, meters, catch basins, channels, access roads, vaults, junction boxes, foundations, junction boxes, and other appurtenances. Easement requirements for storm ponds, ditches, and channels are specified in the SWMM.

6.01.01 Easement Width

Easement widths for City facilities shall provide adequate space for access, operations, maintenance, repair, and open cut replacements.

Table 6-1 shows minimum required easement widths for City Utility pipes and appurtenances based on depth of pipe/appurtenance. Under certain circumstances (e.g., steep slopes, pipe diameters greater than 12 inches, excessive depths) the City may require wider easements than shown in the table. Minimum easement widths for non-pipe facilities and appurtenances, such as channels and ditches, shall be the minimum width required for the City to access, operate, maintain, repair, and replace the facility and to meet the other requirements specified herein and in the SWMM.

Table 6-1 Minimum Easement Width for City Utilities

PIPE INVERT DEPTH, FEET	EASEMENT WIDTH, FEET
< 10	15
10 – 15	25
15 – 20	30
> 20	40

Table 6-2 shows minimum easement widths for City conduits, including, but not limited to, conduits for street lighting, telecommunications, and traffic control device systems.

Table 6-2 Minimum Easement Width for City Conduit

CONDUIT COVER DEPTH, FEET	EASEMENT WIDTH, FEET
2 - 3	5
>3 - 5	7
>5 – 7	10
>7	To be determined by City Engineer, or designee

Easements for non-linear facilities such as traffic signal cabinets, street lights, and power service cabinets shall encompass the entire perimeter of the facility plus a minimum of 2 foot offset distance for the facility edges. Additional offset may be required and determined by the City Engineer, or designee, to be required for facility maintenance, operations, repair, and replacement.

6.01.02 Easement Form

Easements shall be provided on the City's standard easement form, with a separate easement for each facility. A legal description of the easement and the property that the easement encumbers, along with a sketch showing both, shall be stamped and signed by a professional land surveyor and incorporated into the easement form as exhibits. The legal descriptions and sketch shall have margins acceptable to the County of recording. The easements may also be described and recorded on a final plat document. Encumbrances that would conflict with the City's rights and ability to access, operate, maintain, repair, and replace the facilities require release/clearing from title.

The City will record approved easements in the appropriate County prior to acceptance of the public facilities unless part of a final plat document.

6.01.03 Location of Facilities within Easement

Facilities shall be located within the easement as follows:

The preferred location of pipes, channels, structures, and appurtenances is to be centered within the easement. Where facilities are not centered in the easement, additional easement width may be required and it shall be demonstrated, to the satisfaction of the City Engineer, or designee, that the placement will not impede the City's ability to access, operate, maintain, repair, and replace the facilities using typical City practices.

Utility facilities must be located within the easement so that each pipe face or edge of channel, structure, or appurtenance is no closer than 5 feet from its adjacent easement boundary. Telecommunications facilities must be located within the easement so that each conduit, vault, or appurtenance is no closer than 2 feet from its adjacent easement boundary.

6.02 Utility Pipe Separation

6.02.01 Potable and Non-Potable Separation Requirements

The requirements of this section are based on WAC 246-290-200, Washington State Department of Health (DOH), and the Washington State Department of Ecology (DOE). Potable

pipes include pipes conveying water for domestic purposes, including domestic service and irrigation service lines. Non-potable pipes include, but are not limited to, pipes conveying sewage, storm drainage, natural gas, gasoline, and oxygen. Natural gas service lines, drain pipes (yard drains, down spout drains, and wall drains), and storm drain catch basin lateral pipes that carry runoff from a cumulative area of 5,000 SF or less, are not subject to the potable/non-potable separation requirements, but are still subject to general separation requirements as specified herein. The following requirements apply to separation between pipes and appurtenances of potable and non-potable materials:

A. A Minimum of 10 feet horizontal separation is required between the outside walls/limits of parallel facilities where the crown of the non-potable pipe is less than 18 inches lower than the invert of the potable pipe.

B. A Minimum of 4 feet horizontal separation is required between the outside walls/limits of parallel facilities where the crown of the non-potable pipe is at least 18 inches lower than the invert of the potable pipe.

C. The invert of the potable pipe is required to be a minimum of 18 inches above the pipe crown of the non-potable pipe at crossings.

Where meeting separation requirements would require pumping/pressurization of an existing or new gravity non-potable pipe, the separation requirements may be reduced with the following additional requirements:

A. For construction of new potable pipes, the potable pipe shall be encased with ductile iron or steel pipe designed to withstand a minimum static pressure of 150 psi and extending at least 10 feet to either side of the crossing per **City of Auburn Standard Detail W-26**.

B. For construction of new non-potable pipes, the non-potable pipe shall be encased in controlled density fill for at least 10 feet to either side of the crossing.

C. Where non-potable pipe crosses over potable pipe, 18-inches of separation shall be maintained and one or both utilities will be encased, as deemed necessary by the City Engineer or designee.

6.02.02 General Separation Requirements

The following separation requirements are in addition to the other separation requirements specified herein. Placement of new City utility facility mains shall be done in a manner that allows the City to access, operate, maintain, repair, and replace the facilities without impacting other adjacent facilities or structures in the vicinity. Facilities shall be located a minimum horizontal distance of 10 feet from above-ground structures and their foundations. Except as noted above (for crossings of potable water), underground facilities that cross each other shall have a minimum separation of 12 inches. Non-potable facilities require a minimum horizontal distance of 5 feet from all other underground utilities. Where 12 inch vertical separation cannot be achieved, use of an Ethafoam pad between the utilities may be permitted by the City Engineer or designee.

Additional separation of City utility facilities from structures may be required where soil conditions are poor, facility depth is greater than 10 feet, or other conditions are present that require additional separation to ensure the City may access, operate, repair, and replace the facilities using standard City methods. The minimum separation between an underground facility and an adjacent structure shall be such that the zone of influence from the weight of a structure shall be below the invert of the underground facility.

6.03 Utility Access Roads

Public utilities within a utility easement, tract, or parcel that have appurtenances such as manholes, catch basins, stormwater ponds, vaults, fire hydrants, valves, blowoffs, etc. shall have an access road. The access road shall be constructed of gravel, asphalt, pervious concrete or pervious asphalt, or other surface material as approved by the City Engineer, and shall conform to the following requirements:

A. Maximum vertical profile shall be 12% for public facilities and 15% for private facilities.

B. A paved commercial driveway apron meeting City design standards shall be required for both public and private access where access roads connect to paved public roadways.

C. The driveway approach section of the access road shall not exceed a vertical profile of 5% for a minimum distance of 25 feet measured from the back of the driveway entrance. See City of Auburn Standard Detail T-34.

D. The minimum access road length shall be 50 feet as measured from the back of the driveway entrance. See City of Auburn Standard Detail T-34.

E. Access to the access road shall be limited by a double-posted gate with a minimum width of 15 feet (if the gate is connected to a fence), removable bollards, or other approved equal.

F. Except as noted in **Section 7.06.04**, access roads shall be a minimum of 15 feet in width on curves and 12 feet in width on straight sections, centered within the easement. Easement width will need to be increased at curves to accommodate the wider road and adjacent ditch described below. A hammerhead or a turnaround meeting IFC standards is required at the end of all access roads unless drive-through access is provided.

G. For access roads determined by the City Engineer, or designee, to require access by vactor trucks or other large vehicles, inside turning radii shall be a minimum of 45 feet. For all other access roads, minimum inside turning radii shall be 28 feet. Turning analysis may be required to verify movement of equipment.

H. Access roads whose vertical profile is greater than 8% shall be asphalt paved. See **Table 10-7** for paved access road requirements.

I. Unpaved gravel access roads and pond ramps shall meet the requirements of **Table 10-7**.

J. The access road shall have a cross slope of 2%.

K. Access roads will be constructed with appropriate drainage to prevent stormwater ponding on the road.

L. Access roads cut into a hillside will require regrading of the adjacent slopes. To reduce the length of unimpeded slope and to collect and reduce the probable impacts of sheet flow on the slope face, install benches at least 10 feet wide into the slopes adjacent to the access road, with 30 feet maximum vertical spacing between benches. On the uphill slope face, the first bench shall be adjacent to the ditch.

Chapter 7: Water Facilities

7.00 Preface

The design and construction of public and private Water Facilities shall conform to the State of Washington Department of Health (DOH) Design Standards for Group A Public Water Systems, the Standard Specifications of the American Water Works Association (AWWA), and the most recent published and adopted edition of the Uniform Plumbing Code (UPC), unless modified herein.

Compliance with these standards does not alleviate the design engineer from using sound professional engineering practices. The design criteria contained herein are the minimum acceptable under standard conditions. Special conditions may require more stringent requirements that will be addressed during the plan review process. Contact the City of Auburn Public Works Department for specific requirements for the design of pump stations, wells, reservoirs, treatment systems, and other special facilities.

The design criteria used to estimate future line capacities are established in the City's Comprehensive Water Plan. Anyone proposing to extend or modify the City's water system should contact the Public Works Department for information. Applicants needing to construct public water improvements shall enter into a Developer Public Facility Extension Agreement (FAC) with the City. The City's Permit Center can provide information on this agreement as well as applicable permit and connection fee estimates.

7.01 Water Mains and Appurtenances

7.01.01 Materials

Unless otherwise approved by the City Engineer, all water mains shall be the following:

Pipe Type	Construction Standard	Notes
Ductile Iron Pipe, Special Class 52 or 53*	9-30.1(1) (Ductile Iron Pipe)	Asphaltic coating on the exterior and cement mortar lining on the interior

* Class 53 is required for installations with less than 42-inches of cover.

The list of acceptable valves, fittings, and other appurtenances for water facility construction is subject to change as new and improved components become available. Refer to the Construction Standards for the most current information on these requirements.

7.01.02 Water Main Sizing and Main Extensions

New water mains shall be sized to meet flow/demands, pressure requirements and pipe velocity constraints, and as follows:

A. Water mains serving only properties and developments requiring 1,500 GPM @ 2 Hours per **Section 7.05.03** shall be a minimum of 8 inches in diameter.

B. Water mains serving properties and developments requiring 2,500 GPM @ 3 Hours per **Section 7.05.03** shall be a minimum of 12 inches in diameter.

C. Water mains serving properties and development requiring more than 2,500 GPM @ 3 Hours per **Section 7.05.03** shall require hydraulic analysis per **Section 7.06** for sizing and in no case shall be less than 12 inches in diameter.

D. The minimum allowed diameter of a water main in a cul-de-sac, shared access driveway, or dead end street serving only single family/duplex residential properties may be reduced to 4 inches after the last fire hydrant connection serving the cul-de-sac, shared access driveway, or dead end street, unless the City Engineer determines the water main in the cul-de-sac, shared access driveway, or dead end street may be extended in the future or unless minimum pressure requirements cannot be achieved.

Public water main extensions are required where a new service is being requested and there is no existing water main fronting the property(ies) or the existing water main does not extend across the full width of the property(ies) being developed, and shall be as follows:

A. Water main extensions shall be extended to and across the entire property frontage of the parcel being served. For cul-de-sacs or other similar instances where extending across the property frontage is not feasible, main extensions shall meet all other requirements herein, necessary to address fire flow and pressure requirements.

B. Water mains may be required to be extended beyond the property frontage or looped, as determined by the City Engineer, to address system deficiencies created by the development. Water main loops shall have a minimum of two separate connection points to the existing water system, with sufficient valves so that water can be delivered through either connection point independent of the other.

C. In addition to the water main extensions required in item A) and B) above, the City may require properties with service connections on more than one frontage to extend water main(s) across the frontage(s) with the service connection(s), as determined necessary by the City Engineer to accommodate future water system extensions and connections.

D. Water main extensions that may serve adjacent property or to which adjacent property may connect future extension(s), require additional easements, as determined by the City Engineer or designee, to be needed to accommodate the future connections.

7.01.03 Water Main Upsizing

Public water main upsizing is required where a new or modified service is taken from an existing water main that fails to meet minimum pressure requirements per **Section 7.01.05**, fire flow requirements per **Section 7.05.03**, or pipe velocity constraints per Section **7.01.04**, as demonstrated by a hydraulic analysis per **Section 7.06**. In such cases main upsizing shall be as follows:

A. Existing water mains shall be upsized, at a minimum, across the entire property frontage of the parcel being served.

B. Existing water mains may be required to be upsized beyond the property frontage, as determined by the City Engineer, to address system deficiencies created by the development.

C. When main upsizing is required, in no case shall the mains be upsized to be less than the minimum sizes for new mains identified in **Section 7.01.02**.

7.01.04 Water Main Velocities

All water mains shall meet the following velocity requirements:

A. The maximum flow velocity in distribution mains shall not exceed 8 feet per second under Peak Hour Demand (PHD) conditions. Maximum flow velocities in distribution mains may be exceeded under fire flow conditions, but in no case shall velocities exceed 18 feet per second when applying Maximum Day Demand plus Fire Flow (MDD + FF) conditions.

B. The maximum flow velocity in transmission mains shall not exceed 5 feet per second under PHD conditions.

7.01.05 Water Main Pressure

All water mains shall meet the following minimum pressure requirements under the conditions listed:

A. Peak Hour Demand - 30 psi

B. Max Day Demand Plus Fire Flow – 20 psi

7.01.06 Water Main Location

Water mains shall be installed with no less than 42 inches and no more than 72 inches of finished cover. The City Engineer or designee, may grant exceptions to the minimum and maximum cover requirements and may require measures to mitigate impacts of the decreased or increased cover. Said exceptions will only be considered based on the potential impacts to City utilities of constructing the water main within the allowed cover ranges and topographic constraints. When a reduction in pipe cover is granted, in no case shall the finished cover be less than 30 inches.

Public water mains shall be located in the public right-of-way or within a public water utility easement. Public water mains within a utility easement with appurtenances such as hydrants, valves, blowoffs, etc. shall have an access road to such appurtenances conforming to **Chapter 6**. Water mains located in the public right-of-way shall meet the requirements of **Chapter 9**.

For separation requirements between utilities, see **Chapter 6**.

7.01.07 Water Main Appurtenances and Fittings

A. Blow off assemblies (See **City of Auburn Standard Detail W-03 or W-04**) are required on dead-end water mains with a diameter of 6 inches or less; hydrants are required for dead-end mains over 6 inches in diameter. Blow off assemblies shall also be installed at the low point of a depressed “sag” section of a water main, except where a fire hydrant is installed within 50 feet of said area or on a short segment (20 feet or less) where the water main dips under other utilities. Blow off assemblies shall be placed in a level, clear area within the right-of-way or easement, be located as close to the main as possible, and be easily accessible to the City.

B. Combination air and vacuum relief valves (See **City of Auburn Standard Detail W-02**) are required at high points in water mains when an abrupt vertical change in pipe elevation exceeds one pipe diameter, except where fire hydrants are installed within 50 feet of said area. Combination air and vacuum relief valves shall also be installed at the end of all dead-end water mains in addition of a blowoff or fire hydrant, when there is a vertical change in pipe elevation that

exceeds one pipe diameter, and the dead end main is greater than 50 feet in length. Combination air and vacuum relief valves shall be placed within a level clear area within the right-of-way or easement, be located as close to the main as possible, and be easily accessible to the City.

C. All buried bends shall have mechanical restrained joints and concrete thrust blocking or flanged joints and concrete thrust blocking (See **City of Auburn Standard Detail W-01**). 90 degree bends are not allowed when making vertical pipeline adjustments.

D. Tees shall have flanged joints unless there is no valve against the Tee, in which case the Tee may be flanged or mechanical restrained joints. Tees shall include concrete thrust blocking (See **City of Auburn Standard Detail W-01**). When connecting to an existing water main, a tapping tee and valve may be used, if only a single valve is needed at the tee, or unless otherwise approved or required by the City Engineer or designee.

E. Tapping tees are not allowed on commercial fire lines or other water taps needing uninterruptible service; a cut-in tee or installed tee is required.

F. Size-on-size taps are not allowed unless authorized by the City Engineer or designee.

G. The maximum allowable deflection per joint for ductile iron water mains shall be half of the maximum joint deflection specified by the pipe manufacturer or 4 degrees, whichever is lesser.

7.02 Water Services

See **City of Auburn Standard Details W-06, W-13 through W-16a, and W-20.**

The City owns and shall maintain the water service line from the public main to the meter, the meter and setter, the meter radio, the meter tailpiece, and the meter box. The property owner owns and shall maintain the tailpiece connection fitting, shut-off valve, service line after the shut-off valve, and other facilities such as pressure reducing valves, pumps, or backflow prevention assemblies behind the meter.

For fire sprinkler connections, City ownership and maintenance responsibilities cease at the valve installed at the point of connection between the main and the fire service line.

7.02.01 Domestic Services

Domestic water services shall meet the following requirements:

A. Each parcel receiving water service shall have its own meter. Non-single-family developments with multiple buildings on a single parcel shall have a meter for each building unless otherwise authorized by the City Engineer or designee.

B. Water services shall be installed per City of Auburn Standard Details. All existing services shall be replaced when installing new water mains required for the project. The City will furnish and install the meter for services of 2 inches and smaller unless directed otherwise by the City Engineer.

C. Water meters 3 inches and larger will be purchased from the City and installed by the developer/contractor under City observation. Where vaults are required, the vault roof shall contain a 2-inch port for remote reading device.

D. Water meters shall be installed off City owned water mains and shall be located as close to the water main from which the service is taken as possible, while

meeting all other requirements as specified herein, with the distance not to exceed 50 feet.

E. Water meters serving residential lots shall be located in the right-of-way along the frontage of the lot being served. Water meters serving residential lots without right-of-way frontage (such as lots that access the right-of-way via a shared driveway access road) shall be placed in the right-of-way adjacent to the access connection (driveway connection) to the roadway.

F. Water meters shall be placed in landscape strips. If there is no landscape strip, the meter shall be placed behind the sidewalk (in a public water utility easement if not in right-of-way). If there is no landscape strip or sidewalk, the meter shall be placed at the right-of-way limits in a level area, outside of vehicle or pedestrian travel paths, outside parking areas, and away from obstructions.

G. Meters in landscape strips and other landscaped or unimproved areas shall be set 2 inches above the finished grade including landscaping and mulch.

H. Water meters that cannot be placed in the right-of-way while meeting other water meter location requirements may be placed within a public water utility easement adjacent to the right-of-way.

I. Commercial and industrial sites shall have meters located near driveway entrances within the right-of-way or within public water utility easements in landscape islands located near access driveways when, placement in right-of-way, attempting to meet other location requirements of this section, is not practical.

J. Meters may not be placed within sidewalks or pedestrian travel pathways except in cases where obstructions prevent the meter box from being placed behind the sidewalk or in a landscape strip (where a landscape strip is present). In such conditions, the meter box shall be placed in the back of the sidewalk.

K. The water service diameter and meter size shall be sized per Tables 610.3 and 610.4 of the current Uniform Plumbing Code and, upon request by the City Engineer or designee, supporting documentation of the meter size selection provided to the City. The length of the private service line between the right-of-way line and the structure shall not exceed 300 feet.

L. When installing multiple services to a public main, a minimum horizontal spacing of 5 feet shall be used between the corporation stops and tapping tees when the existing main material is ductile iron. A minimum spacing of 10 feet shall be used between the corporation stops and tapping tees on all other types of existing water main materials.

M. Domestic water services shall be connected to the public water main. Domestic water services shall not be connected to private water mains.

7.02.02 Other Services

Irrigation and other non-domestic water services shall meet all the above requirements as well as the following:

A. An Irrigation meter shall be installed in cases where water is used for landscape purposes by non-single-family customers and does not enter the sanitary sewer system.

B. For fire sprinkler service line requirements, see **Section 7.05.02**.

C. Cross connection control devices shall be installed per **Section 7.04**.

7.02.03 Service Abandonment

Services shall be abandoned when properties are redeveloped, and existing services will no longer be used. The following actions are required after removal of the meter:

A. Obtain the necessary permits (e.g., for work in the right-of-way, for meter abandonment)

B. Shut off the corporation stop at the main.

C. Disconnect the service line from the corporation stop.

D. Remove the meter box.

E. Restore the roadway or other surface(s) disturbed by construction activities (e.g., trench patch/overlay).

7.03 Water Valves

Water valves shall be as specified in the Construction Standards and the requirements of this section. See **City of Auburn Standard Details W-17 through W-19** for valve box and extensions.

Water valves shall be of the resilient wedge gate variety. Butterfly valves shall be placed on water mains 14” or larger in diameter. Valves larger than 12 inches may require the valve to be turned on its side with a gear to maintain minimum cover.

Water valves shall be located as follows:

A. Water valves shall be installed at a maximum spacing of 400 feet and at the intersection of lateral lines. A maximum of 20 service connections between valves shall be maintained except on dead end residential streets where up to 30 service connections between valves are allowed.

B. Water valves shall be located in clusters at tees and crosses when possible and shall be located so that each leg of the main line system can be isolated separately.

C. When extending public water mains, a water valve may be required near the end of lines where future extensions are projected.

D. Water valves shall not be placed within the wheel path of vehicle traffic.

A gravel or paved road surface may be required within the public water utility easement as needed to allow access to valves and other appurtenances.

Valves shall be adjusted to final grade in accordance with **City of Auburn Standard Detail T-05.**

7.04 Cross Connection Control

See **City of Auburn Standard Details W-22 through W-25.**

Water Systems shall be designed to protect the City water system from contamination via cross connection control in accordance with Washington State Law (WAC 246-290-490), Auburn City Code (ACC), the City’s Cross Connection Control Program manual, and these design standards. Premises isolation shall be provided on service connections and proposed building tenant improvements in accordance with these standards.

7.04.01 Domestic Services

Backflow protection assemblies shall be installed on all new non-single family service connections. Backflow protection assemblies shall be installed on existing non-single family service connections as directed by the City Cross Connection Specialist. The type of backflow protection assembly shall be as determined by the City Cross Connection Specialists:

A. A Reduced Pressure Backflow Assembly (RPBA) shall be installed adjacent to the meter or at an alternate location where the service line enters the building. RPBA assemblies installed at an alternate location, require the approval of the City, shall have no connections between the meter and the assembly, and shall be installed with adequate drainage to accommodate discharges from the RPBA.

B. A Double Check Valve Assembly (DCVA) for domestic service shall be installed adjacent to the meter, unless installed at an alternate location approved by the City Cross Connection Specialists.

7.04.02 Irrigation Services

A backflow prevention assembly shall be installed on all irrigation service connections. The layout of the backflow prevention assembly shall be per **City of Auburn Standard Detail W-06** for single family residential services up to 2 inches and per **City of Auburn Standard Detail W-20** for non-single family residential services. The minimum level of backflow prevention required shall be provided by a Double Check Valve Assembly (DCVA) per **City of Auburn Standard Detail W-24**. A higher degree of protection may be required if deemed necessary by the City, which may include a Reduced Pressure Backflow Assembly (RPBA) per **City of Auburn Standard Detail W-22**.

The backflow prevention assembly shall be installed adjacent to the meter.

7.04.03 Fire Line Connections

A backflow prevention assembly shall be installed on all fire service connections. The layout of the backflow prevention assembly shall be per **City of Auburn Standard Detail W-09** for single-family residential services up to 2-inches and per **City of Auburn Standard Detail W-20** for non-single-family residential services. The minimum level of backflow prevention required shall be provided by a Double Check Valve Assembly (DCVA) per **City of Auburn Standard Detail W-24**. A higher degree of protection may be required if deemed necessary by the City, which may include a Reduced Pressure Backflow Assembly (RPBA) per **City of Auburn Standard Detail W-22**.

The backflow prevention assembly shall be located in the building riser room for non-single-family residential services.

7.04.04 General

A. A DCVA shall be installed to provide adequate access for inspection, testing and maintenance.

B. A DCVA located outside the building shall be installed in a vault, as described on **City of Auburn Standard Detail W-24.**

C. A DCVA located inside the building shall be installed per **City of Auburn Standard Detail W-25**.

D. An RPBA shall be installed in an above ground enclosure or at alternate location with no connections between the meter and assembly (See **City of Auburn Standard Detail W-23**). An RPBA is required for all services utilizing chemicals.

E. Prior to installation, 2 sets of backflow prevention assembly plans, including the connection point to the City main, shall be submitted for review and approval by the City.

F. Only assemblies listed on the current list of Backflow Prevention Assemblies Approved for Installation in Washington State shall be allowed. This list is maintained by the State of Washington and is available from the City.

G. When multiple buildings are proposed on a parcel the building backflow prevention devices shall all be located outside the buildings or all be located inside the buildings per City of Auburn Standards.

7.05 Fire Systems

7.05.01 Fire Hydrant Assemblies

See **City of Auburn Standard Details W-07 & W-08.**

Fire Hydrant Assemblies shall meet the following requirements:

A. Fire hydrant service lines shall be installed at right angles to 8 inch minimum diameter supply mains.

B. Fire hydrants shall stand plumb, be set to meet manufacturer's specification for ground bury line, and have a clear, level area around the hydrant with a radius of no less than 36 inches.

C. Fire hydrants shall be located no closer than 50 feet to the surrounding structures, or at a distance as determined by the Fire Marshal and approved by the City Engineer or designee. Fire hydrants shall be located such that no portion of the fire hydrant is within 5 feet of any portion of a driveway (including throat, apron, and wings).

D. Fire hydrants shall be provided with two 2½ inch National Standard Thread (NST) hose ports and one 4½ inch NST by 5 inch hose port with a Storz adapter and cap.

E. The pumper port shall face the street or fire access road and be readily accessible to any fire vehicle for firefighting and pumping operations. There shall be at least 18 inches clear from the face of the pumper port to the edge of pedestrian or traveled ways.

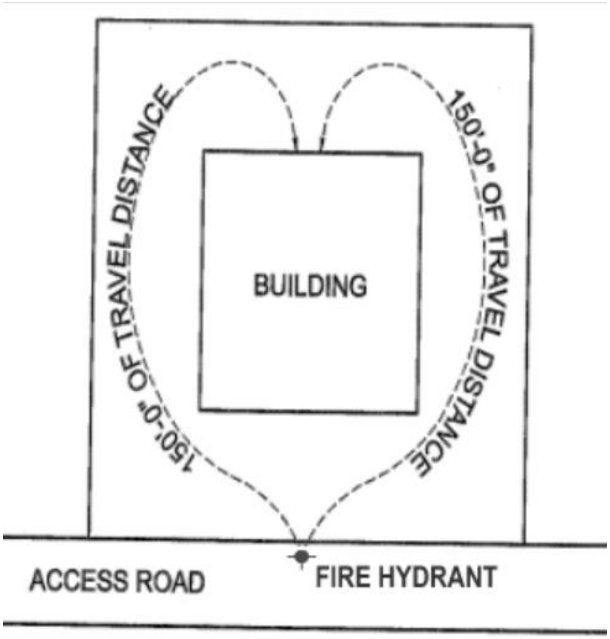
F. The service line from the supply main to the fire hydrant shall be 6 inches in diameter unless the service line extends over 50 feet in length, in which case the service line shall be 8 inches in diameter. Service lines shall be restrained when the length of service line exceeds one pipe length.

G. Fire hydrants shall be installed with a maximum spacing of 600 feet along streets in single-family zones and 300 feet in all other zones.

H. The maximum distance allowed from any part of a single-family residential structure to the closest fire hydrant is 450 feet.

I. Buildings, other than single-family residences, located with portions of the building more than 150 feet in vehicular travel (see figure below) from a fire

hydrant assembly or with building fire flow over 2500 gpm, shall require on-site fire hydrant assemblies. A maximum length of 150 feet of water main serving a single fire hydrant shall be allowed. Any length greater than 150 feet will require the fire hydrant(s) to be served by a water main that loops around the building, or complex of buildings, and reconnects back to the distribution supply main.



7.05.02 Private Fire Hydrants and Water Mains

Private fire hydrant assemblies and associated water mains serving the fire hydrants shall meet all of the same standards as is for public facilities identified in these standards, including the following requirements:

A. The City Engineer, or designee, may require fire hydrants and water mains installed on private property solely for the purpose of providing fire protection to be privately owned and maintained by the benefitting property.

B. Privately owned and maintained fire hydrants shall be painted Safety red per the City Construction Standards to distinguish between publicly owned and privately owned fire hydrants.

C. Ownership of privately owned water mains begins immediately downstream of the valve at the point of connection to the public water main.

D. Private fire hydrant water mains require backflow protection in the form of a Double Check Detector Assembly (DCDA) to be installed on private property as close to the connection to the public main as possible.

E. Privately owned fire hydrants require fire hydrant use permits to be issued for non-maintenance activities to record the amount of water being used for said activity.

7.05.02 Fire Sprinkler Systems

Fire Sprinkler Systems shall meet the following requirements:

A. Any contractor offering to design, install, test, and/or provide maintenance of fire sprinkler systems in the State of Washington must be licensed with the State Fire Marshal's Office, Licensing Section.

B. Fire sprinkler systems shall be required in commercial/industrial and multifamily buildings according to the adopted fire code regulations. Sprinkler systems may be required in single-family residences when determined by the City and the Fire Authority.

C. Fire sprinkler supply lines for commercial buildings, unless designed by a Fire Protection Engineer, shall be a minimum of 8 inches in diameter.

D. Fire sprinkler supply lines for non-single-family buildings shall be connected to a looped water main.

E. Fire sprinkler supply lines shall be separated from the public water main by a valve located at the point of connection. The fire sprinkler supply line shall be installed with a cut-in tee and shall have a 3-valve cluster unless otherwise approved by the City Engineer.

F. The design of fire sprinkler supply lines for single-family/duplex shall be in accordance with **City of Auburn Standard Detail No. W-09.**

G. A Washington State Certified Level "U" contractor shall install underground fire sprinkler supply lines in accordance with WAC 212-80-010. Prior to installation, 3 sets of underground fire sprinkler supply line plans shall be submitted to the City for approval by the Fire Marshal. Both a State Certified Level "U" contractor and a Fire Protection Engineer shall stamp these plans. A letter from a state certified sprinkler system designer stating "FOR DESIGN PURPOSES ONLY" may be attached in lieu of a stamp from the Fire Protection Engineer.

H. A post indicator valve (PIV) shall be installed on the fire sprinkler supply line between the public water main and the building. PIV's shall be located in such a manner as to be easily visible to Fire Department personnel. A wall-mounted PIV may be installed when the exterior wall of the building is of non-combustible construction. A detail containing this information shall be included with the submitted plans.

I. Fire Department Connections (FDC's) shall be placed within 50 feet of a fire hydrant or as directed by the Fire Marshal. FDC's must be identified and approved by the Fire Marshal.

J. New water mains shall be constructed with valves on each side of fire line taps.

K. Fire sprinkler systems shall have backflow prevention in accordance with **Section 7.04**.

L. Fire sprinkler service lines shall not be connected to fire hydrant service lines.

M. Flow-through fire sprinkler systems may be installed for single family residential only. Design shall be according to NFPA 13D. Backflow prevention is not required for flow-through systems.

7.05.03 Fire Flows

New developments, redevelopment of existing sites, or changes in land use are required to meet the minimum City fire flow requirements listed below while maintaining the required minimum pressures. The developer shall provide information to the City to define the project specific fire flow requirements.

The minimum fire flow requirements within the Auburn Water Service areas are:

A. Single-Family Residential: 1,500 GPM @ 2 Hours

B. Industrial/Commercial/Multi-Family: 2,500 GPM @ 3 Hours

Additional fire flow may be required per ACC 15.36A.

Minimum fire flows outside Auburn Water Service areas shall be determined by the water service provider and the Fire Marshal.

When a hydraulic analysis is required to demonstrate the system meets fire flow and minimum pressure requirements, the developer may request that the City perform hydraulic modeling to support the hydraulic analysis at the applicants cost and the City may or may not agree to provide the modeling depending on resource availability and other considerations. See **Section 7.06** for hydraulic analysis requirements.

The Developer shall be responsible for any on-site and/or off-site improvements such as water main extensions, additional connections, fire hydrants, etc. to meet these requirements.

7.05.04 Fire Authority and Hydrant Access

Fire Authority and hydrant access shall meet the following requirements:

A. Access shall be a minimum of 20 feet wide with a minimum vertical clearance of 13½ feet.

B. Access roads shall be designed using a minimum inside radius of 28 feet and a minimum outside radius of 48 feet.

C. Except as noted otherwise in these standards, access that exceeds 150 feet in length from the face of curb or edge of the existing asphalt of the public road and does not return to a public road shall provide a turnaround within 150 feet of the dead-end. If a hammerhead configuration is utilized for the turnaround, it shall be designed per Figure D103.1 and Table D103.4 in Appendix D of the International Fire Code, or acceptable equivalent. If a cul-de-sac is utilized for the turnaround, it shall be designed per the City of Auburn Design Standards.

D. Single-family residential driveways shall have an 18 foot wide driveway apron and a minimum 20 foot wide paved surface to a location where all portions of a dwelling unit structure are no more than 150-ft, as measured by an unobstructed route around the exterior of the building.

7.06 Hydraulic Analysis

7.06.01 General

Hydraulic analysis is required for all new or modified connection(s) to an existing main(s), except when determined by the City Engineer, or designee, to not be required. In determining if an exception from the hydraulic analysis requirement is appropriate, the City Engineer, or designee, will consider whether the existing main meets sizing requirements for new mains per

Section 7.02.02 and the proposed use of the modified or new service connection(s). When a hydraulic analysis is required for a project, it shall include the following:

A. The hydraulic analysis shall be signed and sealed by a professional engineer.

B. Include a description of the project, location, and identify existing water facilities adjacent to the project boundaries.

C. Include a site map showing the project boundaries.

D. Include locations of proposed new or upsized water mains to be installed as part of the project, including pipe diameters and the locations of fire hydrants, if known.

E. For developments that are not solely single-family/duplex residential, provide the proposed type and size of meter(s) and backflow device(s).

F. Show the source node provided by the City with Hydraulic Grade Line (HGL) and existing pressure information.

G. Show on-site demand calculations.

H. Input tables shall be provided for each of the pipes showing the following minimum information:

Pipe No.	Pipe Nodes (Begin and End)	Length (ft)	Diameter (in)	Friction Coefficient

I. Input tables shall be provided for each of the nodes showing the following minimum information:

Node. No.	Connecting Pipes	Elevation (ft)	Demand (gpm)

J. A separate analysis and calculations shall be conducted for Maximum Day Demand (MDD), Maximum Day plus Fire Flow (MDD + FF), and Peak Hour Demand (PHD) scenarios. Explain any assumptions made.

K. Output calculation results for pipes shall include, at a minimum, the following information:

Pipe No.	Flow Rate (gpm)	Velocity (fps)	Head Loss (ft)

L. Output calculation results for nodes shall include, at a minimum, the following information:

Node No.	HGL (ft)	Pressure (psi)	Elevation (ft)	Demand (gpm)

M. Provide a summary table for each scenario analyzed (MDD, PHD, and MDD + FF) and include minimum and maximum static and residual pressures.

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Chapter 8: Sanitary Sewer and Storm Drainage Facilities

8.00 Preface

Compliance with these standards does not alleviate the design engineer from using sound professional engineering practices. The design criteria contained herein are the minimum acceptable under standard conditions. Special conditions may require more stringent requirements that will be addressed during the plan review process.

The City's Comprehensive Sanitary Sewer Plan and Comprehensive Storm Drainage Plan establish basins and design parameters used to estimate future line capacities. Anyone proposing to extend or modify the City's sanitary sewer system and/or storm drainage system should contact the Public Works Department for information on proposed line sizes and locations.

Sanitary Sewer:

The design of sanitary sewer facilities shall be in conformance with the State of Washington Department of Ecology's "Criteria for Sewage Works Design" manual (DOE Sewer Manual) unless modified herein. These standards are set forth as a minimum requirement for the planning and design of gravity sanitary sewer facilities. Sewage pump stations and special facilities are not included within this design manual due to the complexity of these facilities. When designing pump stations and special facilities, please contact the City of Auburn Engineering Services for specific requirements.

In lieu of constructing a public sewer system, the developer of a single, non-residential lot may construct a private sewer system, in accordance with the standards for public sanitary sewer systems consisting of manholes and sewer mains. The property owner is responsible for maintenance and repair of the private system. This option is only available if the sewer extension would not serve any additional upstream properties. Private sewer systems are not allowed in the public rights of way except where permitted through franchise agreement or right-of-way use permit.

Storm Drainage:

These storm drainage requirements provide the design criteria necessary to preserve the City of Auburn's water courses; to minimize surface and ground water quality degradation; to control the sedimentation in creeks, streams, rivers, ponds, lakes, and other water bodies; to protect adjacent and downstream property owners from increased runoff rates, which could cause erosion and flooding; to ensure the safety of City of Auburn's roads and rights-of-way; to decrease drainage-related damage to both public and private property, and to control runoff from development, redevelopment and construction sites. The design of storm drainage facilities shall be in conformance with the City of Auburn Surface Water Management Manual (SWMM) to comply with the Western Washington Phase II Municipal Stormwater Permit issued by the State of Washington Department of Ecology.

8.01 Sanitary Sewer and Storm Mains

8.01.01 Sizing/Slope

All new mains shall be sized as indicated in the City's current Comprehensive Plan. For lines not specified in the plan, the applicant must design the line with sufficient capacity to convey any future flows (based on current land use designations).

Sanitary sewer mains shall be designed and constructed to provide a minimum cleaning velocity of 2 ft/s when flowing at 80% full. If at final build out the planned contributing area will not achieve this capacity, additional provisions may be required.

Analysis of storm drainage pipe systems shall be per the requirements of the SWMM. The following are the minimum slopes for the corresponding Sanitary Sewer pipe sizes:

Table 8-1 Sanitary Sewer Pipe Sizes and Slopes

Pipe Diameter	Minimum Slope
8 inches*	0.50%
10 inches	0.30%
12 inches	0.25%
18 inches	0.15%

* Minimum sanitary sewer pipe size

8.01.02 Location

Standard installation depth for sanitary sewer mains is between 6 feet and 15 feet below the finished surface elevation. Mains less than 6 feet deep and over 15 feet deep, require approval by the City Engineer, or designee, and additional provisions may be required .

Mains shall be located in the public right-of-way or within a public utility easement per **Chapter 6**. Mains within a utility easement with appurtenances such as manholes shall have an access road to such appurtenances conforming to **Chapter 6**. Mains located in the public right-of-way shall meet the requirements of **Chapter 9**.

When the potential exists to serve upstream properties, mains shall extend through the property being served, through the shared driveway or access tract serving the property(s), or across the entire length of the lot frontage at the depth necessary to serve the upstream properties, as determined by the City Engineer or designee.

For separation requirements between utilities, see **Chapter 6**.

8.01.03 Material

The following is the City's list of required sanitary sewer and storm drainage pipe materials and depth criteria.

Table 8-2 Sanitary Sewer and Storm Drainage Pipe Material and Cover

Pipe Type	Construction Standard	Minimum Pipe Cover**	Maximum Pipe Depth
Solid Wall Polyvinyl Chloride (PVC) Pipe, SDR-21*****	9-05.12(1) (Solid Wall PVC Culvert Pipe, Solid Wall PVC Storm Sewer Pipe, and Solid Wall PVC Sanitary Sewer Pipe)	18 inches	22 feet
Solid Wall Polyvinyl Chloride (PVC) Pipe, SDR-35 (Requires 14 foot lengths.*****	9-05.12(1) (Solid Wall PVC Culvert Pipe, Solid Wall PVC Storm Sewer Pipe, and Solid Wall PVC Sanitary Sewer Pipe)	3 feet	18 feet
Solid Wall Polyvinyl Chloride (PVC) Pipe, PS46 (Requires 14 foot lengths.*****	9-05.12(1) (Solid Wall PVC Culvert Pipe, Solid Wall PVC Storm Sewer Pipe, and Solid Wall PVC Sanitary Sewer Pipe)	3 feet	18 feet
Solid Wall Polyvinyl Chloride (PVC) Pipe, C900	9-05.12(1) (Solid Wall PVC Culvert Pipe, Solid Wall PVC Storm Sewer Pipe, and Solid Wall PVC Sanitary Sewer Pipe)	12 inches	30 feet*
Ductile Iron Pipe, Special Class 50	9-05.13 (Ductile Iron Sewer Pipe)	6 inches	30 feet*
High Density Polyethylene Sanitary Sewer Pipe (HDPE)***	9-05.23 (High Density Polyethylene Pipe (HDPE))	2 feet	30 feet*
Triple Wall Polypropylene Culvert and Storm Sewer Pipe****	9-05.24(1) (Polypropylene Culvert Pipe and Storm Sewer Pipe)	N/A	N/A

* Sanitary sewers and storm drainage pipes deeper than 30 feet will require pre-approval from the City Engineer or designee.

** Minimum cover is depth of cover excluding cover depth provided by flexible pavements. No portion of any pipe shall be allowed within 6 inches of the bottom of the flexible or concrete pavement.

*** The design engineer is responsible for specifying a thickness ratio adequate to withstand all loads anticipated for this application.

**** For use in Storm Drainage applications only.

***** These are the City preferred material types that must be utilized unless depth, loading, or other conditions necessitate the use of other material types indicated in the table. Consideration of alternate material type requires deviation.

8.02 Sanitary Sewer and Storm Drainage Structures

8.02.01 Type and Size

Manholes, Catch Basins, and Inlets shall be constructed per the following:

Table 8-3 Sanitary Sewer and Storm Drainage Structure Types

Type	Construction Standard	Notes
Manhole (48-inch to 60-inch)	WSDOT Standard Plan B-15.20 or B-15.60 with an eccentric cone	
Manhole (72-inch to 96-inch)	WSDOT Standard Plan B-15.40 with a flat top instead of riser	
Catch Basin Type I	WSDOT Standard Plan B-5.20	15-inch diameter max. pipe size, 5-foot max. depth to invert.
Catch Basin Type II	WSDOT Standard Plan B-10.20	
Concrete Inlet	WSDOT Standard Plan B-25.60	15-inch diameter max. pipe size, 5-foot max. depth to invert., only utilized for single pipe and where a full depth catch basin is not feasible.
Cement Concrete Curb and Gutter Pan	WSDOT Standard Plan F-10.16	Utilized along curb and gutter sections.
Rectangular Vaned Grate	WSDOT Standard Plan B-30.30	Utilized for all catch basins along curb and gutter sections unless in a sag condition.
Rectangular Frame (Reversible)	WSDOT Standard Plan B-30.10	Utilized for all catch basins.
Combination Inlet	WSDOT Standard Plan B-25.20	Utilized in sag conditions along curb and gutter.

Shallow manholes (32”-50” deep) shall conform to **City of Auburn Standard Detail S-06** and may only be used upon approval of the City Engineer or designee.

Additional design provisions may be required by the City Engineer or designee for manholes over 20 feet deep.

Manhole diameters shall meet the following requirements based on the manhole depth and the size, number, and configuration of pipes entering as shown on **Table 8-3**.

Manholes shall provide a minimum of 0.10 foot of drop between the inlet pipe and the outlet pipe. Pipes of differing diameters shall be aligned so that the crowns of the pipes match. Where the slope of a pipe entering or exiting a manhole is greater than 5%, the slope shall be continued through the manhole and the invert elevations indicated on the plans.

Manholes are to be channeled from the entering pipe to the outlet pipe, with the sidewalls of the channel extended above the top of the largest connected pipe. See **City of Auburn Standard Detail S-08**. When making a new connection to an existing manhole, the manhole shall be rechanneled to match the new pipe configuration.

Table 8-4 Sanitary Sewer and Storm Drainage Structure Sizing

Manhole Diameter	Number & Diameter of pipes/ Connections Allowed	Depth of Manhole
48” Diameter	1 Pipe, 21” 2 Pipes, 12” – 18” 3 Pipes, 8” – 10”	4’ Minimum 12’ Maximum
54” Diameter	1 Pipe, 36” 2 Pipes, 21” – 30” 3 Pipes, 12” – 18” 4 Pipes, 8” – 10”	6’ Minimum 15’ Maximum
60” Diameter	1 Pipe, 42” 2 Pipes, 24” – 36” 3 Pipes, 15” – 21” 4 Pipes, 10” – 12” 5 Pipes, 8”	8’ Minimum 20’ Maximum
72” Diameter	1 Pipe, 48” – 54” 2 Pipes, 36” – 42” 3 Pipes, 18” – 24” 4 Pipes, 12” – 15” 5 Pipes, 8” – 10”	8’ Minimum 25’ Maximum

Pipes entering manholes must have a minimum of 8 inches between their penetrations on the inside of the manhole (See **City of Auburn Standard Detail S-08**).

The angle between inlet pipes and the outlet pipe shall not be less than 90-degrees.

Drop manholes are discouraged and require approval from City Engineer or designee. When approved, drop manholes shall be inside drops conforming to **City of Auburn Standard Detail S-05**.

8.02.02 Structure Locations

The design of new sanitary sewer and storm drainage conveyance systems shall be done in a manner that minimizes the total number of structures (manholes and catch basins), using the following criteria:

A. Structures shall be installed at a maximum spacing of 400 feet apart along the main.

B. A structure shall be installed at all junctions of two or more mains.

C. A structure is required whenever connecting to a main with an 8-inch or larger diameter pipe.

D. A structure shall be installed at all changes in vertical slope, horizontal direction, and/or pipe size.

E. In cases where a sewer main steeper than 5% must turn 90-degrees through a manhole, a transition manhole is required at least 20 feet upstream to reduce the pipe slope to a maximum of 2% and/or to change the angle to 45-degrees.

F. All public sanitary sewer lines shall end with a manhole. All end of the line sanitary sewer manholes with no side sewers connected directly to them shall conform to **City of Auburn Standard Detail S-07**.

G. Sanitary sewer manholes are not to be located within the limits of surface water ponding or flow lines associated with stormwater runoff.

H. Structure covers shall be located outside the wheel paths of roadways and outside driveway aprons.

I. Structures shall not be located within sidewalks, landscape strips trails, or curb and gutters, except as approved by the City Engineer, or Designee. In cases where structures are located in walking paths, the structure cover shall be non-skid, smooth top.

J. Cleanouts are not an acceptable alternative for structures (manholes or catch basins) except they may be used with City Engineer or designee approval at the end of a sanitary sewer main, when the future extension of the sanitary sewer main is planned, and the current end point is not a practical location for a manhole. When approved by the City Engineer or designee, public cleanouts shall conform to **City of Auburn Standard Detail S-03.**

K. Structures shall not be located on portions of streets or access roads with a slope greater than 8%.

L. Structures shall be subject to the separation requirements from buildings and structures specified in **Chapter 6**.

M. Structures set in gravel areas shall be set at the center of a 6-foot concrete apron flush with the finished grade of the apron.

N. Structures set in landscaped or unimproved areas shall be set 6 inches to 12 inches higher than the surrounding terrain and provided with a 6-foot diameter concrete apron around the manhole lid.

O. Frames and covers shall conform to **City of Auburn Standard Detail S-04**.

P. Structures shall be adjusted to grade per **City of Auburn Standard Detail T-05**. Rubberized adjustment rings may be required in certain circumstances as determined by the City Engineer.

8.03 Sanitary Side Sewers

See **City of Auburn Standard Details S-01, S-02 & S-03.**

Side sewers are defined as that portion of the sewer system that extends from 2 feet outside of the outer foundation wall of the structure to the public sanitary sewer main. The City maintains the portion of the side sewer located within the right-of-way. The property owner owns and maintains the portion of the side sewer located outside of the public right-of-way. Side sewers located within easements are the property owners' responsibility to maintain.

Side sewers shall meet the following requirements and shall be laid out per **Figure 8-01**:

A. A separate and independent side sewer from the public main shall be provided for each and every parcel.

B. A separate and independent side sewer from the public main shall be provided for each non-single family building on a parcel.

C. Side sewers within the public right-of-way and side sewers serving non-single family development shall be a minimum of 6-inches in diameter. The private portion of side sewers serving single family residences may be 4-inches in diameter within the parcel that it serves.

D. 6-inch diameter side sewers shall be connected to the public sanitary sewer main by the use of a tee (**City of Auburn Standard Detail S-01**) or connected directly to a manhole located along the public main. All side sewer manhole connections shall incorporate a channeled or rechanneled manhole.

E. Side sewers with a diameter of 8-inches or greater shall be connected to the sanitary sewer system by use of a sanitary sewer manhole which shall be channeled or rechanneled.

F. When constructing sanitary sewer mains in new developments, side sewer installation shall extend from the connection on the main line to the edge of any utility easements or the public right-of-way, whichever is further.

G. When installing new sanitary sewer mains or replacing existing mains in developed areas, side sewers shall be installed for all existing occupied structures and any buildable lots. Side sewers shall extend to the property lines and their location shall be clearly marked in conformance with **City of Auburn Standard Detail S-01**.

H. The maximum length of side sewer from the sanitary sewer main to the building shall not exceed 150 feet. The City Engineer or designee may allow this length to be exceeded in instances where the side sewer can maintain a 2% slope, a public sewer extension built to shorten the side sewer would not serve any other potential customers. Where the maximum length is exceeded and the minimum slope maintained, the City Engineer or designee may require additional cleanouts or other measures to mitigate the additional length.

I. Side sewers shall be designed and constructed with a minimum 2% slope from the building to the tee or manhole connection. Where site constraints require that the slope be less than 2%, the City Engineer or designee may require larger diameter pipe and/or additional cleanouts.

J. When an immediate connection to a building is not being made, side sewers shall be designed to provide a minimum depth at the property line of 5 feet below the floor to be served or 6 feet below the street, whichever is deeper. In cases of vacant properties with no anticipated building elevation, the side sewer shall be constructed at a 2% slope from the tee.

K. Side Sewers shall not have horizontal or vertical bends located within the right-of-way.

L. Side sewers shall have a minimum cover of 5 feet at the edge of right-of-way.

M. Side sewers shall be a minimum of 5 feet from potable water service lines.

N. Side sewer cleanouts shall be installed within 3 feet of the building foundation providing an access point into said line for future maintenance.

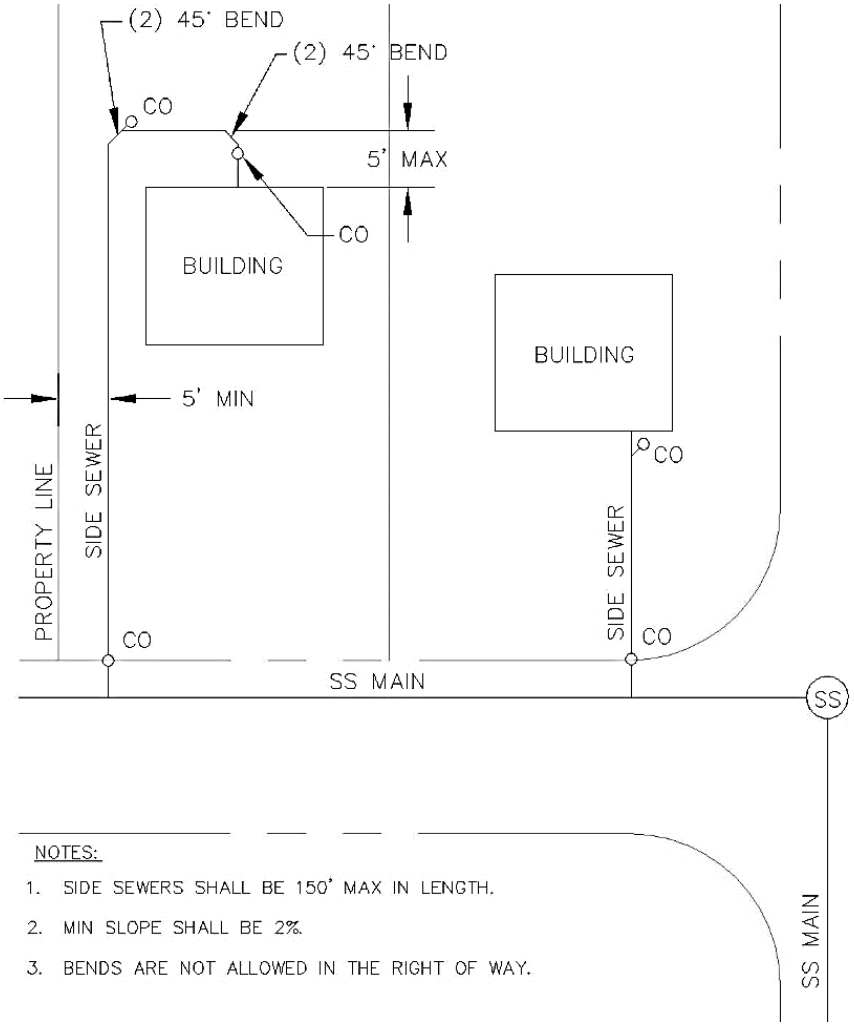
O. Side sewer cleanouts shall be installed at the edge of the property owner's side of the public right-of-way line or utility easement where the ownership of the side sewer changes from private to public.

P. Sanitary sewer cleanouts shall be installed in side sewers every 100 feet and for each change in direction totaling 90 degrees. See **Figure 8-01**.

Q. If the private portion of the side sewer crosses another private property other than the property being served, a minimum of a 10 foot wide private sewer easement (5 feet on either side of the pipe centerline) must be obtained granting the property owner being served permission to cross said property.

R. All side sewers must use push on gasketed joints. Glued joints are not allowed outside the building footprint.

Figure 8-01 Side Sewer Layout



8.04 Oil/Water Separators

Prior to discharging into the sanitary sewer system, oil separation facilities shall be used in pre-treating drainage flows from fuel islands, trash enclosures, wash pads, and floor drains where (in the opinion of the City Engineer or designee) heavy concentrations of oil may occur.

Pads with drains for trash enclosures and wash pads intended for washing the exterior surfaces of vehicles shall drain to a catch basin with a downturned 90-degree elbow prior to discharge to the sanitary sewer. Oil/water separators for other applications shall meet the following design criteria:

A. A forebay to collect floatable and the larger settleable solids.

B. A surface accessible inspection T inside the first chamber at the inflow pipe and a sample T at the last chamber at the outflow pipe.

C. Access to the separator shall be maintained free for inspection at all times.

D. A maximum of 200 SF of uncovered area open to rainfall may discharge to the separator. Refer to BMP S441 in the SWMM for applications where this may apply.

E. If a pump mechanism is required to convey the discharge from the site to the sanitary sewer system, the pump must be designed for discharge to a controlled gravity outlet flow into the City system.

F. The separator shall have a valve on the discharge pipe that can be closed during cleaning and in the event of a spill.

G. All piping entering and leaving the separator must be 6 inches minimum diameter.

H. Access points in the top of the separator vault must be provided to allow a minimum twelve-inch diameter access for observation and maintenance to all chambers of the separator.

I. Access doors shall be galvanized spring-assisted diamond plate with a penta-head bolt-locking latch and recessed lift handle.

J. Access doors must open a full 180 degrees.

8.05 Pressurized Sewer Systems

Private low pressure sewer systems are allowed only where the existing public system has already been extended to, or is within 200 feet of, the subject property and the elevation differences between the public sewer main and the subject property do not allow for a gravity connection. Extension of a private gravity sewer main onto the property(s) may be required if such extension could make gravity sewer service possible. Sewage from pressurized systems must be discharged into a minimum 6-inch diameter private gravity side sewer prior to connecting to the public portion of the side sewer.

Low pressure sewer systems are not allowed in public right-of-way or public easements.

Low pressure sewer systems shall be owned and maintained by those connecting to it. Systems serving multiple properties shall be within easements or tracts dedicated or owned by all properties connecting to the system.

All other proposed pressurized systems require deviation(s). In addition to the standard deviation considerations required by these standards, deviations requesting pressurized systems must show that extension of the public systems as intended per the Sewer Comprehensive Plan to serve the property(s) and that serving the property(s) with septic system(s) are not feasible. Septic systems may only be considered infeasible if there is no form or scale of a septic system(s) that the County would accept for at least one form of development of the property(s) that would be allowed under the current zoning and land use regulations. Determination that septic system(s) are not feasible require written documentation from the County.

8.06 Sanitary Sewer Meters

The use of sewer meters shall only be allowed if it is determined by the City Engineer that a sewer meter is the appropriate device for the accurate measurement of wastewater being sent into the public sewer system.

8.07 Storm Drainage System Requirements

All requests for developing a storm drainage system must comply with the City of Auburn Surface Water Management Manual (SWMM). The City has adopted the 2019 Department of Ecology Stormwater Management Manual for Western Washington and the City of Auburn Supplemental Manual as the SWMM. The Supplemental Manual provides guidance for applying specific sections of the Ecology document within the City of Auburn. All references to the City's SWMM include both documents. The City's Supplemental Manual can be found utilizing the following hyperlink:

Supplemental Manual

Storm drainage system design is guided by the 10 Minimum Requirements for Stormwater Management, listed below. The applicability of the Minimum Requirements is based on project size and the total new and/or replaced hard surfaces created by the project. It is recommended that the Minimum Requirements, especially LID, are considered at the beginning of project design to ensure that the required elements can be included in the project. The SWMM also addresses modeling standards and design criteria for conveyance, storage, treatment facilities, and other drainage system structures.

The SWMM is divided into five volumes that address different aspects of storm drainage system design. These volumes and the key components for design and application submittal are:

Volume I – What Requirements Apply to My Site?

The 10 Minimum Requirements (MR) for Stormwater Management are:

MR #1: Preparation of Stormwater Site Plans

MR #2: Construction Stormwater Pollution Prevention Plan

MR #3: Source Control of Pollution

MR #4: Preservation of Natural Drainage Systems and Outfalls

MR #5: On-Site Stormwater Management

MR #6: Runoff Treatment

MR #7: Flow Control

MR #8: Wetlands Protection

MR #9: Operations and Maintenance

MR #10: Off-Site Analysis and Mitigation (Supplemental Manual)

Volume II – Construction Stormwater Pollution Prevention

Volume III – Choosing, Modeling, and Documenting Your BMPs

Volume IV – Source Control BMP Library

Volume V – Runoff Treatment, Flow Control, and LID BMP Library

Chapter 9: Facilities in the Right of Way

9.00 Preface

The design of public and private facilities located within City right-of-way shall be in conformance with these standards. For the purposes of these standards, “facilities” shall include City owned and non-City owned potable water, irrigation water, sanitary sewer, storm drain, gas, communications, electrical, illumination, and any other utility facility and their appurtenances. This Chapter also covers non-utility facilities such as building foundation elements, awnings, and private signs.

When a non-City sponsored project requires the relocation of private utilities due to public utility extensions or other City required improvements, the cost of relocation of the private utility shall be borne by the developer.

9.01 Franchise/Public Way Agreement Requirement

Private facilities within the City right-of-way require prior approval from the City. Except as allowed otherwise by Auburn City Code, owners of private facilities in the right-of-way shall have a current franchise, public way agreement, or Right-of-Way Use Permit consistent with Title 20 and/or Title 13 and/or Title 12, if applicable, of the Auburn City Code.

9.02 Construction Permit Requirement

Any non-City entity intending to construct, repair, or replace any facility in City right-of-way shall apply for a construction permit. Applications for constructions permits can be made directly through MyBuildingPermit.com. A City permit must be obtained prior to any work within the City right-of-way.

9.03 Design Criteria

The City has established the following minimum requirements to ensure the efficient construction of facilities with the least impact to City transportation and public utility infrastructure:

A. Public water, sewer, storm, and telecommunications facilities shall be constructed per the Engineering Design and Construction Standards.

B. Private underground facilities shall be installed with no less than 36 inches of finished cover.

C. Private underground facilities shall be located a minimum horizontal distance of 5 feet from buildings and public facilities.

D. When crossing public underground facilities, private underground facilities shall be located a minimum vertical distance of 12 inches from the public utility. Additional separation may be required between potable and non-potable pipes per **Chapter 6** of these Engineering Design Standards.

E. Manholes, valve boxes, power vaults, etc., that are located in the paved area of a street shall be located outside of the wheel paths of vehicles and flush with the pavement surface.

F. The design of underground facilities shall seek to minimize the number of required structures and redundant pipes/conduits.

G. Structures located within parking lots, sidewalks, and paths/trails shall also be flush with the surface. In areas where traffic will pass over the structure, load-bearing lids shall be incorporated in the design.

H. Repair of existing cement concrete roadway panels shall be per **City of Auburn Standard Detail T-27.**

I. The City Engineer may allow required restoration overlays per **City of Auburn Standard Details T-02 and T-02A** of individual trenches to be deferred where a program or project exists that would complete the restoration/overlay of multiple trenches as a single project or effort. In all cases, permanent repair of the trench is required per **City of Auburn Standard Detail T-01** with the trench construction and backfill and cannot be deferred or delayed.

9.04 Pavement Trenching and Restoration

Trenching, backfill, and restoration shall, within paved areas, be per **City of Auburn Standard Details T-01 and T-02**. Manhole covers, valve covers, vault lids, and other utility appurtenances within pavement restoration areas, including areas of grind and overlay, shall be first lowered beneath the final wear course, paved over, and then raised to final grade per **City of Auburn Standard Detail T-05** and per the Construction Standards. This requirement may be waived by the City Engineer or designee when the total area of the final wear course paving area is less than 100 SF.

The City Engineer may allow required restoration overlays per **City of Auburn Standard Details T-02 and T-02A** of individual trenches to be deferred where a program or project exists that would complete the restoration/overlay of multiple trenches as a single project or effort. In all cases, permanent repair of the trench is required per **City of Auburn Standard Detail T-01** with the trench construction and backfill and cannot be deferred or delayed.

9.04.01 Perpendicular Trenching in Asphalt Pavement

Trenching through and within intersections is considered perpendicular trenching.

A. Perpendicular trench backfill shall be in accordance with **City of Auburn Standard Detail T-01.**

B. Pavement restoration shall match existing pavement type and thickness with a minimum thickness of 4-inches.

C. After trenching, the adjacent pavement on each side of the trench shall be sawcut and removed (full depth) to a minimum of 12 inches from the edges of trench to reveal a clean pavement edge to patch against. This is referred to as the “T-cut”.

D. In the process of perpendicular trenching, if the remaining section of pavement between the edge of T-cut and the edge of the pavement/gutter is less than 4 feet wide, the restoration/overlay will extend to the edge of the pavement/gutter.

E. In the process of perpendicular trenching, remaining sections of pavement between the edge of T-cut and lane line/lane edges less than 4 feet wide, shall be included in the restoration/overlay area.

F. When more than 1 perpendicular trench is constructed along a roadway, pavement areas between the limits of the restoration/overlay limits that are less than 10 feet wide are to be added to the required restoration/overlay area.

G. Perpendicular trenching to roadways may not be allowed on newer roads or streets that have been constructed or overlaid within the last five years.

H. Perpendicular trenching may not be allowed or may be limited to off-peak hours and/or weekends on principal arterials or where the construction activity will seriously impede large volume traffic patterns. Utility connections that have to be made within the roadway will be allowed after approval from the City.

I. Jacking/boring alternatives may be required as substitute methods for perpendicular trenching.

J. The minimum pavement patch width and overlay restoration for perpendicular/transverse trenches shall be per **City of Auburn Standard Detail T-02.**

K. When multiple trenches are required in close proximity, the asphalt patch shall encompass all the trenches.

L. The longitudinal edge of the perpendicular asphalt patch shall not lie within the wheel paths of vehicles.

M. Requirements for curb ramp installation, replacement, and/or upgrade associated with the utility trench work shall be in accordance with **Chapter 10**.

9.04.02 Longitudinal Trenching in Asphalt Pavement

Trenching outside of intersection limits (curb returns) and running parallel, or within 30 degrees of parallel, to the edge of pavement/flowline is considered longitudinal trenching.

A. Longitudinal trench backfill shall be in accordance with **City of Auburn Standard Detail T-01**.

B. Pavement restoration shall match existing pavement type and thickness with a minimum thickness of 4-inches.

C. After trenching, the adjacent pavement on each side of the trench shall be sawcut and removed (full depth) to a minimum of 12 inches from the edges of trench to reveal a clean pavement edge to patch against. This is referred to as the “T-cut”.

D. In the process of longitudinal trenching, if the remaining section of pavement between the edge of T-cut and the edge of the pavement/gutter is less than 4 feet wide, the restoration/overlay will extend from the trench to the edge of the pavement/gutter.

E. In the process of longitudinal trenching, remaining sections of pavement between the edge of T-cut and adjacent lane line/lane limits less than 4 feet wide, shall be included in the restoration/overlay area.

F. When more than 1 longitudinal trench is constructed along a roadway, pavement areas between the limits of the restoration/overlay limits that are less than 5 feet wide are to be added to the required restoration/overlay area.

G. The longitudinal edges of the asphalt patch shall not lie within the wheel paths of vehicles.

H. The minimum pavement patch width and overlay restoration for longitudinal trenches shall be per **City of Auburn Standard Detail T-02**.

I. For streets that have been constructed or overlaid within the last 5 five years the City Engineer may require additional restoration area.

J. For streets that have been constructed or overlaid within the last 5 five years, or for principal arterials where open trenching will impede large volume traffic patterns, the City Engineer may require that trenchless techniques be used as an alternative. The City Engineer may require that trenchless techniques be limited to off peak hours and/or weekends.

K. Requirements for curb ramp installation, replacement, and/or upgrade associated with the utility trench work shall be in accordance with **Chapter 10**.

L. The City Engineer may allow trench restoration/overlay of individual trenches to be included in a program or project to complete the restoration/overlay of multiple trenches as a single project or effort.

9.04.03 Trenching in Cement Concrete Pavement

A. Repair of existing cement concrete roadway panels shall be per **City of Auburn Standard Detail T-27.**

B. The edges of trenches in concrete pavement shall be sawcut prior to excavation to avoid damaging the slab. Concrete slabs 6 inches and over shall be drilled for the installation of dowels. Dowels shall be 1 and 1¼ inches in diameter, 18 inches long, and spaced 12 inches center to center.

C. The minimum pavement patch width for concrete trenches shall be 4 feet.

D. In the process of trenching concrete, if the section of pavement between the trench and the edge of the existing concrete panel is less than 4 feet, the section shall be removed and replaced.

E. Longitudinal trenches in concrete may be repaved with an asphalt pavement thickness of equivalent strength upon City approval.

9.05 Non-Pavement Trenching

Trenching in areas other than paved surfaces, including sidewalks, gravel shoulders, and landscape strips, shall conform, where applicable, to the previous sections and replace the disturbed material in kind or as directed by the City. Utility trench bedding and backfill shall conform to **City of Auburn Standard Detail T-01** and to the Construction Standards.

9.06 Aboveground Facilities

Unless otherwise provided in a public way agreement, franchise, or lease, all facilities must be located underground. Exceptions to this standard are as follows:

A. Fire Hydrants, Blow-offs, Air/Pressure Relief

B. Pipe and cable crossings of rivers and freeways

C. High voltage electrical facilities (transmission lines and substations)

D. Illumination and signal facilities

E. Telephone pedestals

F. Aerial cables hung on existing utility poles (with approval of City Engineer)

G. Small Wireless Facilities

H. Other facilities, that in the opinion of the City Engineer, cannot be reasonably constructed underground.

Where underground requirements do not apply, the following parameters shall be addressed in locating or relocating aboveground utilities:

A. Clear Zone Requirements: Non-breakaway utility poles and other fixed aboveground utility structures shall meet the clear zone requirements of these design standards, See **Chapter 10**. Respective utility owners shall be responsible for securing easements from adjacent property where clear zone requirements cannot be met within the public right of way.

B. ADA Requirements: Utility poles and other aboveground utility structures shall not be located within the sidewalk. This requirement may be waived by the City Engineer if the pole location in the sidewalk allows a minimum of 48 inches of unobstructed pedestrian travel way and the pole/structure meets clear zone/lateral separation requirements described in **Chapter 10**.

C. Utility poles and other aboveground utility structures shall be compatible with driveways, intersections, and all other road features. They shall not interfere with sight distance, road signing, traffic signals, culverts, etc. The City Engineer may require poles to be relocated to meet this requirement.

D. No utility pole or other aboveground utility structures shall be located in such a way as to pose a hazard to the general public. Utility companies shall locate and replace poles and other structures with primary consideration given to public safety and roadway functionality.

E. New overhead power and communications wires and appurtenances shall comply with the vertical clearance requirements established by WAC-468-34-290. Except as may be determined otherwise by the City Engineer to address safety issues, for the purposes of this overhead clearance requirement, replacement of existing facilities and overlashing of existing cables/wires that do not reduce the existing minimum vertical clearances are not considered to be new. Whether considered to be new or not, plans for overhead power and communications wires and appurtenances must show the existing and proposed vertical clearance of the facilities being installed or modified at each midspan location between poles.

F. If allowed by the City Engineer, wireless and radio facilities that are not considered Small Wireless Facilities per ACC 20.14 are subject to the concealment standards cited in **Chapter 9**.

G. A net increase in the number of poles is not allowed except that the City Engineer may determine that additional poles with service lines only serving properties not included in the project (no distribution lines) may be allowed. In making this determination, the City Engineer will consider the potential impact to structures of undergrounding service line connections.

9.07 Building and Structure Related Facilities

Permanent buildings, building shoring systems that would leave any elements in the right-of-way after construction, footings and foundations, and privately owned walls, gates, and fences are not allowed in the public right-of-way.

Facilities such as Awnings, overhangs, and elevated decks/patios/railing (only in the Downtown Urban Center Zone), and bus shelters may be permitted by the City Engineer with special conditions and considered on a case-by-case basis and subject to ACC 12.60.

9.08 Small Wireless Facilities

This section describes design standards for Small Wireless Facilities as set forth in ACC 20.14. The purpose of these standards is to provide concealment and safety standards for Small Wireless Facilities in the public right-of-way.

9.08.01 General Requirements

A. Small wireless facilities will comply with applicable Federal Communications Commission (FCC), Federal Aviation Administration (FAA), state, and City regulations and standards.

B. A Small Wireless Facility will not be used for mounting signs, billboards or message displays except as approved by the City for the purpose of providing concealment.

C. No lights, other than street lights, are permitted on any pole or antenna unless required by the Federal Communications Commission, the Federal Aviation Administration, or the City.

D. No Small Wireless Facility may be attached to a tree or any other vegetation.

E. Installation of a new pole in the public right of way to serve a Small Wireless Facility will not be allowed whenever an existing pole or other structure in the public right of way can meet technical and network location requirements and the owner of said pole or structure grants permission for the Small Wireless Facility Attachment. If the existing pole or structure does not meet the City's design standards or other requirements, with agreement from its owner, it may be replaced with a pole or structure that meets the design requirements and these standards. In these cases, all attachments must be transferred from the existing pole to the new pole and the existing pole must be completely removed and surface restored.

F. Small Wireless Facilities and all associated facilities, including support poles or structures, will be free from all manufacturer decals and/or logos.

G. Generators are not permitted for Small Wireless Facilities. A battery backup may be permitted through the submittal of a concealment plan and emergency spill response plan.

H. Installation of Small Wireless Facilities is not allowed where it would create a sight distance issue for vehicular or non-motorized traffic, identified in the City of Auburn Engineering Design and Construction Standards.

I. Applications for Small Wireless Facilities will include plans that conform to the plan requirements described in the City of Auburn Design and Construction Standards. Concealment plans will include photos of the proposed site location(s) with overlaid renderings of the proposed Small Wireless Facilities to demonstrate the facility's adherence to concealment standards.

J. Small Wireless Facilities may not share power service connections with City facilities unless specified otherwise in the applicable use agreement for City-owned property.

K. Record Construction Drawings are required in accordance with the City of Auburn Engineering Design and Construction standards.

9.08.02 Attachments to City Facilities

A. Attachment, modification, relocation, or replacement of City facilities requires an executed agreement with the City in addition to any applicable franchise or public right-of-way agreements.

B. Attachment to an existing City pole requires calculations sealed by a Professional Engineer that shows the existing pole can support the Small Wireless Facility. Where the existing facility being attached to is a City owned street light, signal pole, sign support structure, or Dynamic Message Sign (DMS) support structure, calculations must show compliance with the strength and loading parameters stated in the City's Construction Standards. The loading calculations will include consideration of potential future loading with planned or potential future City facility attachments.

C. Small Wireless Facilities are not permitted on City street light poles where they would interfere with street lighting, City banners, flower baskets, holiday lighting, holiday decorations, or other City uses of the pole.

D. Replaced City light poles will be of the same color and similar style as adjacent existing City light poles, unless otherwise approved by the City Engineer. Where a City light pole has been replaced or relocated the davit arm length will be replaced as needed to place the luminaire in-line with the other luminaires along the roadway and in accordance with City design standards.

E. Installation of Small Wireless Facilities on City facilities within secured sites is not allowed. Secure City facilities are those facilities that are enclosed by a fence with locked gate access and typically include water reservoirs, water treatment plants, pump stations, and water wells.

F. Installation of Small Wireless Facilities on traffic signal mast arms is not allowed.

9.08.03 General Pole Requirements

A. Installation of Small Wireless Facilities on poles intended to break-away from vehicular impact is not allowed.

B. New, replaced, or relocated poles are not allowed within the clear zone (as identified in the City of Auburn Engineering Design and Construction Standards). For the purposes of determining clear zone requirements, poles with Small Wireless Facilities attached are considered utility poles.

C. Small Wireless Facilities will be mounted such that no portion of the facility, including antenna, are higher than 50 feet, or 10% higher than the height of buildings or structures immediately adjacent to the right-of-way, or the Small Wireless Facility attachment does not extend the height of the pole to more than 50 feet or by more than 10 percent, whichever is greater.

D. A pole that is relocated or replaced for the purpose of attaching a Small Wireless Facility is considered an existing structure.

9.08.04 Wiring and Conduit

A. All wiring must be inspected and accepted by Washington Department of Labor and Industries and associated documentation provided to the City prior to being placed into service.

B. Except on wooden poles and other support structures where internal routing is not feasible, all cables, wires, and fiber must be routed internally in the pole or support structure and must not be visible externally.

C. Wiring, cables, and fiber associated with the Small Wireless Facility will be in their own conduit, interducts, and channels so they are not co-mingled with conduits and cables serving other uses. Electrical wiring will be separated from communications wiring with interduct or separate channels.

D. All interducts, channels, cables, and wiring will be clearly labeled at the pole ends, handholes, junction boxes, and other termination points. Record construction drawings will show and label all cables/wiring, interduct, and channels.

9.08.05 Concealment

Small Wireless Facilities will be screened, concealed, or camouflaged employing the best available technology, such as compatible materials, shrouding, location, color, and other tactics to minimize visibility of the facility.

Pole mounted equipment, antenna, conduits, cables, mounting hardware, and other visible components will match the color of the pole they are attached to unless specifically approved by the City. The City Engineer or the City Engineer's designee will consider the cumulative visual effects on the visual character of the surrounding area of Small Wireless Facilities mounted on existing structures and/or located on a given permitted site in evaluating concealment requirements.

Where conduit or cables are mounted external to the support structure, the outside cable conduit or cable will be the color of the support structure, and the City may require that the cable be placed in conduit. Full concealment of all conduits, cables, wires, and fiber is required within mounting brackets, shrouds, canisters, or sleeves if attaching to exterior antennas or equipment.

9.08.06 Pole Mounted Antennas and Equipment

Antennas will be located, mounted and designed so that visual and aesthetic impacts upon surrounding land uses and structures are minimized, and so that they blend into the existing environment.

Panel antennas shall not be mounted more than 12 inches from the surface of the utility pole, with the distance measured from inside edge of the antenna to the surface of the pole, unless an additional distance is required by the pole owner. An applicant may install a side-mounted canister antenna, so long as the inside edge of the antenna is no more than 12 inches from the surface of the pole.

Pole mounted equipment other than the antenna(s), electric meter, and disconnect switch must be concealed within equipment enclosures. Equipment enclosures will be installed flush to the pole and not extend more than 24 inches from the face of the pole.

All attachments to a pole that are projecting, or any equipment or appurtenance mounted on the ground, will comply with the Engineering Design and Construction Standards, the Americans with Disabilities Act (ADA) standards and will not obstruct an existing or planned sidewalk or walkway.

All proposed projecting attachments to the pole will provide a minimum vertical clearance of 12 feet over sidewalks, 16 feet over driveways, and 20 feet over roadways.

9.08.07 Non-Pole Mounted Equipment

A. Non-pole mounted equipment facilities will be placed underground if doing so is technically feasible and would not defeat the purpose of the facility.

B. Above ground equipment facilities that are not pole mounted will be screened from any street and adjacent property with fencing, landscaping, shrouding, topography, or a combination of these methods,

C. Above ground equipment facilities that are not pole mounted will be treated with graffiti resistant paint or material.

9.08.08 Strand Mounted Small Wireless Facilities

A. Each strand mounted Small Wireless Facility will not exceed three CFin volume.

B. The strand mounted Small Wireless Facility will be placed as close as possible to the nearest utility pole, but no more than five feet from the pole unless a greater distance is technically necessary or required by the pole owner for safety clearance.

C. No strand mounted Small Wireless Facility will be located in or above the portion of the roadway open to vehicular or non-motorized traffic.

D. Strand mounted small wireless facilities must be installed to cause the least visual impact and with the minimum excess exterior cabling or wires (other than the original strand) necessary to meet the technological needs of the facility.

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Chapter 10: Transportation

10.00 Preface

The intent of this Chapter is to encourage the uniform development of an integrated and accessible transportation system that will support all modes. Through the implementation of these standards, streets are built as transportation facilities as well as public space, contributing positively to the character of the City. These standards help create an efficient multimodal transportation system while minimizing environmental impacts to the community.

The design of Streets within the City of Auburn shall conform to the standards provided herein. The current editions of the American Association of State Highway and Transportation Officials (AASHTO), FHWA and Washington State Department of Transportation, MUTCD, and the State of Washington Department of Transportation (WSDOT) standards shall be utilized by the City Engineer when the design standards, standard specifications, or standard drawings are not covered by the scope of the City's standards.

The design criteria used to estimate future street usage are established in the City's Comprehensive Transportation Plan (CTP).

All streets shall be designed and constructed to comply with Federal Americans with Disabilities Act (ADA) laws. Additional guidelines and information can be found at WSDOT's ADA web page by clicking on the following hyperlink:

https://wsdot.wa.gov/about/americans-disabilities-act-ada

10.01 Development Activity Requirements

10.01.01 Traffic Impact Analysis

Per the Comprehensive Transportation Plan (CTP), development shall not be allowed when the impacts of the development on the transportation system degrade the level of service (LOS) below the adopted LOS standard, unless the impacts are mitigated by the improvements provided by the development. For more details regarding level of service standards and when mitigation is triggered, see the CTP.

A traffic impact analysis (TIA) is used to identify capacity and safety concerns, to assist in the evaluation of site design as it relates to traffic engineering issues, and to identify appropriate solutions and mitigation.

Projected trip generation shall be calculated based on the current edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual.

10.01.01.A When Traffic Impact Analyses are Required

To adequately assess a development's traffic impact, the City Engineer, or designee, may require a TIA. The requirement for a TIA will be based on the size of the development proposed, existing street and intersection conditions, traffic volumes, crash history, safety considerations, community concerns, and other pertinent factors relating to traffic impacts attributable to the development. A traffic impact analysis is required for development activities that create one or more of the following conditions:

A. The development could potentially affect an intersection or corridor where an existing level of service is at or below standard.

B. The development generates more than 30 PM or AM peak hour trips on a corridor or intersection.

C. The development may potentially affect the implementation of the street system as outlined in the Comprehensive Transportation Plan and Six Year Transportation Improvement Program (TIP), or of any other documented transportation project.

D. The development proposes a rezone of the subject property.

E. The original Traffic Impact Analysis for a future development is outdated due to changes in traffic volumes in the vicinity of the proposed project or approved pipeline projects or a change in the proposed land use's trip generation and/or distribution.

F. The development could potentially affect safety or requires an analysis to assist in designing appropriate access.

G. Special event land uses which do not exhibit typical trip generation characteristics may require unique analysis, including but not limited to weekend and off-peak scenarios, and AM versus PM time frames. Examples of such uses would be school, concert stadiums, racetracks or uses which exhibit substantial traffic peaking associated with special events that are scheduled on a periodic basis. The traffic analysis for such uses may include a traffic management plan to control traffic impacts associated with the special events.

10.01.01.B Elements of a Traffic Impact Analysis

Development activities have a wide range of considerations and potential issues that vary depending on the proposed development and its setting. The TIA will be cooperatively scoped by the developer and City Engineer, or designee. However, the City Engineer, or designee, will make the final decision regarding what analyses must be included in the TIA. The TIA may include all or some of the following analyses:

A. Vehicle level of service analyses (Intersection delay and Intersection queueing).

B. Analysis of proposed street connections to other new and existing streets and resulting volumes to demonstrate the requirements of **Section 10.03.01** are met.

C. Critical gap analyses.

D. Roundabout analyses.

E. Traffic signal warrant analyses.

F. Stop control warrant analyses.

G. Turn lane warrant analyses.

H. Traffic calming evaluation.

I. Access management evaluation.

J. Mitigation identification and analyses confirm proposed mitigation addresses impacts. See Mitigation Identification section.

K. Neighborhood Circulation Plan. See Neighborhood Circulation Plan section.

L. Truck trip generation and routing analysis.

M. Evaluation of existing transit services and facilities and identification of modified or new transit services and facilities needed to serve the project.

N. Other analyses and information as required by the City Engineer, or designee.

10.01.01.C Mitigation Identification and Recommendation

To address the potential adverse impacts of a development activity and to fulfill an identified need for public services within the impacted area related to the development, the TIA shall identify any impacts and needs required to be addressed by the development. The TIA shall identify measures to address the impacts and needs and demonstrate through modeling and/or other analyses that the proposed measures provide adequate mitigation and fulfillment of the needs. The developer is responsible for mitigating on-site and off-site deficiencies for present and proposed phases of the development. The TIA shall propose improvements necessary for safe and efficient traffic flow and bicycle, pedestrian, and transit movement and access proportional to the identified impacts. Build-out year, and project phasing impacts shall be considered. Long range forecast modeling is required for proposed zoning changes or non-conforming uses. All or some of the following items are to be included in the mitigation identification:

A. Measures for mitigating on-site impacts and proposed mitigation.

B. Measures for mitigating off-site impacts and proposed mitigation.

C. Discussion of whether on-site and off-site improvements are justified, reasonably related to, and proportional to the impacts of the proposed development. In situations where mitigation of a development's impacts provides mitigation beyond what is caused by the development and beyond the required half street improvements, the City Engineer may consider under certain conditions and in accordance with applicable City Code, a traffic impact fee credit and/or a payback agreement.

D. Any requirements or mitigation measures associated with the Neighborhood Circulation Plan.

The Traffic Impact Analysis shall clearly state the mitigation measures recommended by the analysis and shall summarize how the recommended mitigations are proportional to the identified impacts. The recommended mitigation measures shall be explained in sufficient detail in the analysis to allow them to be understood and evaluated. The recommendation shall also include the following:

A. Clear statements of the applicant's recommended mitigation measures.

B. Conceptual plans depicting recommended mitigation improvements and their relationship to existing and proposed conditions if drawings are needed.

10.01.02 Neighborhood Circulation Plan

Per ACC 17.16, a Neighborhood Circulation Plan is a conceptual plan that outlines the vehicular and nonmotorized circulation within and between a proposed subdivision and the surrounding area consistent with the CTP. Per ACC 17.10, a Neighborhood Circulation Plan is required with all subdivision applications that meets the requirements of ACC 17.16 and RCW 58.17.110(2) for safe walking paths for students. This requirement applies to both residential and non-residential subdivisions. To satisfy this requirement, plans and supporting documentation (such as a TIA where applicable), must satisfy and demonstrate the following:

A. The planned street system must be compatible with the CTP. Development which is proposed in areas of the city which have a planned street system which

is a part of the comprehensive plan or the city's six-year plan, and any other street plan, shall make provisions for such streets and must not cause implementation of such street plans to become unattainable.

B. Make provisions for, and not otherwise obstruct, planned routes or facilities for bicycles, equestrian, or other nonmotorized transportation mode which is a part of the CTP or Transportation Improvement Plan (TIP).

C. Provide a nonmotorized circulation system that is integrated into the overall subdivision and the surrounding area as follows:

- Includes an integrated nonmotorized circulation system that connects buildings, open spaces, and parking areas with the adjacent street sidewalk system.
- Provides connections to existing or potential future trails/pedestrian routes on adjacent properties unless there are physical constraints such as sensitive areas that preclude the construction of a pedestrian connection.

D. For residential subdivisions, in coordination with the applicable school district(s), identify walking routes for students within the subdivision for which bus services are not provided or planned to be provided by the school district(s). At locations where the identified route is not on a sidewalk meeting minimum City standards or where the route crosses a roadway, the project shall include enhancements to meet the requirements of RCW 58.17.110(2). Enhancements shall be identified, designed, and documented by a professional engineer and are subject to acceptance by the City Engineer. In deciding whether the proposed enhancements are acceptable the City Engineer will consider factors such as operations, maintenance, and replacement. Roadway crossings at uncontrolled intersection legs or not at intersections shall require enhancement per **Section 10.09.05**.

10.01.03 Half Street Improvements

10.01.03.A Half-Street Triggers

The requirements described in this section are in addition to any requirements determined during the SEPA process and/or the traffic study process described in **Section 10.01.01**, to mitigate localized impacts of the proposed development activity. This section describes the requirements for public improvements triggered by permitted actions as set forth in ACC 12.64A.

10.01.03.B Half-Street Extents

A public street or alley frontage that requires public improvements is referred to as a "Half-Street". The Half-Street extents are determined using the frontage street's cross section applicable to the street's roadway classification as defined in the CTP. The Half-Street may apply to an existing roadway or to a planned roadway which has not yet been built and extends along the entire length of the subject property frontage(s) with vehicular and/or non-motorized access. When Half-Streets connect to an intersection, the nearest corner of the intersection on the side being improved shall be designed and constructed for the full build-out of the street and shall extend, at a minimum, the intersection curb returns. Half-Street elements may extend beyond the property frontage(s) as described herein to transition to existing improvements or to provide additional improvements as described in **Section 10.01.04**. Half-Street requirements associated with alley frontage is described in **Section 10.01.03.E**.

10.01.03.C Half-Street Width

Along existing roadways, the Half-Street width is the area from the planned right-of-way limits to the planned roadway centerline based on the roadway classification and the typical cross sections in **Section 10.03.06**. Along planned or unimproved roadways, the Half-Street width is either 1) the area from the planned right-of-way limits to the planned roadway centerline or 2) the area from the planned right-of-way limits to the limit required to provide 24 feet of pavement, whichever is greater.

10.01.03.D Required Half-Street New Improvements

Half-Streets shall include construction of the following elements: paved roadway, sidewalks, curb/gutter, street landscaping, street lighting system, storm drainage, and conduit for City telecommunications. Half-street improvements to planned or unimproved roadways shall include improvements to the un-finished side of the roadway (opposite of the subject property frontage), as follows: temporary curbing, shoulders, clear zones, guardrail, slope treatments, and drainage accommodations to assure proper drainage, bank stability, and traffic safety.

If a Half-Street does not connect at both ends to other streets, construction of a permanent or temporary cul-de-sac will be required.

Where Half-Streets are connected to existing streets, lane markings transition tapers are required in accordance with AASHTO where edges of pavement do not match. Pavement transition tapers shall be constructed to a minimum of 5:1 or as constrained by the existing right-of-way.

All public utility improvements required for the project and service connections in the right-of-way shall be installed during the Half-Street construction. The Half-Street will be designed to provide drainage for the constructed portion of the street and to connect to the existing storm drain systems (where present), or be designed to allow for connection of the system to future planned storm drain systems.

10.01.03.E Required Half-Street Existing Improvements

Half-Street improvements shall include removing and replacing existing driveway aprons that do not meet current ADA requirements. Half-Street improvements shall include addressing sidewalk obstructions in the Half-Steet area, including, but not limited to, replacing existing sidewalk areas that are an ADA obstruction.

Additionally, the City Engineer may make a determination that existing improvements within the Half-Street that do not conform to current City standards require improvement, upgrade, modification, or re-construction. In making this determination, the City Engineer will consider the proportionality of the required work to the potential impacts of the project, pedestrian and vehicular safety, ADA requirements, consistency and conformity with adjacent existing and planned improvements, and other factors as deemed relevant by the City Engineer. As part of this determination, the City Engineer may require existing driveway access(es) that do not meet current standards to be removed, relocated, and modified.

10.01.03.F Half-Street ROW Dedication

Right-of-way dedication is required for areas of the subject property within the Half-Street area along all frontages that are not already dedicated as right-of-way. Additional right-of-way dedication may be required as determined by the City Engineer per **Section 10.01.04**.

10.01.03.G Alley Half-Streets

Half-Street improvements in alleys shall include paving the alley to a width of 20 feet along the frontage of the property and, if the property frontage extends to the connection(s) of the alley to the roadway, the improvements shall also include construction of commercial driveway apron(s) at the alley entrance(s). Where a driveway apron already exists, the project shall be required to remove and replace it if the apron does not meet ADA requirements. Additional Half-Street improvements in alleys for projects constructing anything other than one single family residential unit shall include paving the alley to a width of 20 feet along the frontage limits and to the alley's roadway connection. For right-of-way dedication purposes, the Half-Street width along alley frontage is the area between the planned or existing centerline of the alley and the alley limits along the frontage (typically 10 feet offset towards the frontage along the planned or existing alley centerline), as determined by the City Engineer. The required paving width is reduced, as needed, to provide the maximum paved width available within the limits of the existing right-of-way and right-of-way dedicated by the project.

10.01.04 Additional Public Improvements

Additional public improvements besides the Half-Street improvements may be required as determined by the City Engineer to be necessary to mitigate the impacts of the development activity that may include the following improvements, not necessarily located on the property frontage:

A. Additional street lighting.

B. Additional storm drainage systems.

C. Traffic control and other safety systems including, but not limited to, roadway channelization, signage, non-motorized safety, and traffic calming.

D. Dedication of public right-of-way on public street frontages without vehicular or non-motorized access.

E. Off-site improvements identified in the TIA and/or through the SEPA process.

10.01.05 Deferred Public Improvements

Public improvements triggered per ACC 12.64A and/or undergrounding of overhead wiring triggered per ACC 13.32A for which the City Engineer has approved deferral or payment of a fee-in-lieu shall be documented on the Plans with a notation indicating the City street delay application number (SDR-####) and the applicable agreement(s) shall be signed by the applicant and returned to the City prior to Plan approval. Agreements associated with grading permit(s) shall be executed by the City and recorded prior to issuance of notice to proceed with construction activities. Agreements associated with FAC plans/agreements shall be executed and recorded by the City with final acceptance of the FAC.

10.02 Right of Way

Required right-of-way widths are shown on the typical cross sections in this Chapter. The required right-of-way will depend upon the width of the street and other improvements. Additional right-of-way may be required for bike/pedestrian trails, retaining walls, or storm facilities, for example. Right-of-way requirements may be variable within a street corridor due to intersections, turn lanes, bus loading zones, and other street features. Right-of-way radii required at intersections is shown on **Table 10-6**.

Right-of-way shall be conveyed to the City on a recorded plat, by a right-of-way dedication, or

a separate instrument. Right-of-way shall be free of title encumbrances that, in the opinion of the City Engineer, would conflict or inhibit existing or future use of the right-of-way and/or present an unacceptable risk or burden on the City. Right-of-way dedications shall require title insurance as deemed appropriate by the City Engineer.

10.03 Roadway Network

New streets and/or new street systems, other than local residential streets serving residential neighborhoods, shall be configured in conformance with the CTP guidelines and policies. Where the comprehensive plan lacks clear guidance to address a particular situation, the City may require traffic studies and other supporting analysis to help define the configuration and nature of the planned street system.

Streets and street networks will be configured to deter speeding and cut-through traffic. Cut-through traffic is traffic that utilizes local street(s) to connect from one arterial or collector street to another arterial or collector street. Traffic calming measures may also be required to deter speeding and cut-through traffic.

10.03.01 Connections and Vehicle Volumes

Analysis of proposed street connections to other new and existing streets and resulting volumes shall be submitted to demonstrate the requirements of this section are met.

Connection of new streets to existing streets or connections within new proposed street networks shall not be allowed if the connections result in traffic volumes in excess of the upper limit of the average daily traffic volume range for the roadway's classification as listed in **Table 10-1** below.

The layout of local street networks shall be such that the number of local street connections to arterials and collectors is the minimum number of connections required to limit the design ADT on existing and planned local streets in the network to be within the ADT range listed in **Table 10-1** below. This requirement generally limits local street networks with only a single connection to an arterial or collector street to 100 or less units. Traffic volume limits shall not restrict the improvement of an existing parcel to include one single family residential unit.

Table 10-1 Traffic Volumes by Roadway Classification

Roadway Classification*	Average Daily Traffic (ADT)
Principal Arterial	Over 15,000
Minor Arterial	10,000 – 15,000
Residential Collector	2,500 – 10,000
Non-Residential Collector	2,500 – 5,000
Rustic Collector	1,000 – 5,000
Local Residential	Up to 1,200
Local Non-Residential	Up to 1,200
Rustic Residential	Up to 1,000

* Roadway classifications are listed from highest to lowest classification.

10.03.02 Intersection Layout and Spacing

The horizontal approach angle of street intersections shall be between 85° and 95° at the centerlines of intersecting streets. Intersections shall be aligned so that opposing single left turn lanes and through lanes are not offset more than 4 feet as measured from the lane centerline approach tangent.

Intersection spacing for classified roadways shall be determined by the City Engineer on a case-by-case basis using the CTP, AASHTO, and contextual considerations. Local roadway intersections shall meet the minimum centerline spacing requirements as shown in **Figure 10-1** below. Local roadways shall not exceed 1,300 feet in length between intersections.

Figure 10-1 Minimum Local Street Intersection Spacing from Centerline to Centerline

10.03.03 Intersection Control (Local Residential Streets)

New local street intersections shall be designed with sufficient intersection sight distance such that all intersection legs do not require stop control. Design speeds for approaches without intersection control may be lowered per **Table 10-3** when the intersection includes a center traffic island and design speed justification documentation is provided. Projects creating new intersections or modifying existing intersections of local residential streets are required to provide analysis and documentation justifying the proposed intersection control approach.

10.03.04 Intersection Control (Traffic Signals and Roundabouts)

Per the City's Comprehensive Transportation Plan, roundabouts are generally preferred over traffic signals. Where a traffic signal is warranted, an evaluation to determine the feasibility of installing a roundabout instead of a traffic signal will be performed. The feasibility criteria will include right-of-way constraints and property impacts, critical areas, geometrics, context, and other factors as determined to be relevant.

Roundabouts shall be designed per WSDOT Design Manual Chapter 1320 and the Transportation Research Board's (TRB) Roundabouts: An informational Guide, 2nd Edition – Second Edition (NCHRP 672).

Traffic signals shall be designed per **Section 10.21.12**.

10.03.05 Dead End Streets and Cul-De-Sacs

New streets shall be planned, designed and constructed to connect to existing or future streets except when the City Engineer has determined that a new dead-end street is allowed. Where a dead-end street is allowed, the City Engineer will determine whether the dead-end street is considered permanent or temporary. In making these determinations, the City Engineer will

consider whether or not a future through street to connect adjacent properties and/or other streets is reasonably anticipated, feasible, needed, and desirable. Existing dead-end streets shall be linked to new or existing streets as determined by the City Engineer to be required. The following requirements apply to dead-end streets:

A. Dead-end streets that exceed 150 feet in length shall end in a cul-de-sac per the requirements of **Table 10-2**.

B. Dead-end streets shall not be more than 800 feet in length as measured from the center of the nearest intersection to the center of the cul-de-sac.

C. Dead-end streets shall not serve more than 30 dwelling units unless secondary emergency vehicle access is provided. See **Section 10.08.10** for emergency vehicle access driveway requirements.

D. Dead-end streets determined by the City Engineer to be temporary shall include a sign posted at the end of the road indicating the road is planned to be extended in the future and to contact the City of Auburn Public Works Department for further information.

E. When applicable, non-motorized paths shall be provided at the end of dead-end streets to connect to adjacent streets, trails, schools, parks, neighborhoods, or other features.

Table 10-2 Cul-De-Sac Design Requirement

Requirement	Temporary Cul-De-Sac	Permanent Cul-De-Sac
Maximum cross slope and vertical grade as measured from center of cul-de-sac to all points along the curb	5%	5%
Minimum paved surface diameter	65 feet	75 feet
ROW Diameter (Easement allowed for temporary cul-de-sac)	65 feet	90 feet
Sidewalk width (street lights, fire hydrants, and other pathway obstructions must be placed in easement behind the sidewalk)	Not Required	7 feet

10.03.06 Street Classifications

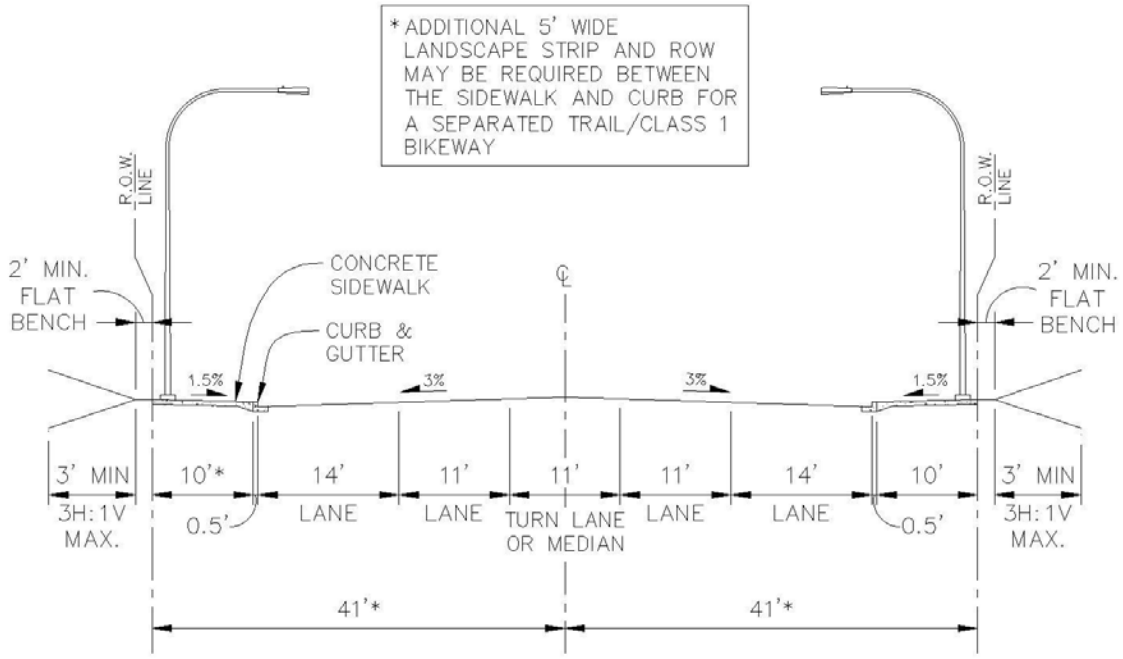
The following section contains descriptions of the street classifications used in the City and typical cross-sections for each street classification. Under certain circumstances, typically to mitigate operational or a safety conditions, the City Engineer may require variations from the typical cross-sections. Examples of these variations include, but are not limited to acceleration and deceleration lanes, right and left turn pockets/lanes, and modified lane widths. Where required, left turn pockets shall be a minimum of 11 feet wide with right turn pockets a minimum of 14 feet wide.

Roadway travel width is measured from the face of curb to the face of curb. Sidewalk width excludes the width of the curb where present. Non-motorized facilities such as sidewalks and bikeways shall be incorporated into the roadway cross sections per the CTP and as determined by the City Engineer to be needed to comply with the City's Complete Streets Policy (See ACC Chapter 12.06).

10.03.06.A Principal Arterial

Principal Arterials are designed to move traffic between locations within the region and to access the freeways. Design emphasis is placed on providing movement of inter-city rather than intra-city traffic. Direct access to multi-family, commercial and industrial land uses is permitted, but managed to improve safety and reduce congestion. Direct access to single family residential land uses is not allowed unless there is no other access point available. Parking is generally not allowed on principal arterials except in certain areas of the Downtown Urban Center (See **Figure 10-14**) and other areas where parking is not prohibited due to specific circumstances. Auburn Way South is a principal arterial that, from the State Route 18 interchange to the southeastern City limits, is also State Route 164 and subject to both City and Washington State Department of Transportation (WSDOT) requirements.

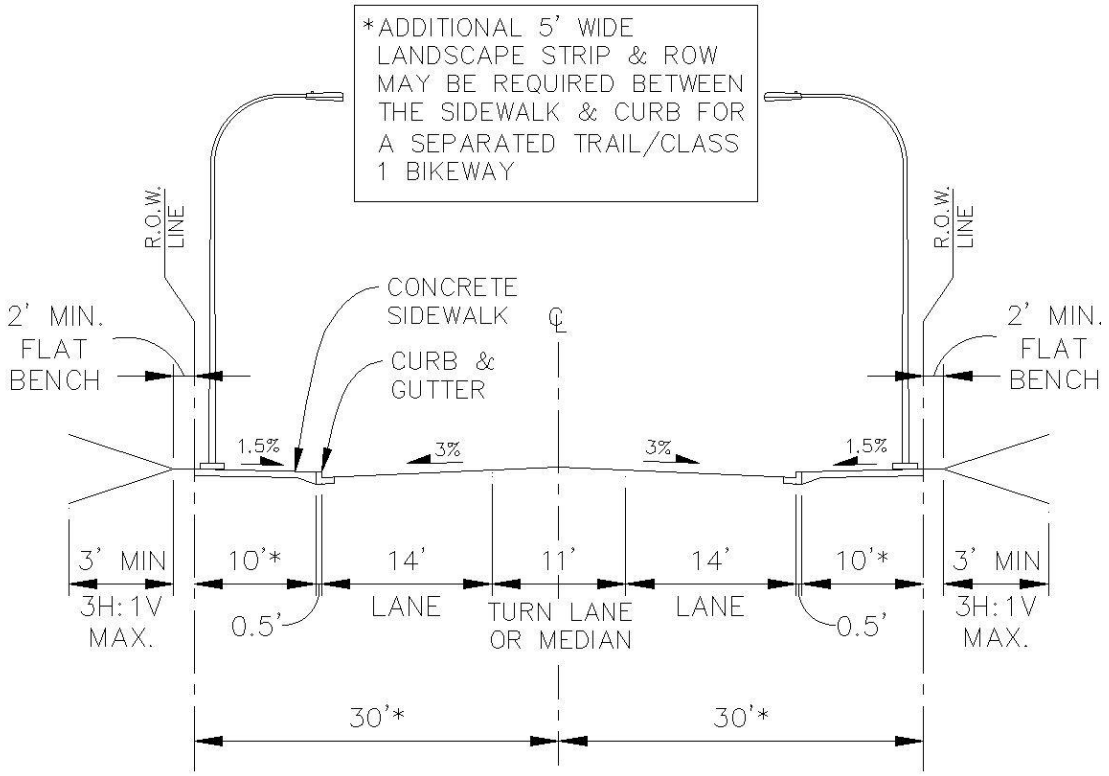
Figure 10-2 Principal Arterial Typical Cross Section



10.03.06.B Minor Arterial

Minor Arterials interconnect and augment principal arterials and provide service to trips of moderate length at a somewhat lower level of travel mobility than principal arterials. Relative to principal arterials, the minor arterial street system consists of facilities that place more emphasis on land access than the higher system and offers a lower level of traffic mobility. Minor Arterials may serve secondary traffic generators such as community business centers, athletic fields, neighborhood shopping centers, major parks, multifamily residential areas, medical centers, large church complexes, hospitals, and traffic from neighborhood to neighborhood within the City. Parking is generally not allowed on principal arterials except in certain areas of the Downtown Urban Center (See **Figure 10-14**) and other areas where parking is not prohibited due to specific circumstances.

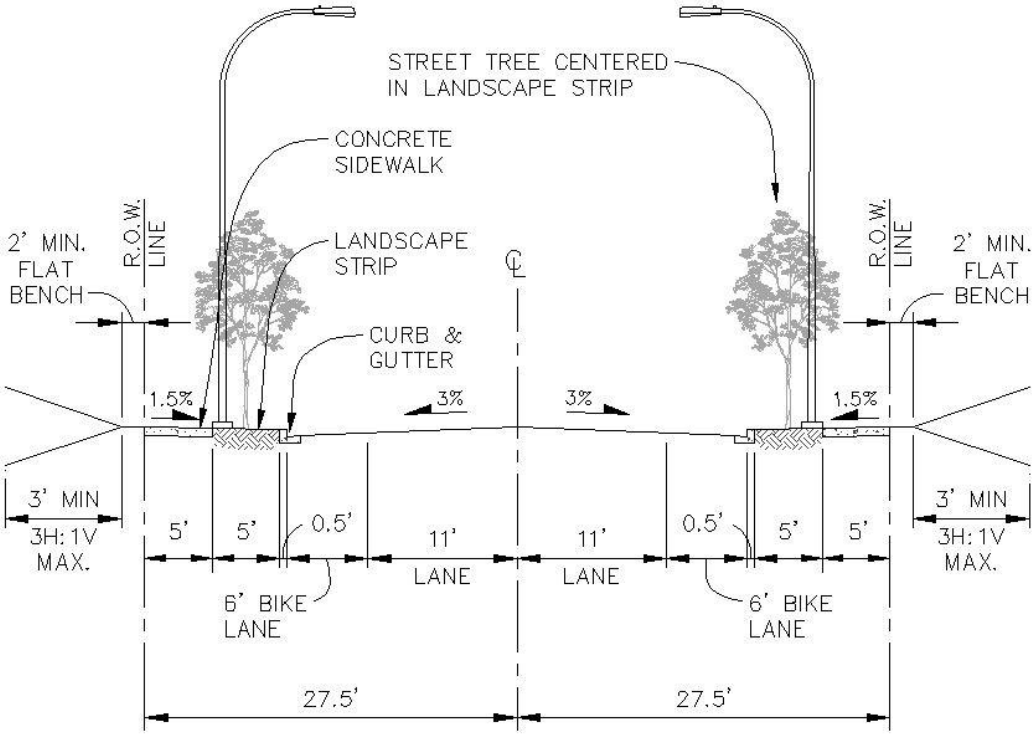
Figure 10-3 Minor Arterial Typical Cross Section



10.03.06.C Residential Collector

Residential collectors are used to connect local residential streets to arterial streets. Traffic using residential collectors is typically generated by single and multi-family residential neighborhoods, light commercial areas, neighborhood parks, and institutional use (schools, churches, community centers). Residential collectors are not intended to serve truck traffic or traffic between arterials. As residential collectors are intended to provide vital links in the City's non-motorized transportation network, they include bike lanes and sidewalks. The current standard configuration for residential collectors does not allow for parking on either side of the roadway. Direct access to residential collector streets from single family residential uses is discouraged but is allowed where no other access is available. Residential collector streets typically require a center left turn lane at an approach to an intersection with another collector or an arterial street. A center turn lane and/or median may be required on residential collectors in other circumstances as determined to be applicable by the City Engineer.

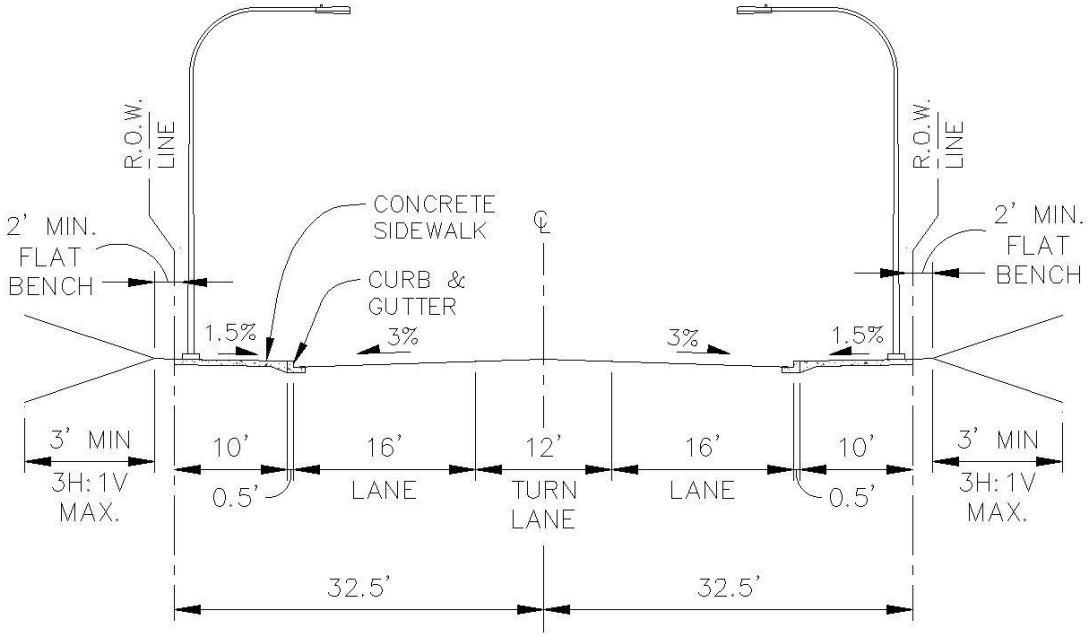
Figure 10-4 Residential Collector Cross Section



10.03.06.D Non-Residential Collector

Non-residential collectors are used to connect local non-residential streets to arterial streets. Traffic using residential collectors is typically generated by industrial and heavy commercial land uses and therefore, are intended to serve truck traffic. Non-residential collectors are not intended to carry vehicular traffic between arterials. The current standard configuration for non-residential collectors does not allow for parking on either side of the roadway. However, there are many examples of existing non-residential collector streets built to previous standards that allow parking on one or both sides of the street. Non-residential collector streets have wide lanes to help facilitate turning movements for trucks.

Figure 10-5 Non-Residential Collector Cross Section



10.03.06.E Local Residential

Local residential streets provide access to abutting residential land use and are designed to convey residential traffic to higher classification streets. A local street network usually carries no through traffic and includes a series of short interconnected streets and cul-de-sacs. Local residential streets are not intended to serve truck traffic or through traffic. Local residential streets provide non-motorized connections from residential dwelling units via sidewalks and the roadway. The current standard configuration for local streets allows for parking on one side of the roadway. Local streets are not striped with lane markings except as directed by the City Engineer.

Figure 10-6 Local Residential Cross Section

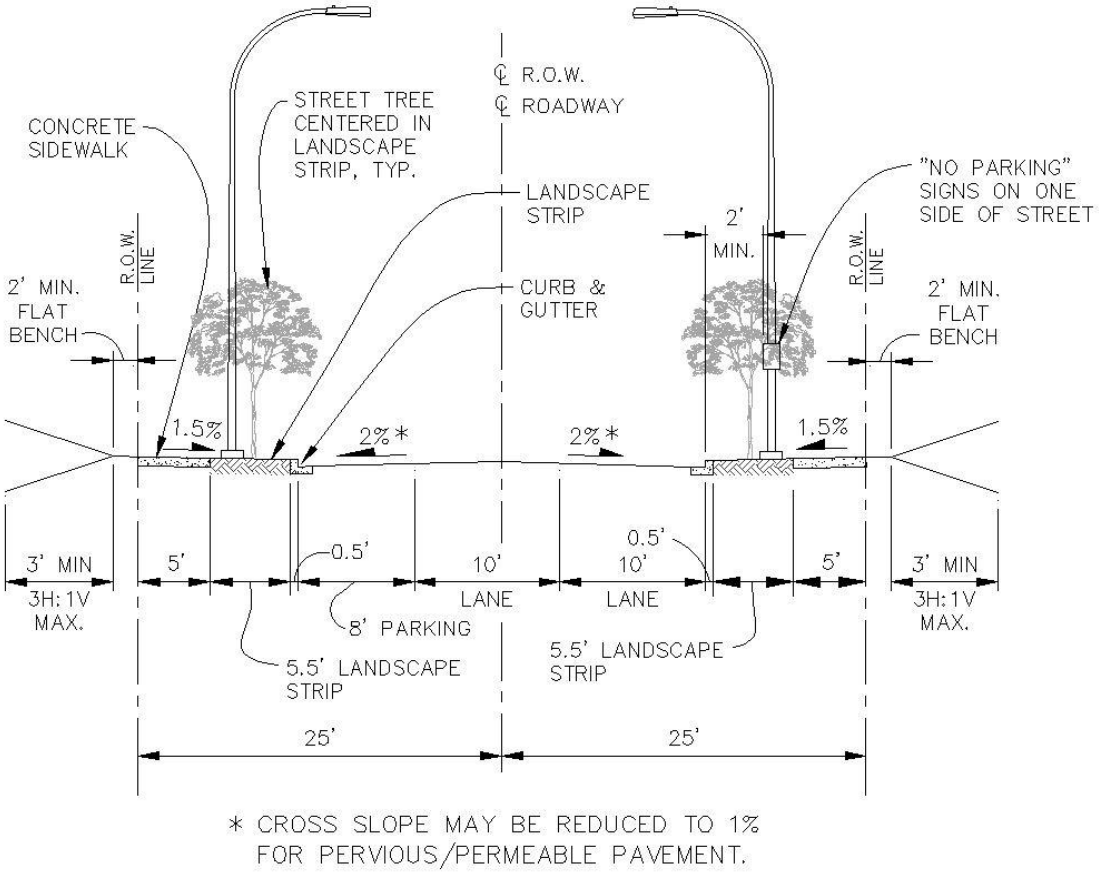
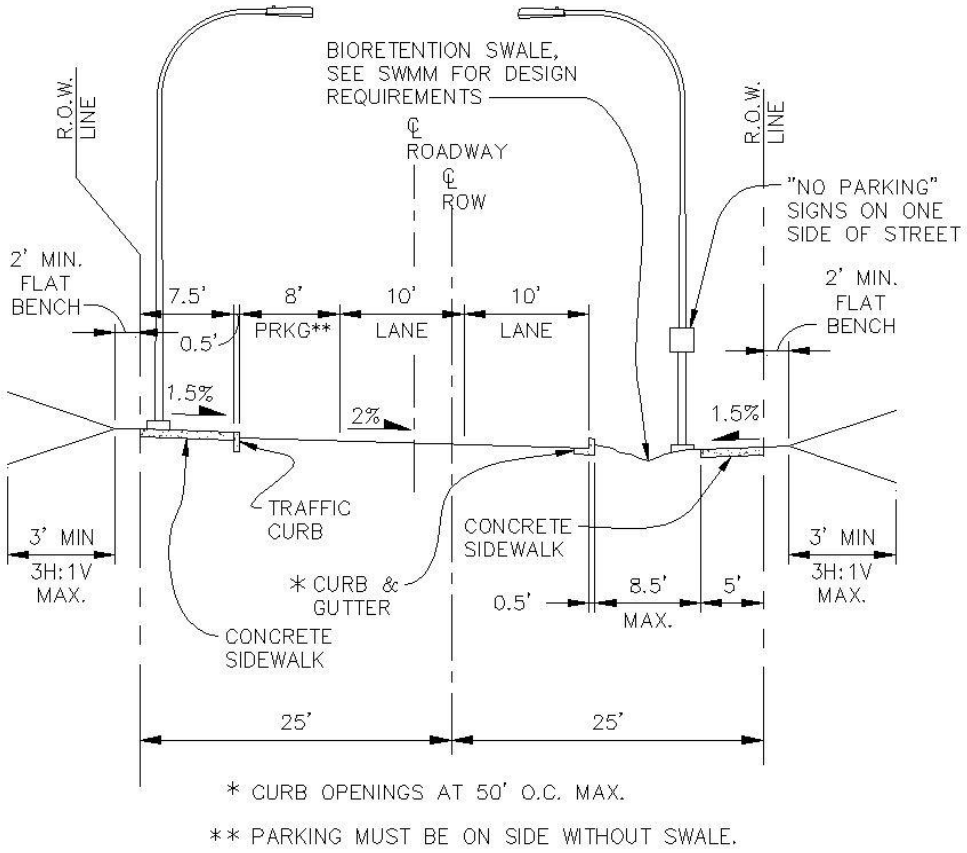


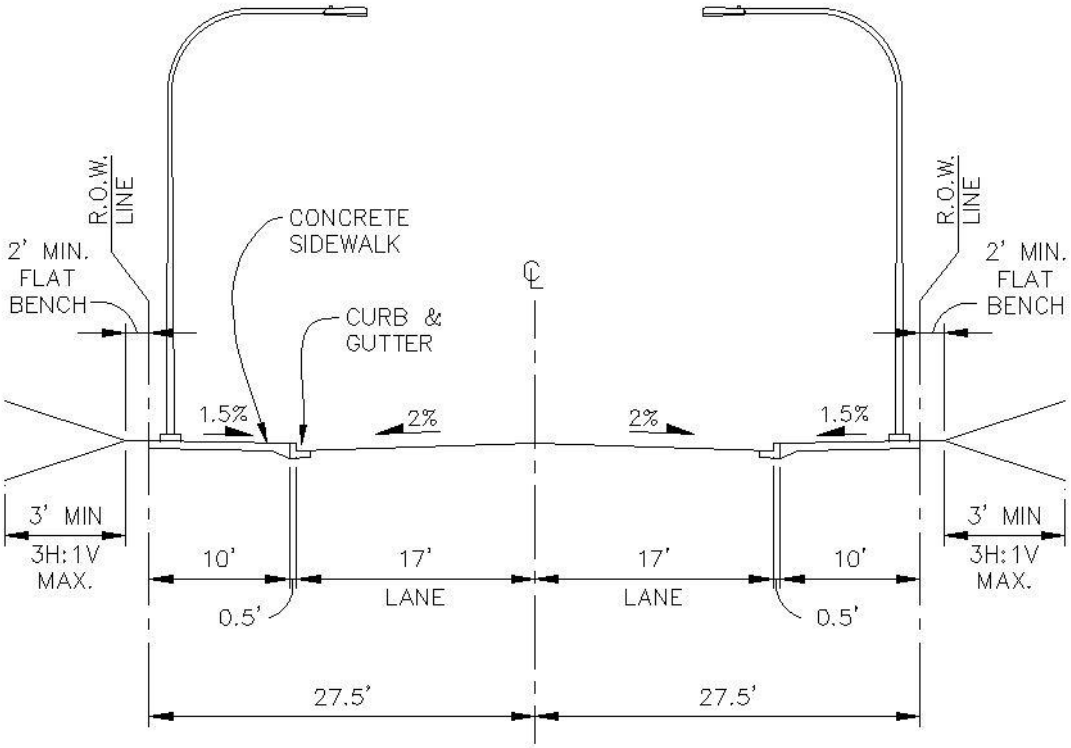
Figure 10-6A Local Residential Cross Section – Alternate w/ Bioretention Swale



10.03.06.F Local Non-Residential

Local non-residential streets provide access to abutting heavy commercial and industrial land uses and are designed to conduct traffic between those uses and higher order streets. A local non-residential street usually carries no through traffic and includes a small network of short interconnected streets and cul-de-sacs. The wide lanes of local non-residential streets are intended to serve the turning movements of truck traffic. Parking is typically not allowed on local non-residential streets and the street is marked with a centerline.

Figure 10-7 Local Non-Residential Cross Section



10.03.06.G Rustic Streets

Rustic streets serve the City's residential conservancy zoning designation. For additional information regarding the context of these roads, see the CTP. Rustic collectors are a type of residential collector street. Rustic residential streets are a type of local residential streets.

Figure 10-8 Rustic Collector Cross Section

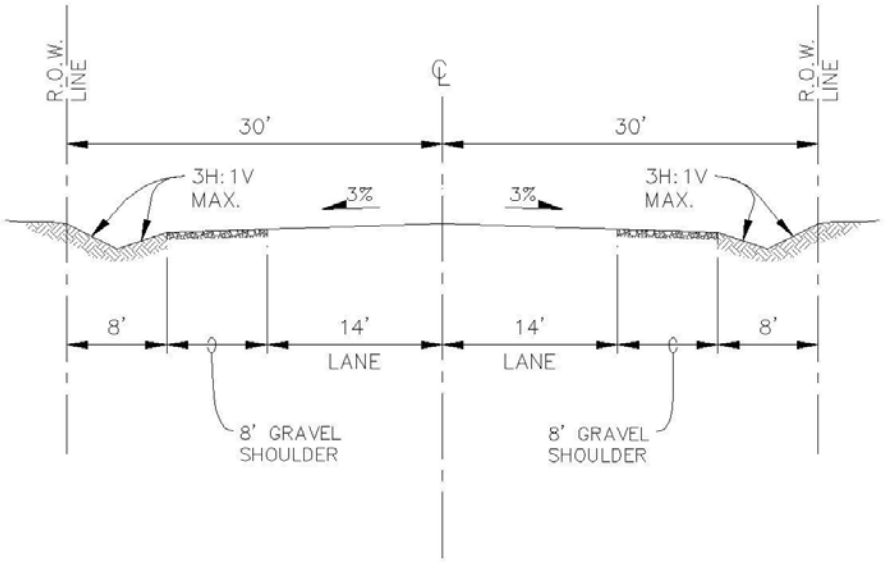
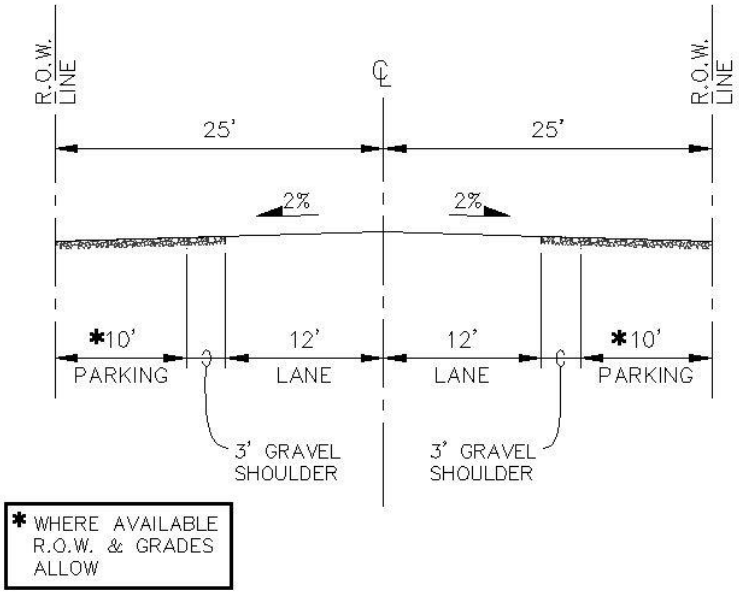


Figure 10-9 Rustic Residential Cross Section



10.03.07 Alleys

Alleys provide vehicular access to abutting properties and are not intended for general traffic circulation. Dead-end alleys are generally unacceptable; however, where dead-end alleys are determined suitable by the City Engineer, for short term or temporary applications, they shall be provided with adequate turnaround facilities at the dead-end. All new alleys shall be private. New alleys and existing alleys being improved shall meet the following requirements:

A. Minimum width of 20 feet of asphalt pavement.

B. Curb and gutter, sidewalk, lighting, and landscaping are not required along alleys.

C. Alleys may be paved with either a crown at centerline with asphalt wedge curbs on both sides to control drainage or be sloped to one side with an asphalt wedge curb on one side to control drainage. When necessary, storm drainage conveyance systems shall be installed along the alley to address storm drainage runoff from the paved surface.

D. Alleys shall connect to City streets via a commercial driveway apron. Alleys serving alley loaded lots shall include provisions for unimpeded vehicular circulation along the alley, and provisions for adequate sight distances along both the alley at driveways and at intersections with public streets.

10.03.08 Private Streets

The City Engineer will determine on a case-by-case basis whether or not a private street will be allowed. Private streets are generally discouraged and will only be considered for approval by the City Engineer under the following circumstances:

A. The street does not provide a current or future planned connection between public roadways.

B. The street does not provide current or future access to properties other than those whom would own the private street.

C. The street would not result in land locking present or planned parcels.

D. The street would only serve a single planned single family residential short subdivision, apartment, townhome, condominium, industrial, or commercial development project. Private streets are not allowed for residential subdivisions not meeting the definition of “Short Subdivision” per ACC 17.04.330.

E. The street would connect directly to a public street.

Roadway geometrics of private streets will be in conformance with the street standards that most closely reflect their intended use, with a minimum of 36 feet of pavement width or 28 feet of pavement width with a marked fire lane on one side.

Private streets shall be located within permanently established tracts or easements. A capable, legally responsible owner or homeowners’ association shall be established to maintain private streets. A plat or short plat with private streets requires an executed recorded Private Street Maintenance Agreement and a Storm Water Easement and Maintenance Agreement that obligate the future property owners to maintain the infrastructure indefinitely.

10.03.09 Downtown Urban Center Standards

Streets in the downtown urban center (DUC) zone, as defined in the Comprehensive Plan zoning map, require sidewalks, street lights, street corners, crosswalks, and traffic signals that differ from other streets. In 2007, the City Council passed Resolution 4271 that approved and adopted for inclusion into the Engineering Design Standards the Auburn Sidewalk Design Guidelines (Guidelines). Since then, the Guidelines have been revised in consultation with the Downtown Redevelopment Committee (formerly a committee of City Council members) and at various Council Study Sessions. The Guidelines are included in the sections referenced below and are no longer a separate document:

A. Sidewalks, Street Trees, Driveway Transitions, and Street Corners (See **Section 10.09.01 and Section 10.12**)

B. Crosswalks (See **Section 10.09.06**)

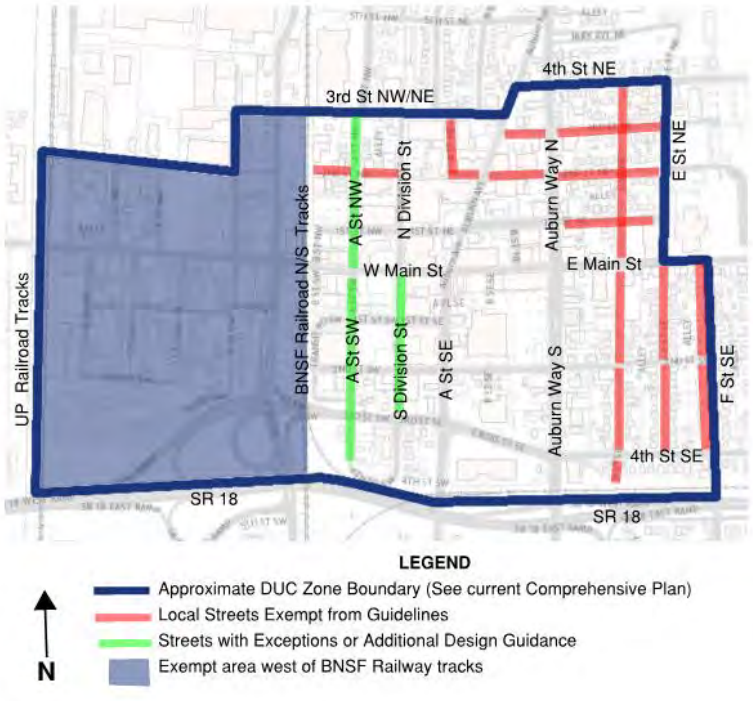
C. Street Lighting (See **Section 10.16.03**)

D. Traffic Signals (See **Section 10.21.12**)

Where the DUC zone boundaries are shown along or within a street, the Guidelines apply to both sides of the street and extend to the curb returns of the exempt street. **Figure 10-10** illustrates the DUC zone and the applicability of the Guidelines within it. All local streets, except N. Division Street and B Street NW, are exempt from the Guidelines. South Division Street from 3rd Street SE/SW through W Main St, also referred to as the "Promenade" and incorporates specialized sidewalks and pedestrian crosswalks that vary from the Guidelines.

Additionally, in the DUC zone, street cross sections generally have one travel lane in each direction and parking on both sides of the street, regardless of the street classification.

Figure 10-10 Downtown Sidewalk Design Guidelines Applicability Map



10.04 Road Design Geometrics

10.04.01 Sight Distance

Minimum sight distance requirements are to be determined using the current edition of AASHTO's "A Policy on Geometric Design of Highway Streets". Roadway geometry shall be designed such that sight lines are unobstructed and within right-of-way, tract, or sight distance easement. Where AASHTO provides guidance for both a "desirable" sight distance and a "minimum" sight distance, the "desirable" sight distance shall be the City's required sight distance. Sight distance calculations supporting the roadway design geometrics shall be included in the plans.

10.04.02 Posted and Design Speeds

Posted speeds for new arterial and collector roadways shall be determined by the City Engineer and Comprehensive Transportation Plan policies. Posted speeds for new non-arterial or collector roadways and the design speeds for all existing roadways shall be per **Table 10-3**.

Table 10-3 Existing Road Design Speeds

	Arterial and Collector Streets	Local and Rustic Residential	Local Non-Residential	Shared Driveway Access Roads and Alleys
Posted Speed (mph)	Varies	25	30	Not Posted
Design Speed (mph)	Posted + 10 mph or 85th percentile per a speed study conducted within 1-year, whichever is greater.	30	35	15
Reduced Design Speed (mph)*	N/A	20	25	N/A

* Reduced design speed may be used within 150 feet of the following:

1) Permanent dead end

2) Permanent cul-de-sac

3) End of road @ T-Intersection

4) On stop controlled approach to local/local Intersection

5) On approaches to local/local intersection with a traffic circle (design speed justification documentation required)

10.04.03 Curves

Design calculations supporting the design of roadway curves shall be included in the plans.

Horizontal curves shall be designed to provide the minimum radii required for vehicles to safely negotiate a turn without leaving their driving lane and shall in no case violate minimum sight distance requirements.

Sections of straight roadway must be designed between curves to avoid quick left-right transitions that could potentially lead to loss of vehicular control. Where reverse curves are superelevated, tangents between curves shall be of sufficient length to accommodate

transitions into and out of the superelevated sections per AASHTO.

Vertical curves are required where a change in vertical alignment equals or exceeds a 1% algebraic grade difference. Crest vertical curves shall be designed to provide the required minimum stopping sight distance for the streets design speed. Sag vertical curve lengths shall be designed to provide headlight sight distance equal to or greater than the design speed stopping sight distance. All vertical curves must be symmetrical, parabolic, and meet AASHTO standards.

10.04.04 Vertical Grades

Table 10-4 Vertical Grades by Roadway Type

	Arterial	Collector & Local Non-Residential	Local Residential & Rustic Residential	Shared Driveway Access Roads & Alleys
Maximum Vertical Grade	6%	8%	8% (may be increased to 10% without deviation where all other geometric design requirements are met)	10% (may be increased to 12% without deviation in access roads without existing or planned public utilities)
Minimum Vertical Grade	0.5%	0.5%	0.5%	0.5%

Deviations to the maximum allowed vertical street grades of arterial and collector roadways shall generally not be granted unless it can be demonstrated that, and the City Engineer determines that, the public benefits significantly outweigh any potential detriments.

Deviations will only be considered for up to an 8% maximum grade for arterials and a 10% maximum grade for collector streets. If approved, deviations for roadway grades above 8% may trigger the additional following design considerations, as determined to be necessary by the City Engineer:

A. Increased travel lane widths

B. Enhanced Paving Section

C. Incorporation of Separated Multi-use trail

D. Incorporation of Median Islands

E. Enhanced Intersection/Signal Improvements

10.04.05 Cross Slopes

Cross slopes shall be as shown in the typical cross sections except roads with vertical grades of greater than 6% where cross slopes may be increased up to 3% and cross slopes of roadways constructed with pervious/permeable pavement may be reduced to 1%. Superelevation design shall be per AASHTO.

Intersections shall be designed to drain away from the higher classification street. Grades shall match at the center of intersections for equal classification streets. At intersections of differing classification streets, the crown shall be carried through the intersection for the higher classification.

10.04.06 Intersection Landings

The intersection landing approach is a defined segment of the street before the intersection and is measured back from the point of tangency of the curb radius on each approach to the intersection. Minimum requirements for intersection landings are shown in **Table 10-5**. Minimum requirements for driveway landings, which include landings for shared driveway access roads and alleys, are included in **Section 10.08.05**.

Table 10-5 Intersection Landing Requirements

	Arterial	Non-Arterial Roadways	Shared Driveway Access Roads & Alleys
Minimum Landing Approach Length (ft)	30	20	12
Maximum Landing Approach Grade	3%	5%	5%

10.04.07 Curb and Right-of-Way Radius

Table 10-6 lists minimum required curb and right-of-way radii. Intersections serving transit routes require analysis to determine if increased radii is needed. The analysis will demonstrate that busses may execute a right turn at 9 mph without crossing lanes or encroaching onto the adjacent curb. The design vehicle will be the largest bus expected currently or planned to be utilized at the intersection. The City Engineer may determine that additional right-of-way is required at or near intersections to accommodate auxiliary traffic lanes and equipment for existing or future traffic signals and street lights. At intersections with two different street classifications, the highest classification for curb radii shall be used except at intersections with local residential streets where the lowest order street shall be used.

Table 10-6 Minimum Curb and ROW Radii

Roadway	Minimum Intersection ROW Radii (ft)	Minimum Intersection Curb Radii (ft)
Principal Arterial	29.5	40
Minor Arterial	24.5	35
Residential Collector	14.5	25
Non-Residential Collector	19.5	30
Rustic Collector	17	30
Local Residential	9	20
Local Non-Residential	19.5	30
Rustic Residential	7	20

10.05 Pavement Design

Pavement design of public streets is based on the street classification per the CTP, subgrade conditions, and whether or not the street is on a transit or freight route. Pavement design of private streets will be in conformance with the street standards that most closely reflect their intended use. Roadway paving shall be asphalt except where cement concrete is approved by

the City Engineer.

10.05.01 Simplified Asphalt Pavement Design

The simplified pavement design approach described in this section may be utilized as a simplified approach to determine the required pavement section except for the following streets for which pavement sections must be designed per the current AASHTO design procedure:

A. Principal arterials

B. Designated transit and freight routes per the CTP

C. Streets where subgrade California Bearing Ratio (CBR) values are less than 3

This simplified approach has been developed so that extensive data and computer analysis is not necessary for developing pavement designs for most projects. The approach requires determination of the street's subgrade conditions and street classification which are then utilized to determine the required pavement design section. The California Bearing Ratio (CBR) shall be used to classify existing subgrade soils as poor, medium, good, or excellent.

The subgrade under the proposed street shall be evaluated by an independent testing laboratory or geotechnical firm to determine the CBR of the subgrade. The proposed roadway shall have a minimum of one test for every 1,000 feet of road and/or for every obvious change in subgrade material. With approval from the City Engineer, or designee, other information such as soils testing data from adjacent projects and field observations may be utilized instead of testing where, in the opinion of the City Engineer or designee, the information provides sufficient data to classify the soil type.

Table 10-7 Simplified Asphalt Pavement Section Design Chart

	Soil Type			
Street Type	Poor (CBR 3-5)	Medium (CBR 6-10)	Good (CBR 11-20)	Excellent (CBR >20)
Unpaved Utility Access Roads	2" CSTC 12" Base Course Geotextile Fabric	2" CSTC 8" Base Course	2" CSTC 8" Base Course	2" CSTC 8" Base Course
Alleys, Access Roads, Locals	6" HMA CL 1/2" 11.5" CSBC Geotextile Fabric	6" HMA CL 1/2" 7.5" CSBC	6" HMA CL 1/2" 4" CSBC	5" HMA CL 1/2" 4" CSBC
Collectors	7" HMA CL 1/2" 14" CSBC Geotextile Fabric	7" HMA CL 1/2" 9" CSBC	7" HMA CL 1/2" 6" CSBC	7" HMA CL 1/2" 4" CSBC
Minor Arterials	9" HMA CL 1/2" 18.5" CSBC Geotextile Fabric	9" HMA CL 1/2" 11" CSBC	7" HMA CL 1/2" 9.5" CSBC	7" HMA CL 1/2" 6" CSBC

10.05.02 AASHTO Asphalt Pavement Design

Engineered pavement designs may be utilized regardless of whether or not the simplified approach is applicable. Engineered pavement designs shall follow the latest "AASHTO Guide for Design of Pavement Structures" for flexible pavements except that the minimum asphalt pavement thicknesses shall apply:

Table 10-8 AASHTO Pavement Design Minimum Require Asphalt Pavement Thickness

Street Type	Minimum Asphalt Pavement Thickness
Local, Alley, Access Road/Tract	5"
Collectors and Arterials	7"

The subgrade under the proposed street shall be evaluated by an independent testing laboratory or geotechnical firm to determine the CBR and/or Resilient Modulus (M_r) of the subgrade for the pavement design. The proposed roadway shall have a minimum of one test for every 1,000 feet of road and/or for every obvious change in subgrade material. Documentation for these required tests shall be included in the Pavement Design Report.

For projects where a traffic analysis report was not required, to determine the amount of traffic for which a street is to be designed, contact the City to obtain the most recent street classification and traffic counts. Traffic counts are done assuming there is a 50/50 split in the direction of traffic. 100% of the 50/50 split must be assumed in the design lane, regardless of the number of lanes in each direction.

The existing traffic levels shall then be inflated to match the projected traffic at the end of the roadways design life (in most cases a twenty-year design life will be used). The annual rate of growth is 1.5% for residential streets and 3.5% for commercial/industrial streets and arterials streets. The minimum pavement section shall be as determined by the pavement design using the AASHTO pavement design approach with a 20-year service life except as limited by **Table 10-8**. The Reliability Level factors used in pavement design shall be in accordance with the following table:

Table 10-9 Pavement Design – Reliability Factors

Functional Classification	Required Level of Reliability	
	Urban	Rural
Principal Arterials	95	90
Minor Arterials	90	
Collectors	90	
Local	85	

10.05.03 Pavement Design Report

All pavement designs (whether per the AASHTO method or per the simplified approach) shall be documented in a Pavement Design Memorandum stamped and signed by a Professional Engineer and may be included in the project Geotechnical Report where applicable.

The report shall include a narrative of the site conditions, geotechnical boring logs, testing results, calculations, the pavement analysis, and applicable background information for review and approval. The report must contain all calculations regarding the pavement design, including spreadsheets, all variables and assumptions, as well as geotechnical engineering information on the subgrade soils.

10.05.04 Permeable Pavements

Pervious Cement and Asphalt Concrete Pavement must be designed by a professional engineer. The design shall be documented by a report that includes relevant calculations, data collection, and assumptions. The report must provide evidence that the permeable surfaces are designed to have at least a 30-year service life given the anticipated vehicle counts and vehicle classifications. The minimum pavement design section shall be as follows:

A. 6-inch-thick wearing course of porous asphalt or pervious concrete; over

B. 6-inch reservoir course (Permeable Ballast per Section 9-03.9(2) of the Construction Standards); over

C. Geotextile (Non-Woven, Moderate Survivability per Section 9-33.2(1) of the Construction Standards); over

D. Where treatment is required, and native subsoils do not meet water quality design criteria per the SWMM: 18-inch runoff treatment layer with specifications per the SWMM.

Permeable pavements shall be designed and constructed per the SWMM and the Construction Standards.

Pervious cement and porous asphalt concrete pavement within the public right-of-way shall not be utilized for storm water management of runoff from areas outside the public right-of-way.

10.05.05 Pavement Surface Restoration and Preservation

Restoration of pavement disturbed by trenching or other activities shall be per **Chapter 9**. When the total surface restoration area exceeds 1,000 SF feet, pavement core sample(s) are required to be collected in the required restoration area to determine the existing pavement thickness. The City Engineer, or designee, may waive or reduce the coring requirement where other information is available to determine the existing pavement thickness. This information could include, but is not limited to, as-built records, coring samples from other work at the same location, or observations made by the City during construction work at the same location. Where the existing pavement to be removed and replaced does not meet current City standards, the City Engineer, or designee, may determine that pavement replacement to meet City Standards is required. Minimum pavement restoration and widening width is 2 feet.

10.06 Roadside Design

10.06.01 Roadway Edge

Roadway edges shall be per the typical sections included in **Section 10.03.06**. Concrete curb and gutter shall be constructed per WSDOT Standard Plan F-10.12**.** Curbs that are not along stormwater flow paths shall be constructed as cement concrete traffic curb per WSDOT Standard Plan F-10.12. Rustic roads within the City may be designed with a gravel shoulder (minimum of 3 inches Crushed Surfacing Top Coarse (CSTC) over 8 inches of Gravel Base. Drainage inlets and grates along curbs shall be constructed per WSDOT Standard Plan F-10.16. Roadway edges without curbs shall include a marked fog line per **WSDOT Standard Plan M-20.10-04**.

10.06.02 Clear Zone – Lateral Separation from Fixed Objects

The following standards provide guidance for the required separation distance from roadway vehicle travel ways and fixed objects for many, but not all, roadways in Auburn. The following standards apply to all new or replaced facilities and do not obligate the City to retrofit or replace existing facilities for the sole purpose of meeting the standards below.

The City has adopted 4 feet as the minimum lateral separation from the edge of motor vehicular travel way to fixed objects for streets with vertical curbs within the urban environment. Utility and traffic signal poles along streets with vertical curbs within the urban environment, as defined in Chapter 10 of the AASHTO Roadside Design Guide require minimum 6 feet lateral separation from edge of motorized vehicular travel way. For the purpose of determining lateral separation, the distance from the edge of vehicular travel way on streets with on-street parking or bike lanes is measured from the edge of the parking area or bike lane along the motor vehicle travel way.

Under many conditions, additional lateral separation shall be required to provide adequate clear zone per the AASHTO Roadside Design Guide. These conditions include, but are not limited

to: streets without vertical curbs, horizontal curves, proximity to driveways, high design speeds (in excess of 45 mph), merge locations, crash history, roadways that are not built per existing City standards, and other conditions as deemed applicable by the City Engineer. Reduced minimum lateral separation along roadways with design speeds of 35 mph or less is allowed for street trees centered within landscape strips and for mailboxes. Minimum lateral separation from the face of curb to any roadside object (regardless if fixed or non-fixed) is 2 feet.

10.06.03 Traffic Barriers

Evaluation of roadside conditions, including embankments, for traffic barriers, including guardrail installations, shall be in accordance with the WSDOT Design Manual.

Guardrail installations shall conform to WSDOT Standard Plan C-1, Beam Guardrail Type 1. End anchors shall conform to WSDOT Standard Plan C-6, Beam Guardrail Anchor Type 1.

10.07 On-Street Parking

On-street parking is generally not allowed on arterial, collector, and local non-residential streets. For Local Residential streets where parking is allowed on one side only and there are landscape strips present on both sides of the road, the parking shall be placed on the side of the street that can accommodate the most parking. Pavement parking space demarcations shall not be used except as directed by the City Engineer.

Parking is not allowed at any of the following locations. Signage, curb, and pavement markings are not required to establish these restrictions except as determined otherwise by the City Engineer, or designee, or as specified otherwise below:

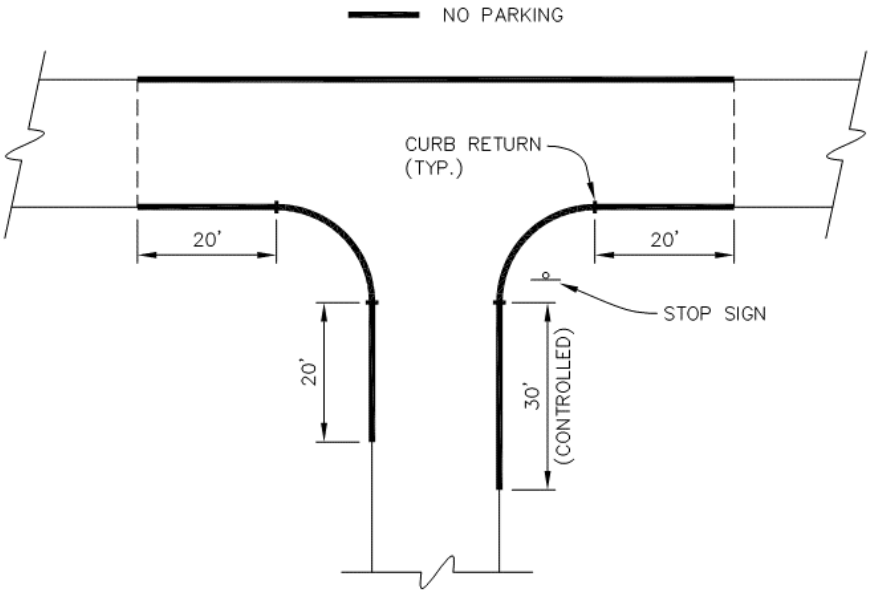
A. Within fire lanes. Fire lanes shall require pavement marking and/or signage.

B. Within 20 feet of an uncontrolled intersection measured from the point of tangency on the entering curb radius.

C. Within 30 feet of a stop, yield or signal controlled intersection measured from the point of tangency on the entering curb radius.

D. Within any intersection. For “T” intersections, the no parking limits shall apply to both sides of the through street (top of the “T”). See **Figure 10-11** below.

Figure 10-11 - T-Intersection Parking Restrictions



E. In front of or within 15 feet of each side of a fire hydrant.

F. In front of or within 5 feet of each side of a driveway.

G. Where mid-block crosswalks are installed, no parking shall be allowed on either side of the street within 50 feet in advance of the nearest edge of the crosswalk and within 20 feet past the furthest edge of the crosswalk. In no case shall the advance parking restriction for crosswalks be less than the minimum stopping sight distance of the roadway.

Additional parking restriction may be required depending upon roadway geometrics, adjacent land use, and the proximity to bridges and railroads.

No parking signage shall be per **City of Auburn Standard Detail T-40**.

10.08 Driveways

Construction of driveway access to the public street right-of-way requires prior approval by the City Engineer, or designee. Connection between the driveway and street shall be with a driveway apron per **City of Auburn Standard Detail T-34 or T-35** except a driveway connection to a street that does not have curb/gutter and sidewalk may be with an apron constructed of the same material, thickness, and strength as the street with tapered corners that accommodate the largest vehicles anticipated to utilize the driveway apron.

Work that requires any portion of a driveway apron to be replaced triggers the requirement to upgrade/replace the entire driveway to meet ADA standards.

10.08.01 Number of Driveways

Regardless if a project includes one or multiples parcels, it is limited to one driveway access to a City street (including alleys) with the following exceptions:

A. Single family residential subdivision projects are allowed one driveway access to each single family residential parcel when all of the driveway accesses for the project are to a local residential roadway, alley, or a shared access tract/driveway.

B. Additional driveway(s) may be provided to satisfy International Fire Code Requirements IFC). These additional driveways are subject to the requirements of Emergency Vehicle Access Driveways per the IFC and these Engineering Design Standards. See **Section 10.08.10** for emergency vehicle access driveway requirements.

Subdivisions with a driveway access to a roadway classified higher than local residential or for non-single family residential projects shall be limited to a single access tract/driveway for the entire subdivision.

10.08.02 Driveway Classifications, Widths, and Spacing

Driveway spacing shall be per **City of Auburn Standard Detail T-04**. When the minimum spacing is not obtainable, to address safety concerns, or to mitigate impacts of traffic flow, the City Engineer, or designee, may determine that two contiguous parcels require a single driveway centered on the property line.

Driveway widths are measured across the driveway apron, excluding driveway wings/ramps. Spacing between driveways is measured from the limits the driveway apron wings/ramps.

Residential Driveway – A driveway serving one single family residential property or a duplex is a residential driveway. Residential driveway aprons width is 11 feet minimum and 18 feet maximum.

Commercial/Industrial Driveway - A driveway serving a commercial, industrial, or residential with 3 or more dwelling units (except accessory dwelling units) parcel is a commercial/industrial driveway. Commercial/Industrial driveway aprons shall be 24 feet wide except, the City may require commercial/industrial driveways along arterial roadways to be wider to accommodate the largest types of vehicles frequenting the parcel (design vehicle). These driveways shall be designed to accommodate design vehicle egress/ingress such that the design vehicle can make its turning movements without dragging outside the apron, does not swing into opposing traffic lanes, and can enter the driveway while another design vehicle is waiting at the driveway to exit. In these cases, design vehicle justification and turning templates are required.

Shared Driveways – A driveway serving two or more residential or commercial/industrial parcels is a shared driveway. See **City of Auburn Standard Detail T-31** and **Section 10.08.07**.

10.08.03 Driveway Lay Out

Driveways and on-site parking, other than that for single-family residences on local residential street or alleys, shall be designed such that vehicle-backing maneuvers will not occur onto the street. A properly designed driveway shall allow the largest typical vehicle that will use the driveway (i.e., tractor-trailers at large warehouses, delivery trucks at mini marts) to enter and exit the site without encroaching into opposing traffic lanes, including two-way left turn lanes.

When designing site layout and driveway access, internal circulation shall be such that on-site traffic will not backup the driveway impeding vehicles in the public street. The City may require

sites with internal traffic congestion to design driveways with long throat lengths to provide extra storage to avoid impacting City streets.

Per ACC 18.52.050, commercial and industrial driveways shall have at least a 40 foot throat from the street (not be intersected by parking aisle, parking space, or another access driveway for a minimum distance of 40 feet from the street right-of-way). The City Engineer may require additional throat distance or may allow less throat distance with the consideration of the following: classification and volumes of street from which access is being taken, total number of parking stalls, design vehicle for parking lot, size of parcel and parking area to which the driveway is providing access, and queueing analysis. If a gate is proposed across a driveway it shall be located a minimum distance of the largest vehicle accessing the site (excluding emergency vehicles), measured from the right-of-way line, unless there is adequate room for parking outside the travel lane(s) without blocking non-motorized facilities.

Driveways connecting non-single family residential development to non-local roadways shall accommodate waste management and other service vehicles serving the development such that the service vehicles do not stop on the roadway (they enter the site, perform services, and exit the site).

10.08.04 Driveway Locations

When a property has frontage on two or more streets (or alleys), the driveway will be located on the lowest classification of street (or alley).

Driveway accesses with any portion of the driveway (including wings) within the "Functional Intersection Boundary" shall be either prohibited or restricted. See **Table 10-10** and **Figures 10-12** and **10-13.** Single family residential driveways on local residential streets are exempt from functional intersection boundary requirements.

The functional intersection boundary is the portion of the street leading up to the intersection required to allow vehicle movements and storage. This is the area where drivers identify the situation, change lanes, come to a stop, and wait before proceeding through the intersection. The functional length of an intersection is measured from the point of curvature/point of tangency (PC/PT) of the curb return. Driveway restrictions include prohibiting either all left turn movements, left turns from, or left turns to the subject driveway.

The City Engineer may also impose driveway restrictions at other locations when a safety hazard is identified or to mitigate impacts to traffic flow along a classified street. Such restrictions shall be incorporated into the design of the driveway in a manner that strives to maintain existing access turning movements to other adjacent properties.

Table 10-10 Distance Requirements for Functional Intersection Boundaries

Posted Speed (mph)	Speed (ft./sec)	Reaction Time (sec)	Decision Distance (ft.) "d_1"	Lane Change Distance (ft.) "d_2"*	Braking Distance (ft.) "d_3"	Storage Length (ft.) "d_4"	Distance A (Approaching) (ft.)	Distance A (Departing) (ft.)	Distance B (ft.)
25	37	1.0	37	25	60	50	135	80	172
30	44	1.0	44	40	86	50	176	107	220
35	51	1.0	51	60	118	100	278	140	329
40	59	1.0	59	85	154	100	339	179	405
45	66	1.0	66	105	194	100	399	216	465

* For single lane approaches where a lane change is not possible, "d_2" should be omitted.

Figure 10-12 Functional Length Diagram of an Intersection with Right and/or Left-Turn Lane

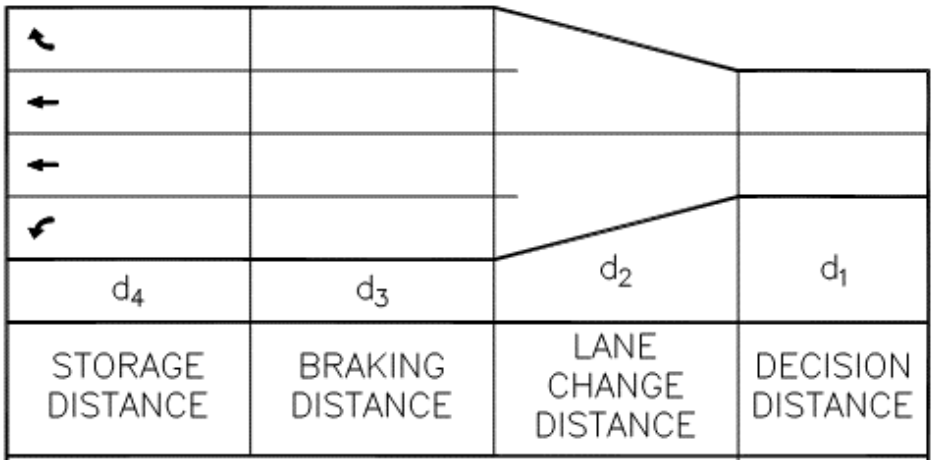
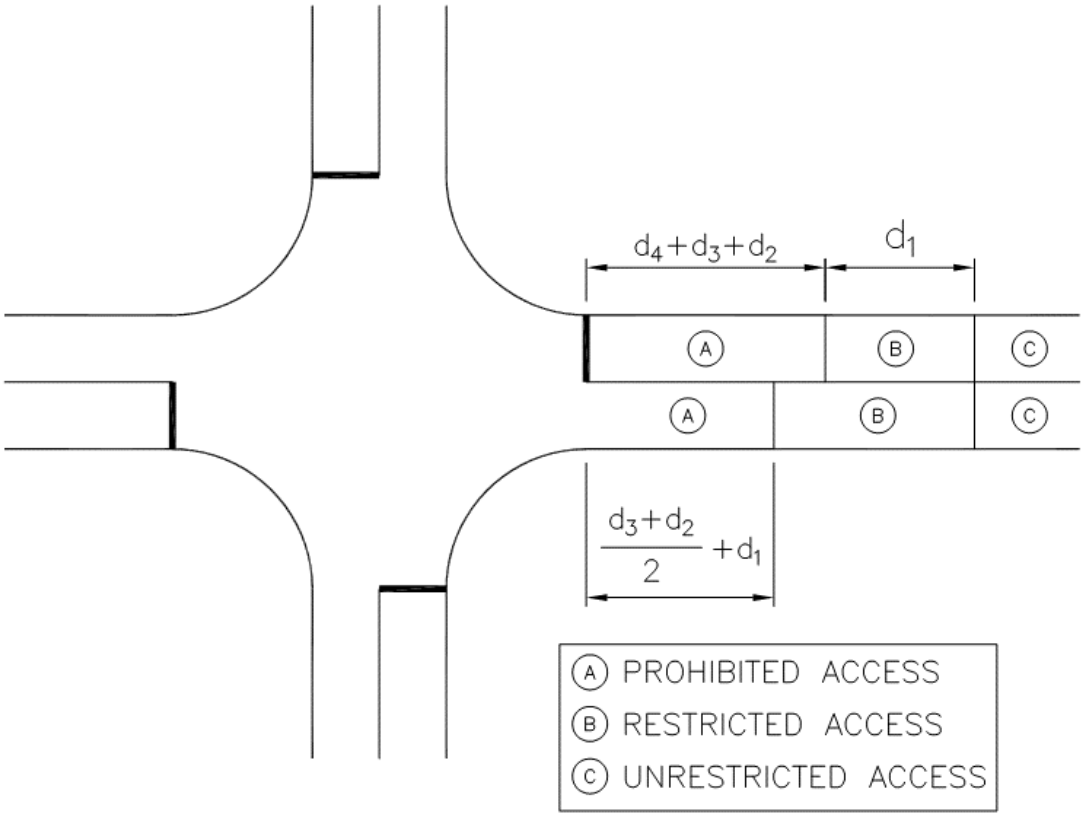


Figure 10-13 Functional Intersection Boundary Restricted Access Diagram



10.08.05 Driveway Alignment (Horizontal and Vertical)

The angle between the centerline of a driveway approach and the edge of a street travel way shall not be less than 85 degrees or greater than 95 degrees unless a “pork chop” or other

access control device is allowed. Where the edge of the roadway is curved, such as in cul-de-sacs, the angle will be measured from the tangential line to the travel way edge at the intersection of the driveway approach centerline.

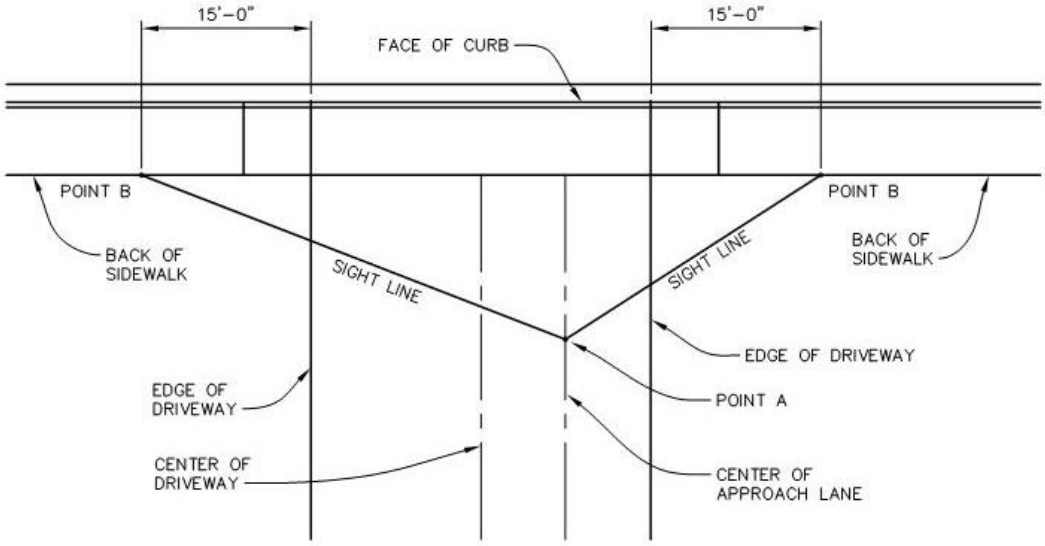
The vertical grade behind the driveway apron shall not exceed 5% for a distance of 12 feet beyond back of sidewalk or right of way line except for the alternate driveway type per **City of Auburn Standard Detail T-35** where the 5 foot driveway ramp grade may be up to 10%. Driveways shall be designed to preclude vehicles from dragging when entering or exiting the site.

10.08.06 Driveway Sight Distance

Minimum sight distance requirements for driveways are to be determined using the current edition of the WSDOT Design Manual M 22.01.22 (Chapter 1340). Easements may be required to meet sight distance requirements.

The minimum sight distance for pedestrian safety shall be as shown in **Figure 10-14** and determined as follows: The driver of an exiting vehicle shall be able to view a one-foot-high object 15 feet away from the edges of the exiting lane or lanes, measured at the back of the sidewalk, when the driver's eye is 14 feet behind the back of the sidewalk.

Figure 10-14 - Pedestrian Sight Distance



10.08.07 Shared Driveway Access Roads

Residential shared driveway access roads may serve a maximum of 6 residential units except where a proposed single family residential unit, to be located on an existing lot, would exceed this threshold. Shared driveway access roads are privately owned and shall be maintained by the property owners who use them to access their property or as otherwise stipulated in the tract easement dedication documents or private agreements. Maintenance of shared driveway access roads shall not be the responsibility of the City.

Shared driveway access roads shall include storm drainage facilities in accordance with these standards. Shared driveway access roads shall have only a single connection to the

public/private roadway, except where an additional gated access exclusively for emergency vehicles and/or maintenance vehicles may be allowed.

The following requirements apply to shared driveway access roads except that one or more of the requirements may be waived by the City Engineer, or designee, for development of a single-family residence on an existing platted lot that only has access to an existing shared driveway where inclusion of the requirement would require additional property rights beyond the applicant's control, modification of existing building(s) and structure(s), impacts to critical areas, or other reason as deemed acceptable by the City Engineer:

A. **Easement/Tract Width:** Set within dedicated and recorded easement or tract with a minimum width of 22 feet for access roads serving 2 or less residential units, 26.5 feet for access roads serving 3 or more residential units, 35 feet for access roads serving commercial use(s), and 41 feet for access roads serving industrial use(s).

B. **Pavement Width:** Minimum asphalt pavement width of 20 feet for access roads serving residential unit(s), 24 feet for access roads serving commercial uses, and 30 feet for access roads serving industrial uses.

C. **Turnaround:** All access road ends that are 150 feet or more from the connection to the public/private roadway connection shall include turnarounds. If a hammerhead configuration is utilized for the turnaround, it shall be designed per Figure D103.1 in Appendix D of the International Fire Code or equivalent as determined to be acceptable by the City Engineer, or designee. If a cul-de-sac is utilized for the turnaround, it shall be designed per the City of Auburn Design Standards. The turnaround area must be paved and lie entirely within the access tract or easement.

D. **Length:** Maximum length of 600 feet as measured along the centerline of the access road to the centerline of the street to which the access road connects. Where an access road has multiple centerlines (due to a "T" or other discontinuous configuration, the total length is measured along all centerlines of the access road).

E. **Grades/Curves:** Geometrics per **Section 10.04**.

F. **Sidewalks:** Shared driveway access roads that serve 2 or less residential units or provide emergency access only do not require sidewalk along the access road. Access roads serving 3 or more residential units require sidewalk, curb and gutter along one side of the access road. Access roads serving commercial or industrial property(s) require sidewalk, curb and gutter along both sides of the access road. The minimum sidewalk width shall be 5 feet (not including curb) and shall be separated from the vehicular egress/ingress with curb and gutter. Where sidewalks are required and the residential units are along only one side of the access road, the sidewalk shall be placed on the side of the road with the residential units.

G. **Signage:** Identified as a fire lane with pavement markings and/or signage per ACC 10.36.175(E) such that a minimum clear width of 20 feet, free of parked vehicles or other obstructions, is provided. Signed as private drives inclusive of all addresses being served off the access road per **City of Auburn Standard Detail T-26**.

H. Edges of access roads without curb/gutter and sidewalk will have an asphalt wedge curb per **City of Auburn Standard Detail T-41**, along the edge(s) to which the roadway drains, if any. Wedge curb may be excluded/modified as required to accommodate drainage facilities serving the access road. Where

curb, gutter, and sidewalk are present along the shared access road, driveway connections to property(s) from the shared access road shall be by residential driveway apron.

I. Driveway connections to property(s) on the access tract are configured such that vehicles backing out of the driveway are able to turn around without entering another property.

10.08.08 Controlled Driveways

Where a driveway connection meets a signal warrant that cannot be addressed without a signal or roundabout, the City Engineer may allow signalized or roundabout access to a public street from a private access. In such situations, dedication to the City of any right-of-way necessary for maintaining and operating the intersection will be required. Additional mitigation measures may be required to ensure safe and efficient access to the public street. The private leg of the intersection within the right-of-way shall be designed to the applicable public street standard as determined by the City Engineer.

10.08.09 Restricted Access Driveways

Restricted Access Driveways are used to restrict turning movements out of or into driveways. Turning restrictions at driveway locations shall be by one or more of the following methods as deemed appropriate by the City Engineer, or designee:

A. Median Islands

B. Mountable Curbs

C. Pork Chops

D. Signage (turn restriction signage must be placed in the right-of-way)

10.08.10 Emergency Vehicle Access Driveways

Local street networks with over 30 dwelling units that do not have more than one street connection to a collector or arterial roadway are required to have a second access from the local street network to a collector or arterial via an emergency access driveway. The emergency vehicle access must be gated and restricted to emergency vehicles only with a knox lock. Non-motorized access may also be provided at the emergency vehicle access. Emergency access roadways shall meet the requirements for shared access driveways.

10.09 Sidewalks

Streets shall include sidewalks as shown on the typical sections in **Section 10.03** and as designated in the CTP. The City Engineer may determine that sidewalk widths that differ from the typical sections and CTP are required.

Sidewalks with landscape strips shall be per **City of Auburn Standard Detail T-13**.

Sidewalks without landscape strips shall be per **City of Auburn Standard Detail T-15**.

Pervious sidewalks shall be per **City of Auburn Standard Detail T-14**.

10.09.01 Downtown Sidewalks

The following requirements apply to sidewalks subject to DUC zone guidelines:

A. Shall be per **City of Auburn Standard Detail T-15** and will also include a 2-foot x 2-foot square scoring pattern with a light broom finish with minimal scoring depth to allow for easy cleaning.

B. Shall be a minimum of 10 feet in width except sidewalks along A Street NE/NW may be 7 1/2 feet wide at some locations, as determined by the City Engineer.

C. Shall include a single row of bricks to be used at transition points such as driveways per in **City of Auburn Standard Detail T-44**.

D. Shall include street trees per **City of Auburn Standard Detail T-06**. Where the tree planter area encroaches upon the minimum pedestrian clearance width, a tree grate shall be required per **City of Auburn Standard Detail T-30**. Pervious concrete sidewalks shall not be allowed where tree grates are required.

E. Shall include decorative street corners as follows:

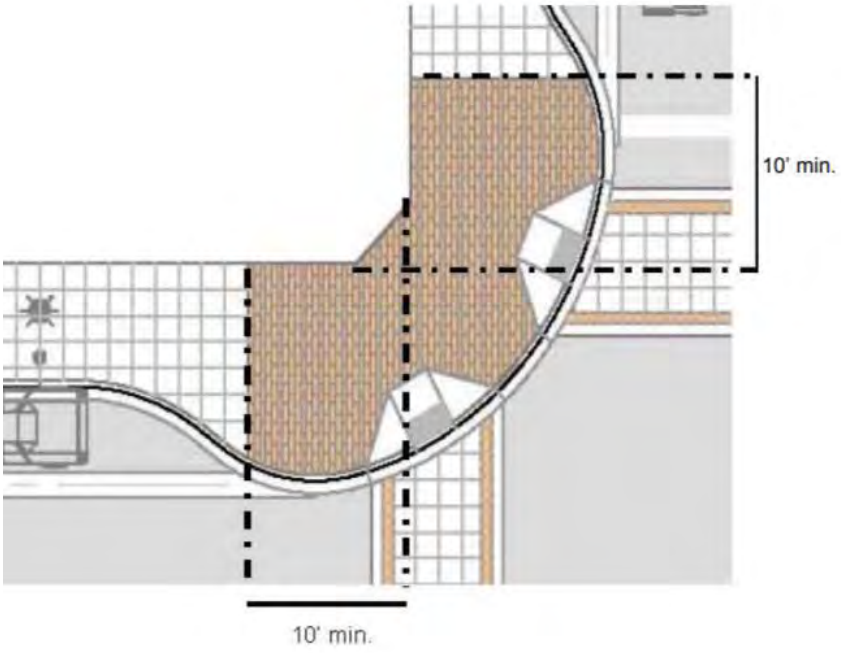
   i. Corner bulbs shall be integrated into corners where on-street parking is allowed, dependent upon the adjacent street geometry, presence of bus routes or other large vehicle use, as determined by the City Engineer.

   ii. All street corners where a corner bulb is required or where both legs of the street corner have sidewalks that are at least 10-feet wide shall be constructed of brick pavers in a rectangular pattern as shown in the figure below. The specific type of brick pavers shall be approved by the City, including shape, size, and color. The brick pavers shall be set on a concrete base.

   iii. The bulb-out layout and limits shall generally be as depicted in **Figure 10-15**. The City Engineer, or designee, shall determine specific design parameters for bulb-outs on a case-by-case basis.

   iv. Construction of a new or replaced curb ramp on a street corner that does not meet the DUC zone standards shall require the street corner to be re-built in its entirety to meet the DUC zone standards.

Figure 10-15 Downtown Street Corner Illustration



10.09.02 Meandering Sidewalks

The City Engineer may approve meandering sidewalks along a corridor when the sidewalk, landscaping, lighting, signing, right-of-way, and other surface features are integrated into the design of the improvements. Additional right-of-way (or an easement) may be required to accommodate the meander of the sidewalk and other surface features.

10.09.03 Accessibility

All sidewalk cross slopes shall be designed to 1.5% and not exceed 2%. Sidewalk grade shall not exceed the grade of the adjacent street centerline, except at driveways and curb ramps. All sidewalks shall maintain a minimum walking zone of 5 feet in width, free of all obstructions including utilities, signage, street trees, furniture or other elements, permanent or temporary.

Sidewalks require a minimum overhead clearance from trees, street signs, and vegetation of 7-feet and a minimum overhead clearance of 10-feet from all other objects.

10.09.04 Curb Ramps

See WSDOT Standard Plans F-40.12, F-40.15 & F-40.16.

Curb ramps shall be provided at all intersections and pedestrian crossings having vertical curb sections. Every curb ramp shall have at least one receiving ramp. Existing curbed radius return access points also require curb ramps. All curb ramps shall have detectable warning patterns formed with manufactured truncated domes in accordance with WSDOT Standard Plan F-45.10. Truncated dome color shall be yellow except in the downtown urban core area where truncated dome color shall be brick red. Pervious cement concrete ramps and landings shall not be allowed.

For any deficient element that does not meet ADA requirements, designers shall document the deficiency via a Maximum Extent Feasible (MEF) document stamped and signed by a

professional engineer. The MEF document will be reviewed for acceptance by the City. MEF's shall also be documented on the Plans with a notation indicating the deficiency and that the curb ramp was designed to the MEF per **Chapter 3, Appendix C** of these standards.

Trenching work and the associated patching and surface restoration that traverse crosswalks/pedestrian pathways (crossings) shall not trigger the requirement to replace curb ramps that do not meet current ADA standards at the crossing, unless, the cumulative width of surface restoration at the crossing for all work associated with the project equals or exceeds 50% of the crossing width, as measured from curb face or pavement edge at the pedestrian pathway entry into the vehicle travel way to curb face or pavement edge at the pedestrian pathway departure from the vehicle travel way. This distance is measured through medians, islands, and other pedestrian refuge areas. If the cumulative width of all surface restoration at a crossing equals or exceeds 50% of the crossing width, then the curb ramp(s) that intercept the impacted crosswalk that do not meet current ADA standards must be upgraded/replaced, including signal push-button replacement/relocation where applicable per **Section 10.21.12** of these Standards.

Whenever any portion of a curb ramp or intersection corner without a curb ramp is replaced or upgraded for any reason, the entire curb ramp or a new curb ramp is required to meet ADA standards and installation of curb ramp(s) on the receiving end(s) is required if not already present.

10.09.05 Crosswalks

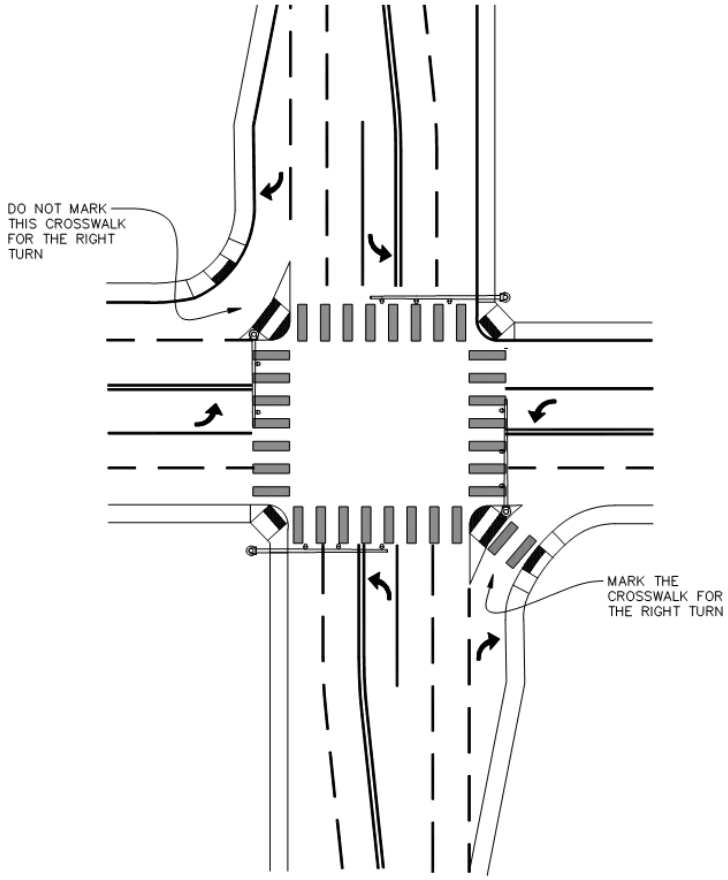
Per RCW 46.04.160, crosswalks exist at all roadway intersections, whether marked or un-marked, and regardless of whether there are sidewalks at the intersection. Crosswalks also exist at non-intersection locations where they have been established with crosswalk markings (such as a midblock crossing). For the purposes of these standards, intersections are as defined in Chapter 1 of these standards.

Marked crosswalks shall be per WSDOT Standard Plan M-15.10 except where DUC zone standards apply marked crosswalk shall be per **Section 10.09.06**.

Crosswalks will be marked at the following intersection locations, except where pedestrian facilities are NOT present:

A. Traffic signal and stop controlled intersections as shown in the figure below:

Figure 10-16 Marked Crosswalks at Signalized Intersections



B. Yield controlled approaches to roundabouts.

C. Stop controlled approaches at intersections within the Downtown Urban Center.

D. Stop controlled approaches to Arterial Streets (Principal or Minor Arterials).

E. Stop controlled approaches at the intersection of two or more arterial and/or collector Streets.

F. Stop controlled approaches of Local Streets to Non-Residential Collector Streets.

Crosswalks at non-intersection locations, and intersection locations not listed above, are by-default not marked and when they are marked require enhancement(s) that reduce traffic speeds, shorten crossing distance, increase driver awareness of the crossing, and/or provide active warning of pedestrian presence. Selection of appropriate enhancements requires analysis and documentation by a professional engineer. Enhancements may include, but are not limited to, signage, rapid rectangular flashing beacon(s), and/or bulb-outs.

Permanently closed crosswalks across arterial and collector streets shall have signage indicating that pedestrian crossing is prohibited (**No Pedestrian Crossing Sign, MUTCD R9-3**). A supplementary plaque with arrow (**Use Crosswalk Plaque w/Arrow MUTCD R9-3bP**) will be included with the no pedestrian crossing sign where the closed crosswalk is at an intersection where one crosswalk is closed, and the adjacent crosswalk is open and at locations where an open crosswalk exists only in one direction from the closed crosswalk.

10.09.06 Downtown Crosswalks

Marked crosswalks subject to DUC zone standards shall be per **City of Auburn Standard Detail T-43**.

An existing marked crosswalk that does not meet the requirements of the Guidelines shall be re-built in its entirety to meet the requirements of the Guidelines with the any of the following construction activities:

A. On an arterial street, full depth pavement re-construction across half or more of the crosswalk width.

B. On a non-arterial street, surface pavement restoration across half or more of the crosswalk width.

The crosswalk width is measured from face of curb or pavement edge at the pedestrian pathway entry into the vehicle travel way to curb face or pavement edge at the pedestrian pathway departure from the vehicle travel way. This distance is measured through medians, islands, and other pedestrian refuge areas.

10.10 Bikeways

See **City of Auburn Standard Detail T-17** and WSDOT Standard Plan M-9.50.

Bikeways shall be incorporated into street and trail networks in accordance with the CTP and the typical sections in **Section 10.03**.

Bikeways shall be designed in accordance with AASHTO's current "Guide for the Development of Bicycle Facilities", the MUTCD, this section, and applicable City of Auburn standard details.

The City of Auburn's bicycle network consists of various classification bikeways. Typically, these bikeways are shared with other transportation modes, although they may be provided exclusively for bicycle use. Bikeways are categorized as follows: Class I, II, or III Bikeways.

10.10.01 Class I Bikeway

Class I Bikeways are facilities shared with other non-motorized modes and are physically separated from motorized vehicle roadways. For the purposes of this section, Class I Bikeway design standards are for bicycle facilities that generally parallel a roadway with minimal crossflow by motor vehicles. When required, Class I Bikeways shall be designed for two-way traffic. Class I Bikeways that are part of the City's Future Trails and Bicycle Network shall be public and shall be located within public right-of-way, tracts or easements.

Class I Bikeways shall be either asphalt or cement concrete, at the discretion of the City Engineer or designee. Asphalt bikeways shall have a minimum pavement section of 2 inches of CL ½" asphalt concrete pavement over 6 inches of Crushed Surfacing Base Course (CSBC). Cement concrete bikeways shall be per **City of Auburn Detail T-13**. When the California Bearing Ratio (CBR) of the existing soil is 5 or less, an additional 6 inches of gravel base shall be required. When the trail is also utilized as a vehicular service road, the pavement design shall be the Access Road classification on **Table 10-5**. Class I Bikeways shall be a minimum width of 10 feet and be separated from the vehicular travel way by a landscape strip or other

physical buffer with a minimum 5 foot width.

Where Class I Bikeways are intersected by driveways appropriate signing and pavement markings shall be provided consistent with requirements for midblock crossings.

10.10.02 Class II Bikeway

Class II Bikeways, or “Bike Lanes,” are incorporated within the roadway section adjacent to vehicle travel lanes. Bike lanes are exclusive one-way bicycle facilities delineated by pavement markings and signage. Bicycle traffic is carried in the same direction as the adjacent motorized vehicle traffic.

Bike lanes shall have a minimum width of 6 feet as measured from nearest edge of the travel way to face of curb, edge of pavement, or edge of parking lane. Bike lanes shall have the same pavement section as the adjacent roadway. Buffering from the vehicle travel ways may be required as determined by the City Engineer.

10.10.03 Class III Bikeway

Class III Bikeways, or “Shared Lanes,” are facilities shared by bicyclists and motorized vehicles Class III Bikeways may or may not be delineated with shared use pavement markings and signage as determined by the City Engineer. Generally, lower-speed/lower-volume streets are adequate for bicycle travel, so additional signing and pavement markings for bicycle use are unnecessary.

10.11 Landscape Strips

Landscape strips are required per the typical sections in **Section 10.03**. Landscape strips are also included as part of separated trails/Class I Bikeways. Landscape strips shall be located between the back of the curb and the sidewalk. Landscape strips shall meet the following requirements:

A. 5 foot minimum width.

B. Minimum 8 inch deep amended soils as bedding over minimum 4 inch layer of scarified/tilled base soils all free of rocks, construction debris, slurry, and other construction material.

C. Graded towards the curb at approximately 1.5%. Other grades may be allowed where it can be demonstrated to not cause drainage or maintenance issues.

D. Planted with grass or shrubs, vegetation groundcover, and street trees. Shrubs and vegetative groundcover must be low maintenance, minimal debris dropping, and not present a tripping hazard to pedestrians. Landscape strips shall not include gravel, rocks, or other aggregate. Artificial turf may be placed in landscape strips subject to the following requirements:

   i. Must have lifelike individual blades of grass that emulate natural turf in look and color (green).

   ii. Indoor or outdoor plastic or nylon carpeting is not allowed.

   iii. Pile height must be at least 1.5 inches and have a face weight of 50 ounces per square yard.

   iv. A minimum eight-year manufacturer’s warranty that protects against color fading and decreased pile height is required.

   v. Must not utilize rubber infill.

vi. Must be free of tears, bulges, wrinkles, ripples, and frayed edges.

vii. Must be anchored.

viii. Must be installed with the grain pointing in a single direction.

ix. Edges must be trimmed to fit against all regular and irregular edges to resemble a natural look.

x. Must be a minimum water permeability of thirty inches per hour per square yard after installation.

E. Driveways, lighting, fire hydrants, junction boxes, water meters and other appurtenances shall be configured such that no landscape strip has a net landscaped surface area (landscape strip area minus areas occupied by non-landscape features) of less than 50 SF and no portion of a landscaped surface within a landscape strip has a width less than 2 feet.

Landscape strips along local residential streets may be constructed as bioretention swales to provide low impact development (LID) surface water management. Bioretention swales in the public right-of-way shall be designed to collect, treat, and infiltrate runoff from the public right-of-way. If, after runoff from the public right-of-way has been accounted for, additional capacity remains in the bioretention swale, the bioretention swale may be utilized to treat and infiltrate runoff from adjacent private single family residential property(s) with a maintenance agreement between the City and property(s) draining to the swale that requires those property(s) to maintain the swale in perpetuity. The bioretention swale shall be designed and constructed in accordance with the SWMM. Street trees shall not be placed in landscape strips constructed as bioretention swales. Instead, required street trees shall be placed on adjacent private properties and/or tracts.

10.12 Street Trees

See **City of Auburn Standard Detail T-06**.

Street trees are required for local residential streets, residential collector streets, and streets within the DUC zone (except along Auburn Way).

10.12.01 Species Selection, Placement, and Spacing

Where street trees are required, they shall be installed at a spacing of 40 feet on center or no closer than 1-1/2 times the mature diameter of the tree canopy, whichever is greater. Street trees shall be placed such that the center of the tree trunk is at 2-1/2 feet from the back of the adjacent curb or centered in the landscape strip, whichever is greater. Selection of tree species, placement, and spacing requires consideration of the following:

A. **Sight Lines:** Trees shall be placed so that they do not obstruct the view of any street intersection, driveway, or visibility of any traffic control device or sign. Sight distance triangles may be required to analyze and confirm visibility at street intersections is not blocked by tree(s).

B. **Planting Next to a Building**: Where a building is placed close to the sidewalk, the mature size of a tree should be considered when selecting species. Trees with a pyramidal, columnar, or oval shaped canopy are preferable; a tree with a round head is generally unsuitable in this situation.

C. **Overhead Wires**: When trees must be planted directly under or when the mature canopy is within 12 feet of overhead utility lines, species with a mature maximum height of 25 feet or less must be selected.

D. **Street Lighting**: Street and pedestrian lights should be placed between street trees. The trees shall be located at least half their mature canopy width or 20 feet from street lights, whichever is greater.

E. **Underground Utilities:** Trees shall be planted to avoid impacts on underground utilities.

F. **Clearance:** Trees shall be pruned as they grow to provide at least 8 feet vertical clearance above sidewalks and 14 feet of vertical clearance above roadway surfaces.

Table 10-11 provides a selection of acceptable species of trees. Many other trees are appropriate and alternative selections may be proposed if desired. Alternative plant choices must be evaluated and approved by the City Engineer, or designee. Needled evergreens and trees with mature heights of over 35 feet are not allowed.

A. **Round:** These are generally wide spreading trees that need more space than other shapes.

B. **Oval:** Taller than they are wide and cause less interference with traffic.

C. **Columnar:** Useful in locations where there is little available room between the street and buildings, awnings, or other features. Branches of columnar trees tend to grow up rather than out. Many branch lower than other types of trees without causing problems with traffic or pedestrians.

D. **Pyramid:** Also called cone, typically broad at the base of the canopy and are somewhat pointed at the top. Planted close together, pyramidal trees can screen unwanted views or create vistas. Lower branches sometimes droop with age and may have to be limbed up in later years to provide the needed clearance.

E. **Vase:** (sometimes also called “v-shaped”) have canopies that are narrow toward the bottom and broad at the top. V-shaped trees may have arching branches that form a canopy over both street and sidewalk. They generally do not cause problems with overhead power lines or traffic.

Table 10-11 Street Trees

Common Name	Mature Height (ft.)	Mature Canopy Width (ft.)	Sidewalk Landscape Areas	Medians	Canopy Shape
Amur Maple 'Flame'	20	20	x		Round
Mt. St. Helens Plum 'Frankthrees'	20	20	x	x	Round
Rocky Mt Glow Maple 'Schmidt'	25+	15	x	x	Round
Flowering Plum 'Krauter Vesuvius'	30	15	x	x	Round
Pear 'Autumn Blaze'	30	25	x		Round
Pacific Sunset Maple 'Warrens Red'	30	25	x	x	Round
Serviceberry 'Princess Diana'	20	15	x		Round
Serviceberry 'Autumn brilliance'	20	15	x		Round
Queen Elizabeth Maple 'Evelyn'	35	30	x		Oval
Red Fox Katsura	30	16	x	x	Oval
Frans Fontain Hornbeam	35	15	x	x	Columnar
Cherry 'Columnarus'	35	15	x	x	Columnar
Cherry 'Spire'	30	10	x	x	Columnar
Pyramidal European Hornbeam 'Fastigiata'	35	25	x	x	Columnar
Red Obelisk	35	12	x	x	Columnar
"Marilee"	24	10	x	x	Pyramid
Pear 'Redspire'	35	25	x	x	Pyramid
Linden 'Redmond'	35	20	x	x	Pyramid
Chancelor Linden 'Chancole'	35	20	x	x	Pyramid
Flowering Cherry 'Amanogowa'	20	6	x	x	Vase
Flowering Cherry 'Akebono'	25	25	x		Vase

10.12.02 Root Direction Devices

Trees within sidewalks, landscape strips, and on public or private property that are within 10-feet of a street or sidewalk require root barrier devices to deflect tree roots downward into the soil. The root barrier will be placed on all sides of the tree root ball. For a tree outside the street cross section, the barriers may be omitted on the side of the tree root ball that is parallel and opposite to the street. Plan submissions shall indicate the location of root barriers and provide a specification sheet on the product to be used.

10.13 Ground Cover

Ground cover and shrubs plantings in landscape strips and medians shall adhere to the requirements of this section. Except street trees, landscape strips and median plantings shall have a mature height of less than 3 feet. **Table 10-9** provides several acceptable species of ground cover and shrubs. Many other types of plants may be appropriate and alternative selections may be proposed if desired. Alternative plant choices must be evaluated and approved by the City Engineer, or designee. The SWMM shall be utilized to select groundcover plantings within the wet areas of bioretention facilities.

Groundcover shall be planted from either four-inch pot with 12-inch spacing or one-gallon pot

with 18-inch spacing. Alternative spacing of particular species may be approved by the City Engineer, or designee, if documentation concerning the effectiveness of the groundcover is submitted with the landscape plan.

Table 10-12 Ground Cover

Common Name	Mature Height (ft.)	Can be utilized in: M (Medians), L (Landscape Strips)	Minimum Planting Area Width (ft.)
Kinnikinnick Bearberry	0.5 to 1	M, L	5’ to 6’
California Wild Lilac	1.5	M	6’ to 8’
Bearberry Cotoneaster	< 2	M	5 to 6’
Purple Leaf Winter Creeper	1.5	M	6’ to 8’
Blue Chip Juniper/Hughes Juniper	1	M	6’ to 8’
Siberian Carpet Cypress	1.5	M	7’ to 8’
Evergreen Bramble	1	M	6’
Mother of Thyme	0.25	M	1
Otto Lyuken	3	M	6
Japanese Barberry	4	M	5
Wings of Gold	3 – 4	M	3
Periwinkle	0.5	M	1.5’

10.14 Irrigation Systems

Irrigation systems for landscape strips in the public right of way shall conform to ACC 12.12.236 and shall adhere to the standards specified in the City of Auburn Construction Standards.

10.15 Mailboxes

See **City of Auburn Standard Details T-07, T-08 & T-09.**

Locating and installing mailboxes in connection with the construction or reconstruction of a City street shall follow AASHTO and Post Office guidelines.

Mailboxes shall be located a minimum of 2 feet back from the face of curb on streets which have a curb. For streets without a curb, setbacks shall be determined using ASSHTO standards. When locating mailboxes, access, sight distance, parking, and landscaping requirements shall be taken into account. Final locations shall be detailed on the civil plans and approved by the serving Post Office and the City Engineer.

When mailboxes are located in the sidewalk, individually or in clusters, sidewalks shall be widened to provide a minimum 5 feet of clearance around the mailboxes. Widening of the sidewalk may require the dedication of additional right-of way or easement.

The owners or residents served by mailboxes will install and thereafter maintain their own individual, clustered, or separated mailboxes as instructed by the U.S. Postal Service.

10.16 Illumination

10.16.01 Street Lighting Design

Street lighting design shall be in conformance with the design criteria in the most recent edition of the IES Lighting Handbook (Illuminating Engineering Society of North America) and applicable WSDOT and City of Auburn Design and Construction Standards.

Table 10-13 provides minimum lighting design criteria, lamp attachment types, heights, davit arm lengths, and typical spacing for various roadway classifications in the City. The schedule is based on typical straight roadway sections with a staggered lighting configuration. Wider road sections, curves, intersections, cul-de-sacs, single sided lighting configurations require additional analysis to determine the spacing, height, and davit arm lengths required to achieve the required lighting levels.

Street light standards shall be staggered from one side of the roadway to the other, except where site constraints make single sided lighting more feasible and equally effective. Street lights on streets with median islands 8 feet in width and greater shall be located in the medians using dual davit arms to light the street on both sides of the median. The Applicant shall provide project specific lighting calculations that demonstrate minimum illumination levels will be met. Light level calculations shall be done ignoring any existing substandard luminaires (PSE lights on wood poles, etc.).

Special consideration shall be given to light levels at crosswalks, curves, conflict points and street ends. The locations of street lights shall take into consideration any obstacles which may screen or impede lighting levels such as street trees and awnings. Minimum separation between street trees and street lights shall be 20 feet or ½ the mature tree canopy width, whichever is greater.

Marked crosswalks at traffic signal controlled intersections and sidewalks in the Downtown Urban Corridor (DUC) zone shall be lit to an average of 2-foot candles. All other marked crosswalks will be lit to a minimum of 1-½ times the required average light level per **Table 10-13**.

10.16.02 Luminaries

All City street lights shall be LED. Acceptable light fixtures/luminaries are shown on **City of Auburn Standard Detail T-37**. Use of other fixtures requires documentation showing they meet all applicable City standards and approved by the City Engineer, or designee.

Street and Pedestrian Luminaires shall operate on 240 Volt AC and all luminaires shall be full cutoff. All luminaires shall be provided with wattage labels for positive identification of Lamp (See **Table 10-10**). A maximum of 5% voltage drop across each circuit will be permitted.

All City Street lights must support dimming and have PCR7 photocell receptacle and utilize a Sensus wireless control node.

Table 10-13 Lighting Design Criteria

Street Classification	Lamp Attachment Type (See City of Auburn Standard Detail T-37)	Avg. Light Level (ft-candle)	Max. Uniformity Ratio	Min. Light Level (ft-candle)	Luminaire Mounting Height (ft)	Spacing* (ft)	Davit ** Arm Length (ft)
Principal Arterial	Type A	1.4	3 To 1	0.2	35**	190	12
Minor Arterial	Type B	0.9	3 To 1	0.2	35	190	12
Minor Arterial w/Center Turn Lane or Median	Type B	0.9	3 To 1	0.2	35	190	12
Non-Residential Collector	Type B	0.9	3 To 1	0.2	35	200	12
Residential Collector	Type D	0.6	3 To 1	0.2	30	175	14
Residential Collector w/Center Turn Lane or Median	Type D	0.6	3 To 1	0.2	30	175	14
Local Non-Residential	Type D	0.6	3 To 1	0.2	35	160	12
Rustic Roads*		N/A	N/A	N/A	N/A	N/A	N/A
Local Residential and Local Residential Alternate	Type F	0.4	6 To 1	0.1	30	185	8

* Lighting for rustic roads shall be at intersections only and meet the design criteria for Local Residential Roads.

** Davit arm lengths may change based on approved roadway cross section.

10.16.03 Light Poles

City street light poles shall be “cobra head” style per **City of Auburn Standard Detail T-19** except for streets within the DUC zone that shall be per **City of Auburn Standard Detail T-28 or T-39**. An alternate street light may be utilized along local residential streets per **City of Auburn Standard Detail T-29**.

Light Standards handholes shall be four inches by six inches nominal non-flush type in accordance with **City of Auburn Standard Detail T-19** with tamper resistant screws.

All light poles shall be placed on a foundation. Foundations for light standards shall conform to **City of Auburn Standard Details T-19, T-28, or T-29.**

Luminaire wiring, conduit, and pole placement within street cross sections that have curb, gutter, and sidewalks shall be per **City of Auburn Standard Detail T-18.**

10.16.04 Service Cabinet, Foundation, Conduit

See **City of Auburn Standard Detail T-21.**

All new luminaires shall be connected on an electrical circuit that is connected to a power source through a service cabinet. The service cabinet shall be within 50 feet of the Puget Sound Energy (PSE) point of service connection.

Service cabinets shall be installed within right-of-way, easement, or City property behind the sidewalk and at locations that do not impede maintenance access or sight distance. The cabinet shall be located in the center of the system so there are a near equal number of lights being

served on separate circuits from each side of the cabinet. The cabinet shall be labeled with "COA Lighting" and service site address.

The number of luminaires per service will be based upon the type of luminaire and the capacity of the service. Testing may be required to determine if additional luminaires may be added to an existing service.

Service cabinets shall be in conformance with the City of Auburn Engineering Construction Standards. All new luminaires shall have a 7 pin PCR7 receptacle and come with a Sensus VantagePoint wireless control node.

Street light conduit shall be per the City of Auburn Construction Standards.

10.17 Junction Boxes

See **City of Auburn Standard Detail T-20**.

Junction boxes shall be of the type specified on the plans and shall conform to the requirements of WSDOT Standard Plan J-40.10. All junction boxes shall be locking.

Type 1 junction boxes shall be located adjacent to the sidewalk within the landscaping strip, if provided, or adjacent to the back of sidewalk if there is not a landscape, or within the shoulder of a non-curbed roadway. Junction boxes remaining or placed within the sidewalk or walking paths shall have non-slide lids.

10.18 Survey Monuments

See **City of Auburn Standard Detail T-46.**

Survey monuments shall be placed or replaced in accordance with WAC 332-120 (Survey Monuments – Removal or Destruction), and RCW 58-09.120 and good practice in land surveying. Monuments are required along the centerline of improvement of all new or reconstructed streets. Monuments shall be placed at intersections, points of curvature (PC), and points of tangency (PT).

Unless approved otherwise by the City Engineer or designee, ground disturbing activities within 25 feet of an existing survey monument requires securing of a permit from the Department of Natural Resources in advance of those activities. All existing survey monuments that are disturbed, lost, or destroyed during construction shall be replaced by a registered land surveyor registered in the State of Washington at the expense of the responsible party. Any monuments set shall be permanently marked with the certificate number of the Professional Land Surveyor (PLS) setting it (which shall be the same PLS that prepares and certifies the associated monument recording information).

10.19 Bollards

See **City of Auburn Standard Detail T-03.**

When necessary to deny vehicle access to an easement, tract, or trail (except for maintenance vehicles) the point of access shall be closed by a line of bollards. These shall include one or more fixed bollards on each side of the traveled way and removable, locking bollards across the traveled way. Spacing shall provide one bollard on centerline of the trail and other bollards at a spacing of 3 feet on center. Where pedestrian access is intended, bollards shall include at least one space between them of 5 feet. Bollards are considered fixed roadside objects and shall meet separation requirements described in **Section 10.17**.

Emergency vehicle access roads shall not be blocked with bollards. Emergency vehicle access roads will be blocked with a gate and knox-lock.

10.20 Bus Transit Facilities

Transit facilities in the City of Auburn will be coordinated with the relevant transit agency.

When determined appropriate by the City Engineer, or requested by a transit service agency, an applicant for new or expanded development is required to consult with King County METRO, Pierce Transit, Sound Transit, and/or the Muckleshoot Indian Tribal Transit to determine the practicality of how the site can be served by transit-oriented improvements such as bus pullout lanes, bus stops, or other appurtenances.

Bus stops are located, designed and installed as part of a cooperative effort between the City and the operating transit agency. Bus stops are managed as part of a right of way use permit granted by the City to the operating transit agency. In general bus stop location and design decisions should follow the facility design guidelines of the operating transit agency.

10.20.01 Bus Stops Locations

In general bus stop location and design decisions should follow the facility design guidelines of the operating transit agency. The following are guidelines that indicate where bus stops are appropriate:

A. Projected or existing passenger boardings demand warrant a stop.

B. The stop is not at a location where traffic level of service standards are not being met or where the stop would cause traffic operations to drop below traffic level of service standards.

C. The stop does not obstruct minimum required sight distances.

D. The location meets the facility guidelines and fleet specifications of the operating transit agency.

E. The stop is required to meet all applicable ADA requirements.

10.20.02 Bus Stops Features

In general bus stop location and design decisions should follow the facility design guidelines of the operating transit agency. The following are some guidelines that would indicate what type of treatment would be appropriate by type of bus stop.

A. Shelters should be installed at bus stops with an existing or estimated 25 or more boarding per day.

B. Benches should be installed at bus stops with an existing or estimated 15 or more boarding per day.

C. Trash receptacles should be installed and maintained by the operating transit agency at all bus shelters. A sign should be placed indicating that the shelter stop is maintained by the operating transit agency and giving specific contact information to report problems with the stop including a phone number.

D. At all bus stops experiencing 15 or more boarding per day trash receptacles may be placed by the City or adopt a spot group and should be maintained by the City or the adopt a stop group.

E. Information schedules and schedule holders shall be placed at all inbound stops (stops where buses are headed toward a major Central Business District), at all transfer points and at heavily used outbound stops.

F. Additional bus stop lighting should be provided at locations where lighting levels are determined to be less than 1 foot candle.

10.20.03 Bus Pullout Lanes

The City Engineer may determine that bus pullout lanes are required where bus queuing or staging is required. In making this determination, the City Engineer will consider the following:

A. Traffic volumes, bus frequency, and ridership volumes.

B. Traffic impacts of an in-lane stop vs a pullout.

C. Posted speed limits.

Bus pullout locations shall meet the following requirements:

A. Placement of bus pullouts shall be on the far side of signalized intersections and non-signalized intersections immediately following the intersection. Distance between pullouts should not be less than 1,000 feet.

B. Pullouts should be constructed on both sides of a two-way street in a complementary pair.

C. When locating a bus pullout consideration shall be given to existing access points and where passengers have access to sidewalks, crosswalks, ramps, or other pedestrian facilities. Consideration shall also be given to trip attractors, and activity centers.

D. Bus pullouts shall be designed to provide for a bus leaving the pullout lane to enter traffic with minimum required entering sight distance per AASHTO.

E. Bus pullouts shall be located along roadways meeting minimum stop sight distance requirements per AASHTO.

10.21 Traffic Control Facilities

Traffic control facilities are all signs, signals, markings, medians, curbing, and other features used to regulate, warn, or guide traffic. All traffic control devices shall meet the requirements of the MUTCD and the standards herein.

10.21.01 Median Islands

The City Engineer may determine that a median island is needed to provide the following:

A. Manage/restrict access along a corridor.

B. Provide a traffic calming element.

C. Provide pedestrian refuge.

D. Improve roadway aesthetics.

E. Separate opposing travel lanes.

Median Islands shall be designed using the same geometric criteria as the street on which they will be constructed. Medians shall also meet the following requirements:

A. All edges shall require concrete curb per WSDOT Standard Plan F-10.12. Median edges towards which runoff flows shall include concrete curb and gutter per WSDOT Standard Plan F-10.12**.** The face of curb shall be offset at least 1 foot from the edge of adjacent travel way.

B. Median ends shall include reverse curves of the curb lane with 20 foot minimum radii to accommodate turning vehicles and street sweeping.

C. Minimum median width is 4 feet.

D. Median landscaping is not allowed on medians less than 9 feet wide and shall conform to the requirements of **Sections 10.11, 10.12 and 10.13.** Landscaped medians shall include irrigation systems. Landscaped medians shall provide a 1 foot wide, 6-inch thick, concrete maintenance apron around the perimeter of the median behind the curb.

E. Median hardscape shall be stamped concrete with colors and patterns as determined to be required by the City Engineer or designee.

F. Street lights on streets with median islands 8 feet in width and greater shall be located in the medians using dual davit arms to light the street on both sides of the median.

G. Medians with street lights and/or landscaping will be designed to allow maintenance of the lights or vegetation without requiring full closure of a travel direction(s).

10.21.02 Mountable Curbs

Mountable (also referred to as “C” Curbs), are curbs used for the restriction of turning movements and to aid in the channelizing of traffic. The City Engineer may determine that mountable curbs may be required in order to control access along a corridor within the restricted zones of any functional intersection boundary as defined in **Section 10.08.04**.

Mountable Curbs constructed to retrofit existing roadways shall be constructed per **City of Auburn Standard Detail T-32**. Mountable Curbs constructed on new roadway surfaces shall be cast-in-place curb per **City of Auburn Standard Detail T-47**. All Mountable Curb shall be painted to match the adjacent roadway striping (yellow or white) and shall be marked with raised pavement markers and flexible tubular delineators at the beginning and end sections as shown on **City of Auburn Standard Detail T-32**. Mountable curbs shall be designed to account for roadway drainage.

10.21.03 “Pork Chop” Islands

“Pork Chop” Islands are barrier islands used to restrict turning movements at driveways. The City Engineer may determine that a pork chop is required where left turns are restricted and other physical barriers such as median Islands or curbing is not feasible. When required, pork chops shall be accompanied by appropriate turn restriction signage in the right-of-way and pavement markings.

10.21.04 Signage

All signing shall be per the MUTCD and City of Auburn Engineering Construction Standards.

Applicants shall be responsible for providing and installing all traffic control signs, including but not limited to street name signs, regulatory signs, warning signs, barricades, and bicycle/pedestrian signs as required.

Sign posts shall be installed per **City of Auburn Standard Detail T-24.**

Mast arm mounted street name signs shall be per **City of Auburn Standard Detail T-25.**

Post mounted street name signs shall be per **City of Auburn Standard Detail T-26.**

10.21.05 Left Turn Lane Channelization

See WSDOT Standard Plans M-3.20 & M-3.40**.**

Single direction left-turn lane channelization shall include a minimum of 150 feet of full-width lane. The standard width of a left-turn lane will be 11 feet. Left-turn arrows per WSDOT Standard Plan M-24.40 shall be installed 25 feet behind the stop bar. Additional storage may be required for long vehicles, anticipated left-turn queues longer than the minimum storage, or to ensure that a left-turn lane is not blocked by an adjacent through queue. If storage length exceeds 150 feet, auxiliary turn arrows will be installed at 100 foot intervals. Deviation requests from the minimum left-turn lane storage requirements will need a traffic study submittal and approval by the City Engineer.

The installation of two-way left-turn lanes on City streets will be determined by the City Engineer based on street classifications and left turn requirements. The minimum width of a two-way left-turn lane shall be 11 feet. The delineation lines shall be Single Broken Yellow and a Single Solid Yellow along the opposing lanes per the MUTCD. Two-way traffic arrows shall be spaced every 250 feet along this lane with a minimum of one per block.

Left-turn lane at end of two-way left-turn lanes shall conform to WSDOT Standard Plan M-3.40.

Dual left turn lanes shall conform to WSDOT Standard Plan M-3.50.

10.21.06 Right Turn Lane Channelization

See WSDOT Standard Plan M-5.10

Right-turn lane pocket channelization shall include a minimum of 150 feet of full-width lane. The standard width of a right-turn lane will be 11 feet. Additional storage may be required for long vehicles, to accommodate anticipated right-turn queues longer than the minimum storage, or to ensure that a right-turn lane is not blocked by a through queue. Deviation requests from the minimum right-turn lane storage requirements will need a traffic study submittal and approval by the City Engineer. Right-turn arrows shall conform to WSDOT Standard Plan M-5.10.

"ONLY" lettering per WSDOT 80.10 is required where a through lane converts to a turn lane and other circumstances as determined by the City Engineer.

10.21.07 Lane Division

See WSDOT Standard Plan M-20.10 and **City of Auburn Standard Detail T-12.**

All pavement markings used to separate or channelize traffic shall conform to the referenced Standard Plans and to the City of Auburn Construction Standards.

Lane division pavement markings on Local Residential streets are not required, except as may be deemed necessary by the City Engineer.

10.21.08 Painted Islands

Painted islands will be allowed on a case-by-case basis with approval from the City Engineer. Pavement markings for painted islands shall meet the MUTCD requirements.

10.21.09 Other Pavement Markings

Railroad crossing marking shall be per the standard symbol shown on WSDOT Standard Plan M-11.10.

10.21.10 Construction Area Temporary Traffic Control

The contractor shall be responsible to provide and maintain all signs, barriers, warning lights, striping, and flag control required for maintaining public safety in construction areas. Traffic control shall be maintained at all times when construction is in progress on all streets, and access points in the construction area.

Construction activities will not be allowed in the public right of way without an approved traffic control plan. Contractor to refer to the Construction Standards for further details.

10.21.11 Roadway Barricades

Barricades shall conform to the standards described in the MUTCD.

Type I or Type II barricades may be used when traffic is maintained through an area being constructed/reconstructed.

Type III barricades may be used when streets are closed to traffic. Where provision must be made for access of equipment and authorized vehicles, the Type III barricades may be provided with movable sections that can be closed when work is not in progress, or with indirect openings that will discourage public entry. Where job site access is provided through the Type III barricades, the developer or contractor shall assure proper closure at the end of each working day.

Type III barricades shall be used at the end of a local access street terminating abruptly without cul-de-sac bulb or on temporarily stubbed off streets. Each such barricade shall be used together with an end-of-road marker. See **City of Auburn Standard Detail T-45**.

10.21.12 Traffic Signals

Traffic signals shall be designed and constructed in accordance with Sections 8-20, 9-29, and other applicable sections of the Construction Standards. Traffic signal facilities shall utilize video vehicular detection. Induction loops or other solution are only allowed where the City Engineer, or designee, has determined that video detection is not feasible. Wherever existing induction loops are damaged and require replacement, *the City Engineer may require their replacement with video detection. WSDOT Standard Plans shall be utilized except the following elements that shall be per City of Auburn Standard Details:*

Traffic Signal in the DUC Zone: **City of Auburn Standard Detail T-38**

Traffic Signal Controller and Foundation: **City of Auburn Standard Detail T-22**

Telecommunication and Luminaire Electrical Trench: **City of Auburn Standard Detail T-23**

The following definitions are referenced when determining what upgrades to pedestrian push-button and pedestrian signal head systems are triggered by development/construction activity:

A. **Functionally Accessible:** For pedestrian pushbuttons and pedestrian signal heads to be considered accessible from a functionality standpoint, they must be of the brands, makes, and models that are specified by the current Engineering Construction Standards.

B. **Location Accessible:** For pedestrian pushbuttons to be considered accessible from a location standpoint, they must be between 42 and 46 inches in height measured vertically from the centerline of the pushbutton and the adjacent level landing and the pushbutton must be 10 inches or less measured horizontally from the adjacent level landing.

In accordance with the City's adopted ADA Transition Plan, modification, or expansion of any portion of the electrical systems of a signalized intersection or enhanced crossing requires making all pedestrian pushbuttons and pedestrian signal heads at the intersection or crossing Functionally Accessible. Construction, modification, removal or replacement of any portion of any curb ramp at a signalized intersection or enhanced crossing requires making the pedestrian pushbutton serving the new, modified, or replaced ramp Location Accessible and making all of the pedestrian pushbuttons and pedestrian signal heads at the intersection or crossing Functionally Accessible.

10.21.13 Traffic Calming

The City Engineer may determine that traffic calming features are required on existing or new streets to address cut-through or speeding concerns. Potential traffic calming features include varying roadway sections, traffic circles, chicanes, medians, bulb-outs, raised intersections, and raised crosswalks. Speed cushions are not an acceptable traffic calming approach except when considered and installed as either: 1) Part of the City's Neighborhood Traffic Calming Program, or 2) With approval from the City Engineer, as mitigation on existing roadways where development activity creates the potential for cut-through and/or speeding traffic and the City Engineer determines that other traffic calming approaches would not be applicable or appropriate.

Where speed cushions are installed, they will be per **City of Auburn Standard Detail T-42.**

10.22 City Telecommunication Facilities

10.22.01 Preface

The design of City Telecommunications facilities, including intelligent transportation systems (ITS) and general communications fiber located within City right-of-way and easements shall be in conformance with these standards.

City telecommunications facilities shall be included in the Public Facility Extension Agreement (FAC) between the developer and the City when the Agreement includes street improvements per ACC 12.64A.

10.22.02 Design Criteria

The City has established the following minimum requirements to ensure the efficient construction of City telecommunication facilities with the least impact to City transportation and other utility infrastructure. The design of City telecommunications facilities shall also meet the requirements of **Chapter 9.**

Unless approved otherwise by the City Engineer, or designee, City telecommunications conduits and related facilities are required in conjunction with all street improvements constructing sidewalks, traffic signals, or traffic beacons and may be required with other improvements as determined by the City Engineer, or designee, in accordance with ACC 12.64A. When required, facilities shall extend the full length of the street improvement. Placement of the facilities shall accommodate connection with other existing or future telecommunication facilities within the corridor.

10.22.03 Conduits

City telecommunication conduits shall be 3-inch PVC Schedule 40 and shall have a minimum of 24 inches of cover and, except for street crossings, shall be located under the sidewalk per **City of Auburn Standard Detail T-23**. If no sidewalk is included in the scope of the required

street improvements, the conduit will be installed in the most feasible location within the street construction limits as directed by the City Engineer, or designee. Roadway crossings shall be minimized, and sweeps shall be long sweep 90-degree bends. Trace wire shall be placed within the conduit.

10.22.04 Splice Vaults and Pull Boxes

When required, splice vaults and pull boxes shall be per WSDOT Standard Plans J-90.21 and J-90.10, respectively, except that lid marking lettering shall be as specified in the Construction Standards and lids shall not be marked with WSDOT logos or text indicating WSDOT. Splice vaults shall be placed every 1,500 feet. Pull boxes shall be placed every 500 feet and at all intersections.

STANDARD DETAILS

February 2024

City of Auburn
Engineering Services
Public Works Department
25 West Main Street
Auburn, WA 98001-4998

Approved By:

Jacob Sweeting, P.E. — 2/7/24
Assistant Director of Engineering Services/City Engineer — Date

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PREFACE FOR THE CITY OF AUBURN STANDARD DETAILS

Per Auburn City Code (ACC) 12.04.020, all public work construction contracts of the City, including but not limited to streets and sidewalks, storm water and sanitary sewer systems, and water systems, and all work within City public right-of-way performed by the City and others shall conform to the Engineering Construction Standards (ECS). The ECS apply to City capital projects and to work performed by developers and others under construction permits (CON), grading permits (GRA), storm permits (STM), other utility permits, and public facility extensions (FAC). The City of Auburn has adopted the ECS to require the standardization of design and construction elements for consistency, to assure that public safety needs are met, and to comply with Local, State, and Federal regulations. This Standard Details document is a sub-part of the ECS.

Unless otherwise noted, references to specifications sections in the Standard Details refer to the Washington State Department of Transportation's (WSDOT) Standard Specifications (M41-10) for Road, Bridge and Municipal Construction, 2024 edition publication (Standard Specifications), as modified by City of Auburn Special Provisions.

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TABLE OF CONTENTS

NAME	NUMBER
GENERAL DETAILS	
BANNER DETAIL	G-01
TEMPORARY CONSTRUCTION SITE SIGN BOARD (4'x4')	G-02
TEMPORARY H.U.D. CONSTRUCTION SITE SIGN BOARD (4'x4')	G-04
TEMPORARY CONSTRUCTION SITE SIGN BOARD (8'x4')	G-05
WSDOT STANDARD PLANS (INCLUDED BY REFERENCE ONLY)	
PULL BOX (CITY TELECOMMUNCATIONS PULL BOX)	J-90.10
SMALL CABLE VAULT (CITY TELECOMMUNCATIONS SPLICE VAULT)	J-90.21
TEMPORARY EROSION AND SEDIMENT CONTROL (TESC) DETAILS For additional TESC details and figures see the City of Auburn SWMM	
TEMPORARY CONSTRUCTION ENTRANCE/EXIT	E-01
SILT CONTROL FENCE	E-02
CATCH BASIN INLET PROTECTION	E-03
ALTERNATE CATCH BASIN INLET PROTECTION	E-04
GRADING/EROSION DISCHARGE CONTROL STRUCTURE	E-05
TRAFFIC DETAILS	
TYPICAL PIPE TRENCH BACKFILL	T-01
EXISTING ROADWAY RESTORATION OF UTILITY TRENCHES	T-02
EXISTING ROADWAY RESTORATION OF UTILITY TRENCHES IN INTERSECTION	T-02A
TYPICAL BOLLARD INSTALLATION	T-03
DRIVEWAY WIDTHS AND LOCATION	T-04
ADJUSTMENT OF NEW AND EXISTING UTILITY STRUCTURES TO FINISH GRADE	T-05
STREET TREE	T-06
NEIGHBORHOOD DELIVERY AND COLLECTION BOX UNIT (N.D.C.B.U.) INSTALLATION	T-07
NEIGHBORHOOD DELIVERY & COLLECTION BOX UNIT (N.D.C.B.U.) SINGLE UNIT	T-08
NEIGHBORHOOD DELIVERY & COLLECTION BOX UNIT (N.D.C.B.U.) MULTIPLE UNITS	T-09
DOUBLE CENTERLINE WITH RAISED PAVEMENT MARKERS	T-12
CEMENT CONCRETE SIDEWALK WITH LANDSCAPE STRIP	T-13
PERVIOUS CEMENT CONCRETE SIDEWALK	T-14
CEMENT CONCRETE SIDEWALK WITHOUT LANDSCAPE STRIP	T-15
BICYCLE LANE MARKINGS	T-17
LUMINAIRE AND CONDUIT LAYOUT DETAIL	T-18
LUMINAIRE POLE	T-19
UNIFORM LUMINAIRE WIRING DETAIL	T-20
POWER SERVICE CABINET DETAIL	T-21
TRAFFIC SIGNAL CONTROLLER & FOUNDATION DETAIL	T-22
TELECOMMUNICATION AND LUMINAIRE ELECTRICAL TRENCH	T-23
TYPICAL SIGN POST INSTALLATION	T-24

NAME	NUMBER
MAST ARM MOUNTED, STREET NAME SIGN DETAIL	T-25
POST MOUNTED, STREET NAME SIGN DETAIL	T-26
REPAIR OF EXISTING CEMENT CONCRETE PANEL IN ROADWAY	T-27
DOWNTOWN PEDESTRIAN POLE MOUNT LIGHTING STANDARD	T-28,28A,28B
LOCAL RESIDENTIAL ORNAMENTAL STREET LIGHTING STANDARD	T-29
TYPICAL PLAN FOR TREE GRATE	T-30
PRIVATE ACCESS ROAD / SHARED DRIVEWAY	T-31
PRECAST CONCRETE DUAL FACED SLOPED MOUNTABLE CURB RETROFIT	T-32
STANDARD DRIVEWAY - OFFSET APRON	T-34
ALTERNATE DRIVEWAY - INLINE (DROP) APRON	T-35
STREET LIGHTING LAMP SCHEDULE	T-37
DOWNTOWN DECORATIVE TYPE III COMBO LIGHTING & MAST ARM SIGNAL	T-38
DOWNTOWN DECORATIVE LIGHT POLE	T-39
"NO PARKING" SIGN	T-40
CONCRETE TRAFFIC CURB & GUTTER TO HMA WEDGE CURB TRANSITION	T-41
SPEED CUSHION DETAIL	T-42
SPEED CUSHION PLAN	T-42A
DOWNTOWN PEDESTRIAN CROSSWALK	T-43
DOWNTOWN BRICK PAVER BAND	T-44
TYPICAL TRAFFIC BARRICADES	T-45
POURED IN PLACE MONUMENT TYPE A MODIFIED	T-46
CAST-IN-PLACE DUAL MOUNTABLE CEMENT CONCRETE TRAFFIC CURB	T-47
SENSITIVE AREA SIGN COMMERCIAL AQUATIC	T-48
DOWTOWN PEDESTRIAN PUSH BUTTON STANDARDS	T-49
RECTANGULAR RAPID FLASHING BEACON	T-50a, 50b
WSDOT STANDARD PLANS (INCLUDED BY REFERENCE ONLY)	
RAISING BEAM GUARDRAIL DETAIL	C-1
BEAM GUARDRAIL ANCHOR TYPE 2	C-6a
CEMENT CONCRETE CURBS	F-10.12
PARALLEL CURB RAMP	F-40.12
PERPENDICULAR CURB RAMP	F-40.15
SINGLE DIRECTION CURB RAMP	F-40.16
DETECTABLE WARNING SURFACE	F-45.10
CEMENT CONCRETE DRIVEWAY ENTRANCE TYPES 1, 2,3, & 4	F-80.10
LOCKING LID STANDARD JUNCTION BOX TYPES 1 & 2	J-40.10
TYPE 3 BARRICADE	K-80.20
LEFT TURN CHANNELIZATION REDUCED TAPERS	M-3.20
TWO-WAY LEFT TURN AND MEDIAN CHANNELIZATION	M-3.40
DOUBLE LEFT-TURN CHANNELIZATION	M-3.50
RIGHT TURN CHANNELIZATION	M-5.10
BICYCLE LANE SYMBOL LAYOUT	M-9.50

NAME	NUMBER
RAILROAD CROSSING LAYOUT	M-11.10
CROSSWALK LAYOUT	M-15.10
LONGITUDINAL MARKING PATTERNS	M-20.10
SYMBOL MARKINGS - TRAFFIC ARROWS FOR LOW-SPEED ROADWAYS	M-24.40
SANITARY SEWER AND STORM DRAIN DETAILS	
SIDE SEWER STUB	S-01
PRIVATE SANITARY SIDE SEWER CLEAN OUT	S-02
PUBLIC SIDE SEWER CLEANOUT (8" OR LARGER)	S-03
24" DIA. MANHOLE FRAME AND COVER	S-04
RETROFIT EXISTING MANHOLE WITH INSIDE DROP	S-05
EXTRA SHALLOW MANHOLE DETAIL	S-06
MANHOLE AT END OF SANITARY SEWER LINE	S-07
MANHOLE CHANNEL CONSTRUCTION	S-08
FLOW RESTRICTOR	S-09,9a
COVERED CURB OPENING INLET	S-10
WSDOT STANDARD PLANS (INCLUDED BY REFERENCE ONLY)	
CATCH BASIN TYPE 1	B-5.20
CATCH BASIN TYPE 2	B-10.20
MANHOLE TYPE 1	B-15.20
MANHOLE TYPE 2	B-15.40
COMBINATION INLET	B-25.20
CONCRETE INLET	B-25.60
CEMENT CONCRETE CURB AND GUTTER PAN	F-10.16
WATER DETAILS	
WATER MAIN BLOCKING	W-01
TYPICAL AIR AND VACUUM RELIEF VALVE DETAIL	W-02
2" PERMANENT BLOW OFF ASSEMBLY	W-03
TEMPORARY BLOW OFF DETAIL	W-04
WATER SAMPLING STATIONING DETAIL	W-05
3/4" TO 2" IRRIGATION FROM DOMESTIC SERVICE LINE (SINGLE FAMILY)	W-06
5 1/4" M.V.O. HYDRANT SETTING DETAIL	W-07
FIRE HYDRANT LOCATION IN CUT OR FILL W/ GUARD POSTS	W-08
2" FIRE SPRINKLER LINES WITH 3/4" TO 2" DOMESTIC SERVICE LINE	W-09
1" WATER SERVICE INSTALLATION	W-13
1 1/2" & 2" WATER SERVICE	W-14
WATER METER LOCATION & MATERIAL SCHEDULE	W-15
3" OR LARGER WATER METER INSTALLATION	W-16,16a
VALVE WRENCH EXTENSION BOX	W-17
C.I. VALVE BOX TOP & VALVE BOX COVER	W-18
5" C.I. SOIL PIPE VALVE BOX EXTENSION & C.I. VALVE BOX BOTTOM	W-19
NON-SINGLE FAMILY SERVICE LINES	W-20

NAME	NUMBER
TEMP. COMBINATION HYDRANT METER/ REDUCED PRESSURE BACKFLOW ASSY.	W-21
REDUCED PRESSURE BACKFLOW ASSY. (OUTSIDE INSTALLATION)	W-22
REDUCED PRESSURE BACKFLOW ASSY. (INSIDE INSTALLATION)	W-23
DOUBLE CHECK VALVE ASSEMBLY (OUTSIDE INSTALLATION)	W-24
DOUBLE CHECK VALVE ASSEMBLY (INSIDE INSTALLATION)	W-25
PIPE CASING DETAIL	W-26

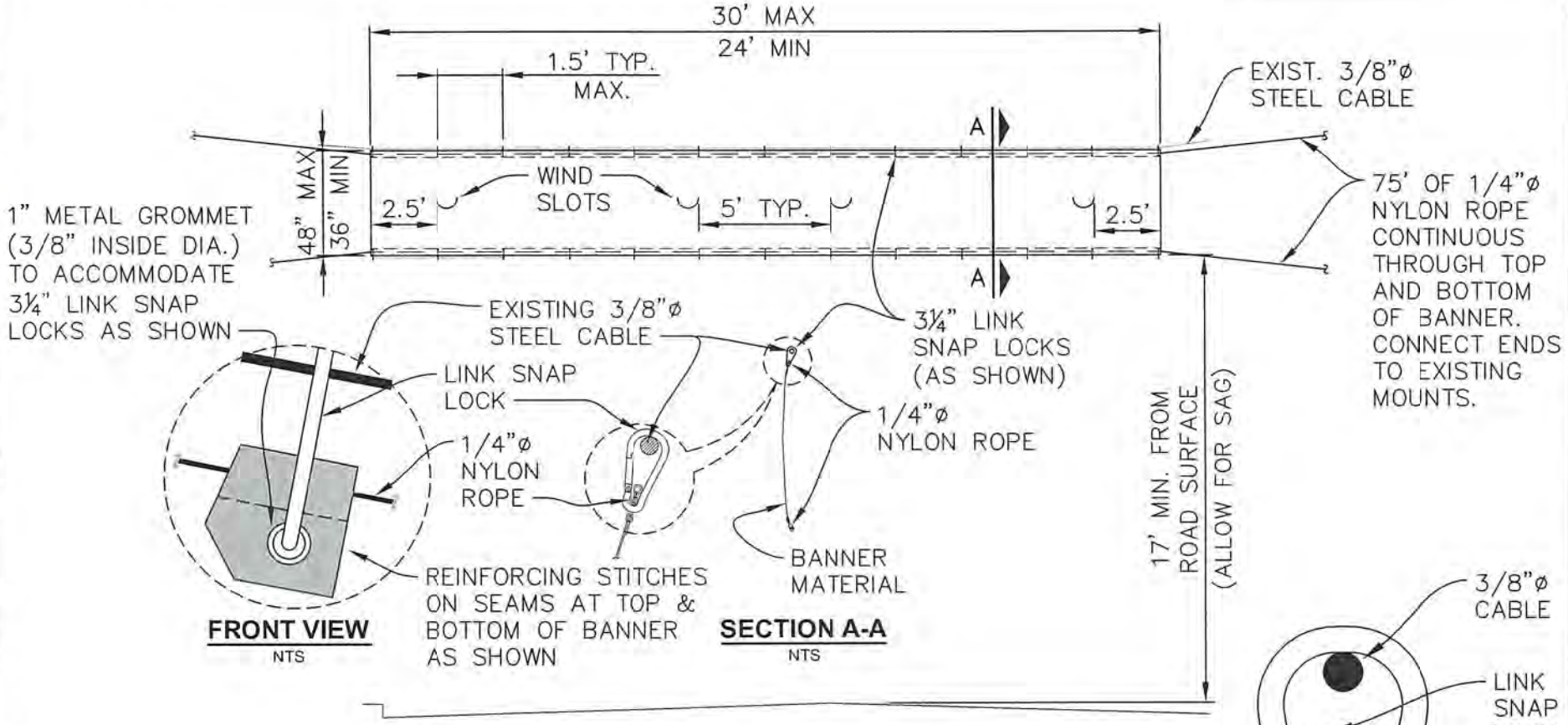
PUBLIC WORKS DEPARTMENT

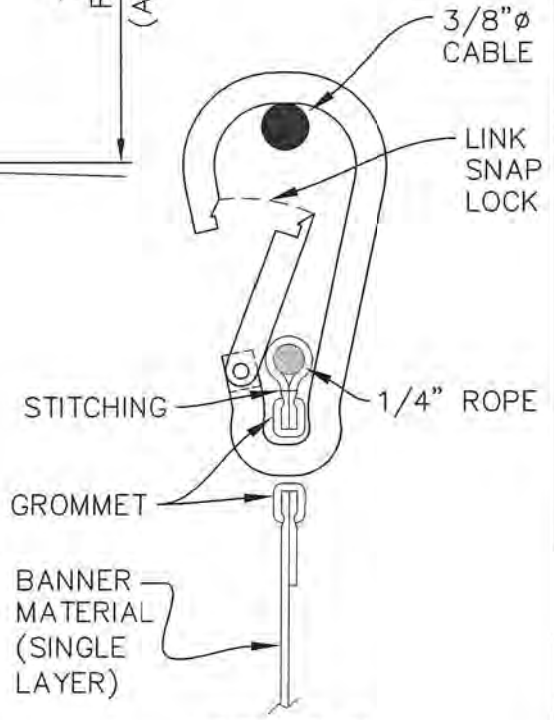
APPROVED BY CITY ENGINEER: Chris Lyons for Kevin 12/26/19 DATE:

CITY OF AUBURN WASHINGTON

BANNER DETAIL

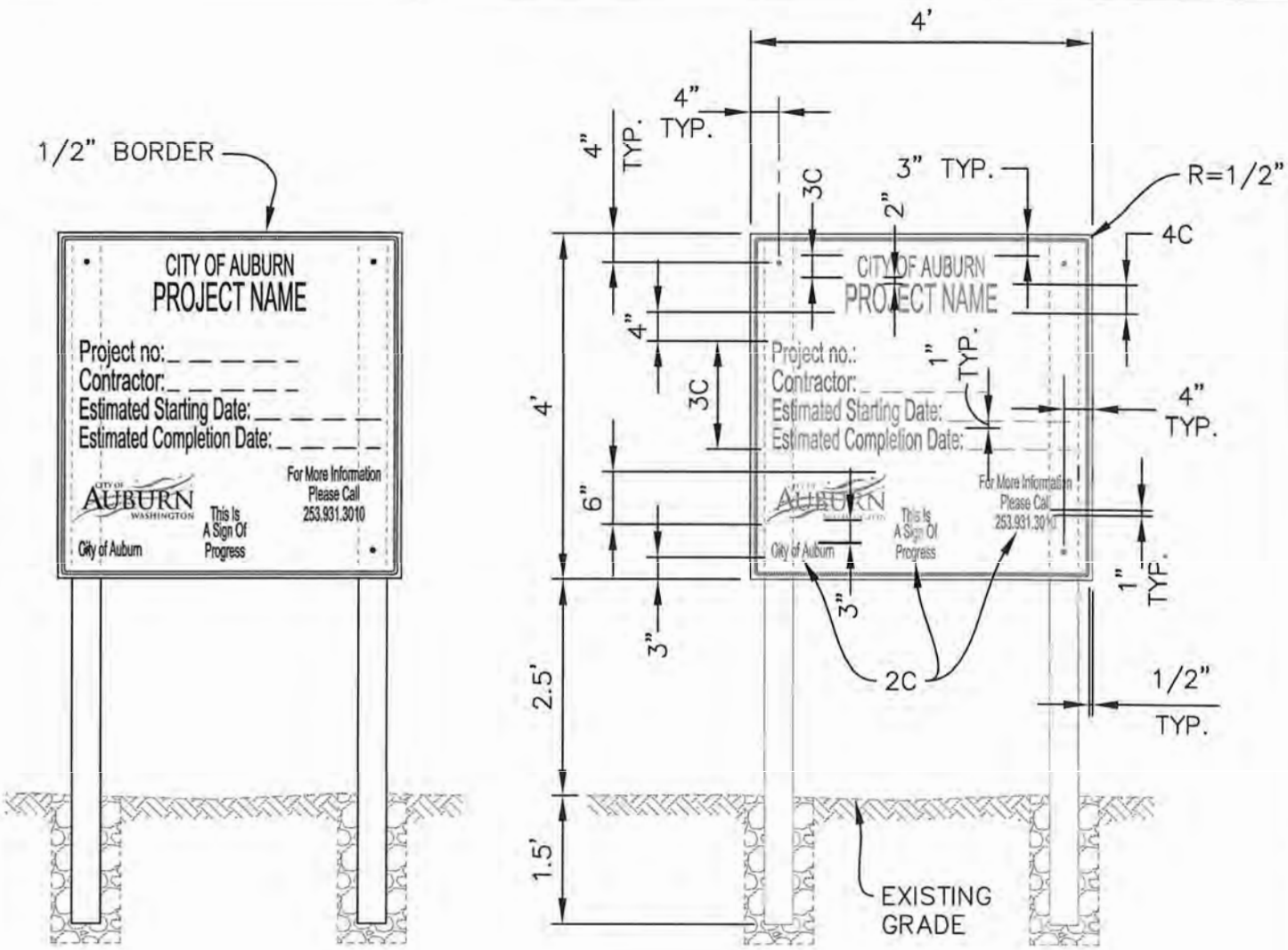
STANDARD DETAIL: G-01.3





NOTES:

1. WIND SLOT SHALL BE 6" DIAMETER HALF CIRCLE, MINIMUM. THEY MAY BE LOCATED IN AREAS WHICH DO NOT DETRACT FROM THE BANNER.
2. WIND SLOTS SHALL BE SPACED ONE SLOT PER 5 FT. OF BANNER LENGTH.
3. BANNER SHALL BE DURABLE TEARING RESISTANT MATERIAL, I.E., NYLON, VINYL, ETC.
4. BANNER SHALL BE CONNECTED TO EXISTING CABLE WITH DETACHABLE 3¼"" LINK SNAP LOCKS AS SHOWN. OTHER METAL RING TYPES WILL NOT BE ACCEPTED. APPLICANT SHALL PROVIDE A MINIMUM OF 40 LINK SNAP LOCKS INSTALLED ON THE TOP AND BOTTOM OF BANNER AS SHOWN (20 ON EACH SIDE). NOT ALL LOCATIONS REQUIRE LINK SNAP LOCKS ON THE BOTTOM. APPLICANT TO VERIFY DURING BANNER APPLICATION SUBMITTAL.
5. REINFORCING STITCHES SHALL BE PROVIDED ON SEAMS AT TOP & BOTTOM OF BANNER.
6. BANNER SHALL BE CONSTRUCTED USING A SINGLE LAYER OF BANNER MATERIAL. DOUBLE SIDED BANNERS SHALL HAVE PRINT ON BOTH SIDES OF THE SINGLE LAYER MATERIAL.
7. BANNER CONSTRUCTION SHALL BE APPROVED BY THE CITY ENGINEER PRIOR TO BANNER BEING DEPLOYED AT THE PERMITTED LOCATION.



CONSTRUCTION NOTES:

1. SIGN BOARD SHALL BE CONSTRUCTED FROM 4'x4'x3/4" EXTERIOR MARINE PLYWOOD.
2. ALL LETTERS AND NUMERALS SHALL BE SERIES C.
3. LETTERING SHALL BE BLACK ON WHITE BACKGROUND USING 3M SCOTCHLITE EC FILM SERIES 1700 OVER 3M DIAMOND GRADE VIP OR BETTER.
4. SIGN AND POSTS SHALL BE PLANTED INTO AN UNYIELDING SOIL AND REINFORCED BY TAMPING GRAVEL OR SMALL ROCKS WHEN NECESSARY TO ASSURE RESISTANCE AGAINST STRONG WIND. BRACING MAY BE REQUIRED AT SOME LOCATIONS AS DIRECTED BY THE ENGINEER.
5. SIGN BOARD SHALL BE FABRICATED AND MOUNTED ON 2 EACH 4"x4"x8' POSTS WITH THE FOLLOWING GALVANIZED FASTENERS AND SIZES AS INDICATED:

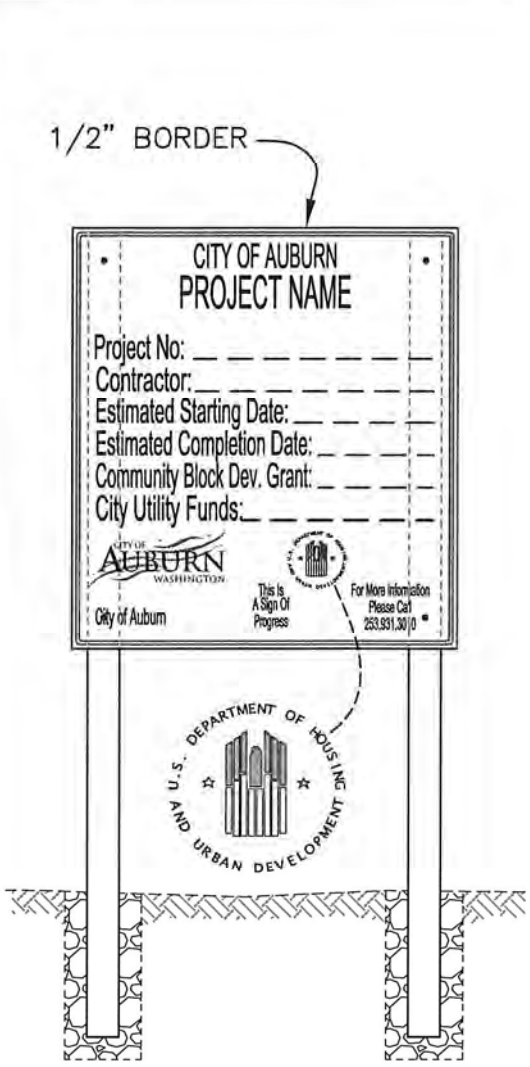
   4 EA. 1/4" DIA.x6"

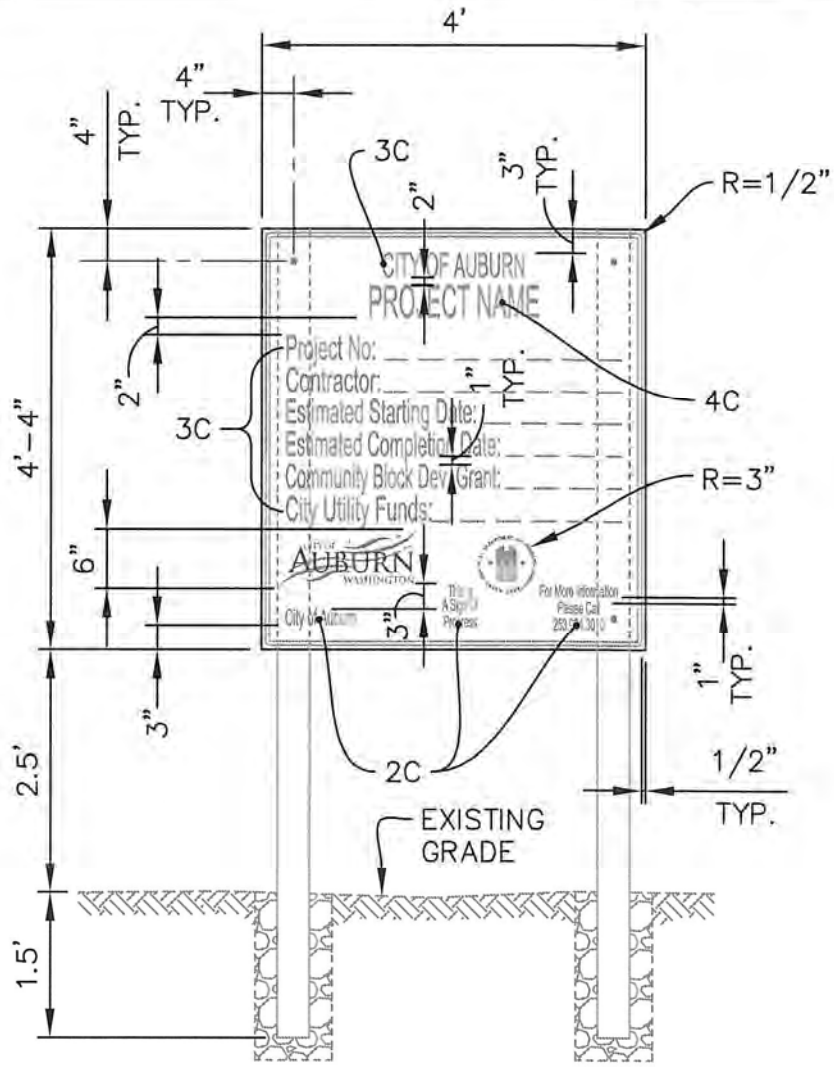
   4 EA. 1/4" NUTS

   8 EA. 1/4" WASHERS

APPROVED BY CITY ENGINEER:	DATE:	CITY OF AUBURN WASHINGTON	TEMPORARY CONSTRUCTION SITE SIGN BOARD (4'x4')
	8/5/2016		
COMMUNITY DEVELOPMENT & PUBLIC WORKS DEPT.			STANDARD DETAIL: G-02.1

Plotted by: Craig Dobyns on 7/13/2016 File location: M:\Construction Standard Details\Approved Drawing Files (dwg)\General\STDETL-G-02.1





CONSTRUCTION NOTES:

1. SIGN BOARD SHALL BE CONSTRUCTED FROM 3/4" EXTERIOR MARINE PLYWOOD.
2. ALL LETTERS AND NUMERALS SHALL BE SERIES C.
3. LETTERING SHALL BE BLACK ON WHITE BACKGROUND USING 3M SCOTCHLITE EC FILM SERIES 1700 OVER 3M DIAMOND GRADE VIP OR BETTER.
4. SIGN AND POSTS SHALL BE PLANTED INTO AN UNYIELDING SOIL AND REINFORCED BY TAMPING GRAVEL OR SMALL ROCKS WHEN NECESSARY TO ASSURE RESISTANCE AGAINST STRONG WIND. BRACING MAY BE REQUIRED AT SOME LOCATIONS AS DIRECTED BY THE ENGINEER.
5. SIGN BOARD SHALL BE FABRICATED AND MOUNTED ON 2 EACH 4"x4"x8' POSTS WITH THE FOLLOWING GALVANIZED FASTENERS AND SIZES AS INDICATED:

   4 EA. 1/4" DIA.x6"

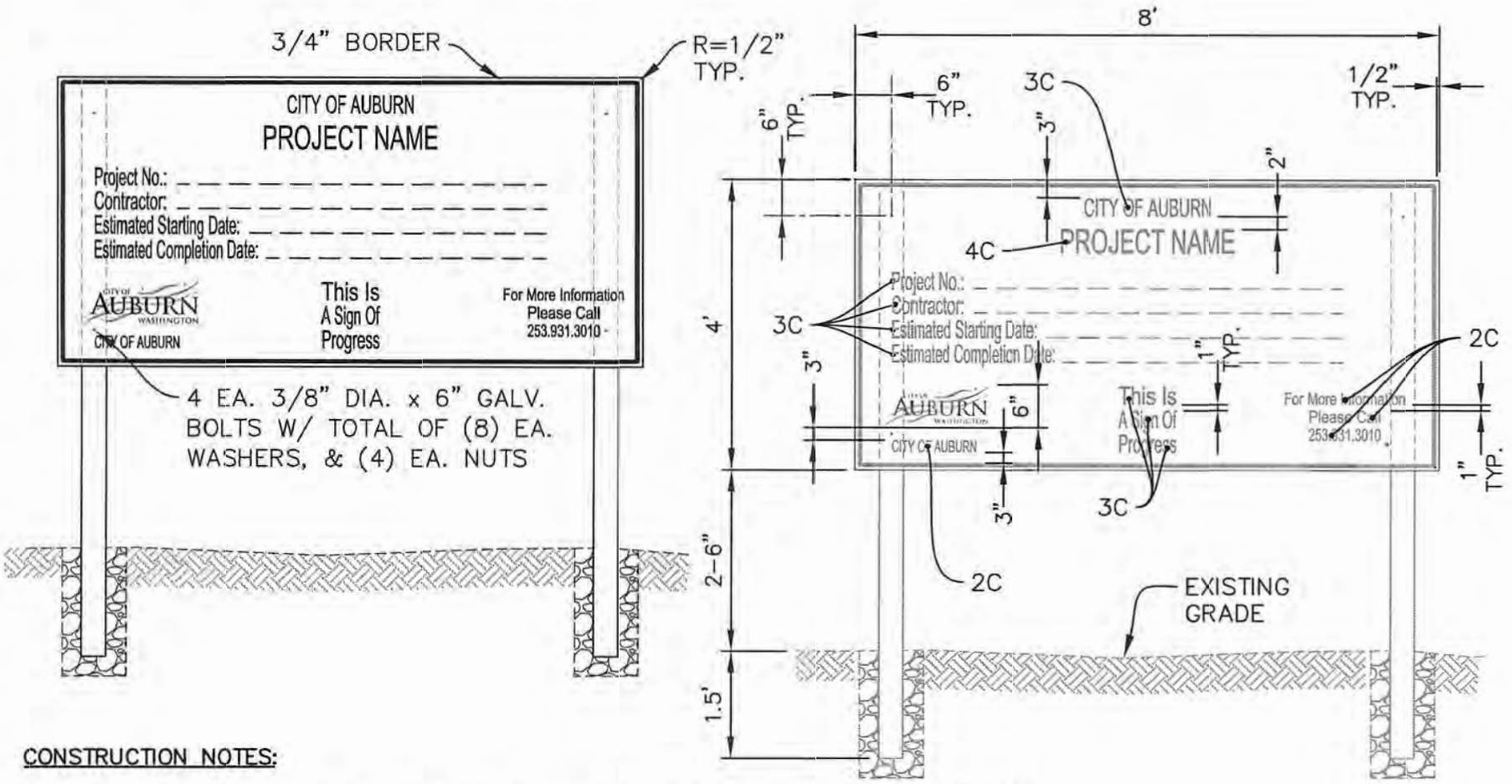
   4 EA. 1/4" NUTS

   8 EA. 1/4" WASHERS

APPROVED BY CITY ENGINEER:	DATE:	CITY OF AUBURN WASHINGTON	TEMPORARY H.U.D. CONSTRUCTION SITE SIGN BOARD (4'x4')
	8/5/2016		
COMMUNITY DEVELOPMENT & PUBLIC WORKS DEPT.			STANDARD DETAIL: G-04.1

Plotted by: Craig Dobyns on 7/13/2016 File location: W:\Construction Standard Details\Approved Drawing Files (dwg)\General\STDETL-G-04.1

Plotted by: Craig Dobyns on 7/13/2016 File location: M:\Construction Standard Details\Approved Drawing Files (dwg)\General\STDETL-G-05.1



CONSTRUCTION NOTES:

1. SIGN BOARD SHALL BE CONSTRUCTED FROM 4'x4'x3/4" EXTERIOR MARINE PLYWOOD.
2. ALL LETTERS AND NUMERALS SHALL BE SERIES C.
3. LETTERING SHALL BE BLACK ON WHITE BACKGROUND USING 3M SCOTCHLITE EC FILM SERIES 1700 OVER 3M DIAMOND GRADE VIP OR BETTER.
4. SIGN AND POSTS SHALL BE PLANTED INTO AN UNYIELDING SOIL AND REINFORCED BY TAMPING GRAVEL OR SMALL ROCKS WHEN NECESSARY TO ASSURE RESISTANCE AGAINST STRONG WIND. BRACING MAY BE REQUIRED AT SOME LOCATIONS AS DIRECTED BY THE ENGINEER.
5. SIGN BOARD SHALL BE FABRICATED AND MOUNTED ON 2 EACH 4"x4"x8' POSTS WITH THE FOLLOWING GALVANIZED FASTENERS AND SIZES AS INDICATED:

   4 EA. 3/8" DIA.x6"
   4 EA. 3/8" NUTS
   8 EA. 3/8" WASHERS

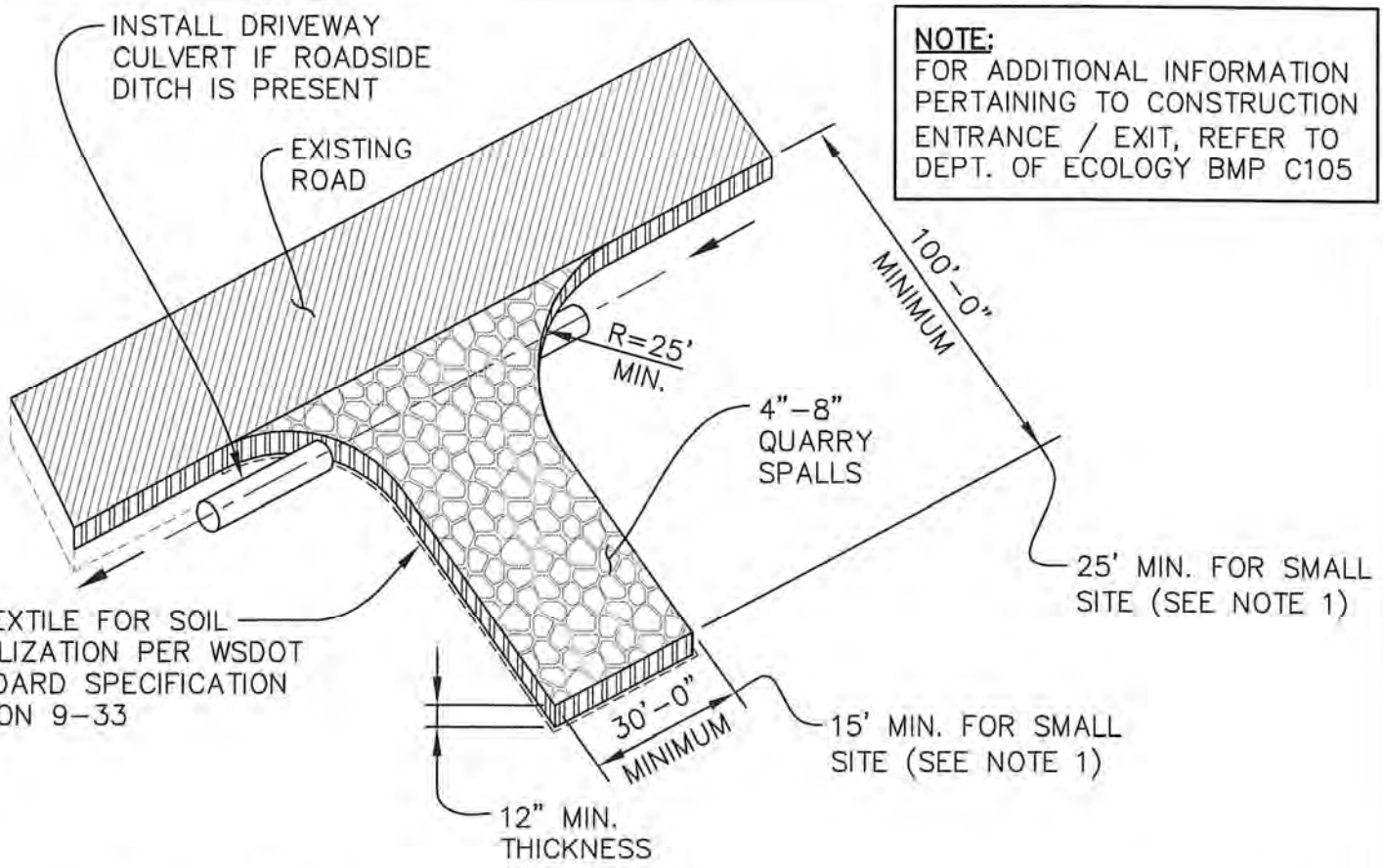
APPROVED BY CITY ENGINEER: [signature] DATE: 8/15/2016

COMMUNITY DEVELOPMENT & PUBLIC WORKS DEPT.

CITY OF AUBURN WASHINGTON

TEMPORARY CONSTRUCTION SITE SIGN BOARD (8'x4')

STANDARD DETAIL: G-05.1



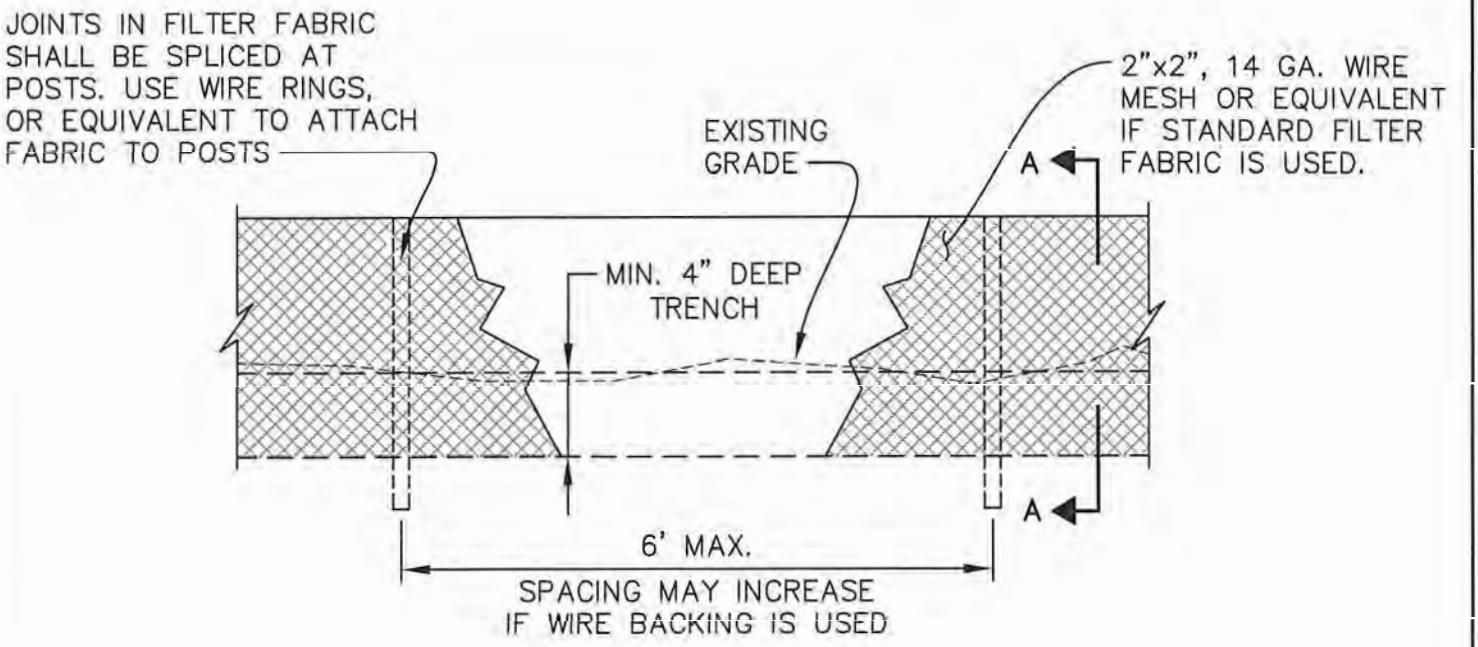
NOTE:
FOR ADDITIONAL INFORMATION PERTAINING TO CONSTRUCTION ENTRANCE / EXIT, REFER TO DEPT. OF ECOLOGY BMP C105

MAINTENANCE STANDARDS:

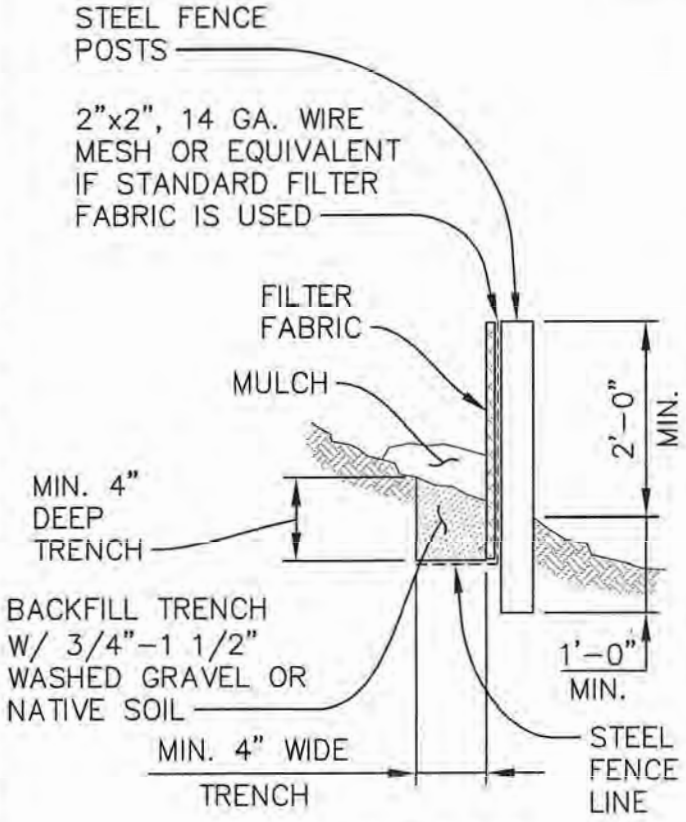
1. SMALL SITE IS DEFINED AS A SITE THAT ADDS OR REPLACES LESS THAN 5,000 SQUARE FEET OF IMPERVIOUS SURFACE & DISTURBS LESS THAN ONE ACRE.
2. QUARRY SPALLS PLUS WOVEN GEOTEXTILE FABRIC UNDER ROCK SHALL BE ADDED AS NEEDED TO KEEP THE ENTRANCE IN CONFORMANCE WITH THESE STANDARDS.
3. IF THE ENTRANCE IS NOT PREVENTING SEDIMENT FROM BEING TRACKED ONTO PAVEMENT, THEN ALTERNATIVE MEASURES TO KEEP THE STREETS FREE OF SEDIMENT SHALL BE USED. THIS MAY INCLUDE SHOVELING, PICKUP SWEEPING, & HAND SWEEPING, AN INCREASE IN THE ENTRANCE DIMENSIONS, OR THE INSTALLATION OF A SELF-CONTAINED WHEEL WASH STATION, (REFER TO DOE BMP C-106 FOR MORE INFORMATION).
4. ANY SEDIMENT THAT IS TRACKED ONTO STREET PAVEMENT SHALL BE REMOVED IMMEDIATELY BY SHOVELING, PICKUP SWEEPING, & HAND SWEEPING. THE SEDIMENT COLLECTED BY SWEEPING SHALL BE REMOVED OR STABILIZED ONSITE. PAVEMENT SHALL NOT BE CLEANED BY WASHING DOWN THE STREET, EXCEPT WHEN SWEEPING IS INEFFECTIVE & THERE IS A THREAT TO PUBLIC SAFETY. IF IT IS NECESSARY TO WASH THE STREETS, A CONSTRUCTION OF A SMALL SUMP SHALL BE CONSIDERED. SEDIMENT WOULD THEN BE WASHED INTO THE SUMP.
5. ANY ROCK SPALLS THAT ARE LOOSENED FROM THE DRIVEWAY PAD & ONTO THE ROADWAY SHALL BE REMOVED IMMEDIATELY. VACTOR TRUCK MUST BE USED TO CLEAN CATCH BASIN IF IT BECOMES PLUGGED.
6. VEHICLES SHALL NOT ENTER OR EXIT THE SITE OTHER THAN THE CONSTRUCTION ENTRANCE(S).
7. REMOVE TEMPORARY CONSTRUCTION ENTRANCE/EXIT UPON COMPLETION OF THE ON-SITE WORK.

APPROVED BY CITY ENGINEER:	DATE:	CITY OF AUBURN WASHINGTON	TEMPORARY CONSTRUCTION ENTRANCE / EXIT
	8/5/2016		
COMMUNITY DEVELOPMENT & PUBLIC WORKS DEPT.			STANDARD DETAIL: E-01.1

Plotted by: Craig Dobyns on 7/13/2016 File location: M:\Construction Standard Details\Approved Drawing Files (dwg)\Erosion Control\STDETL-E-01.1



SILT FENCE
NOT TO SCALE



SECTION A-A
NOT TO SCALE

MAINTENANCE STANDARDS:

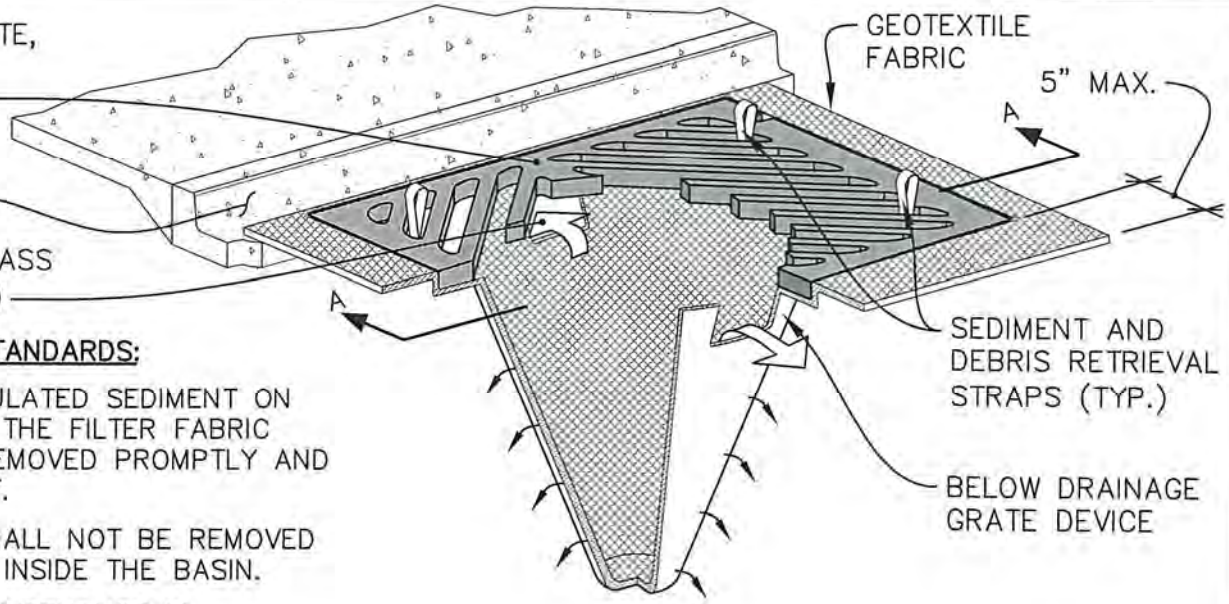
1. INSPECT WEEKLY ON ACTIVE SITES, MONTHLY ON INACTIVE SITES, & AFTER EACH STORM EVENT TO VERIFY PROTECTION IS STILL ADEQUATE. ANY DAMAGE SHALL BE REPAIRED IMMEDIATELY.
2. IF CONCENTRATED FLOWS ARE EVIDENT UPHILL OF THE FENCE, THEY MUST BE INTERCEPTED AND CONVEYED TO A SEDIMENT POND.
3. THE UPHILL SIDE OF THE FENCE SHALL BE PERIODICALLY CHECKED FOR SIGNS OF CLOGGING CAUSING CHANNELIZATION OF THE FLOWS PARALLEL TO THE FENCE. IN SUCH CASE, REPLACE THE FENCE AND OR REMOVE THE TRAPPED DEBRIS AND SEDIMENT.
4. SEDIMENT AND DEBRIS BUILD UP MUST BE REMOVED WHEN 6" HIGH.
5. REMOVE AND REPLACE DETERIORATED FILTER FABRIC DUE TO ULTRAVIOLET BREAKDOWN.
6. UPON COMPLETION OF WORK AND WHEN ALLOWED BY THE CITY OF AUBURN, THE CONTRACTOR SHALL REMOVE ALL FILTER FABRIC FENCE AND GRAVEL. PROVIDE FINISH GRADES WITH SURFACING MATERIAL AND LANDSCAPING AS REQUIRED.

NOTES:

1. FILTER FABRIC FENCES SHALL BE INSTALLED ALONG CONTOUR WHENEVER POSSIBLE.
2. FOR ADDITIONAL TECHNICAL INFORMATION, REFER TO WSDOE BMP C233.

APPROVED BY CITY ENGINEER:	DATE:	CITY OF AUBURN WASHINGTON	SILT CONTROL FENCE
[signature]	8/5/2016		
COMMUNITY DEVELOPMENT & PUBLIC WORKS DEPT.		STANDARD DETAIL:	E-02.1

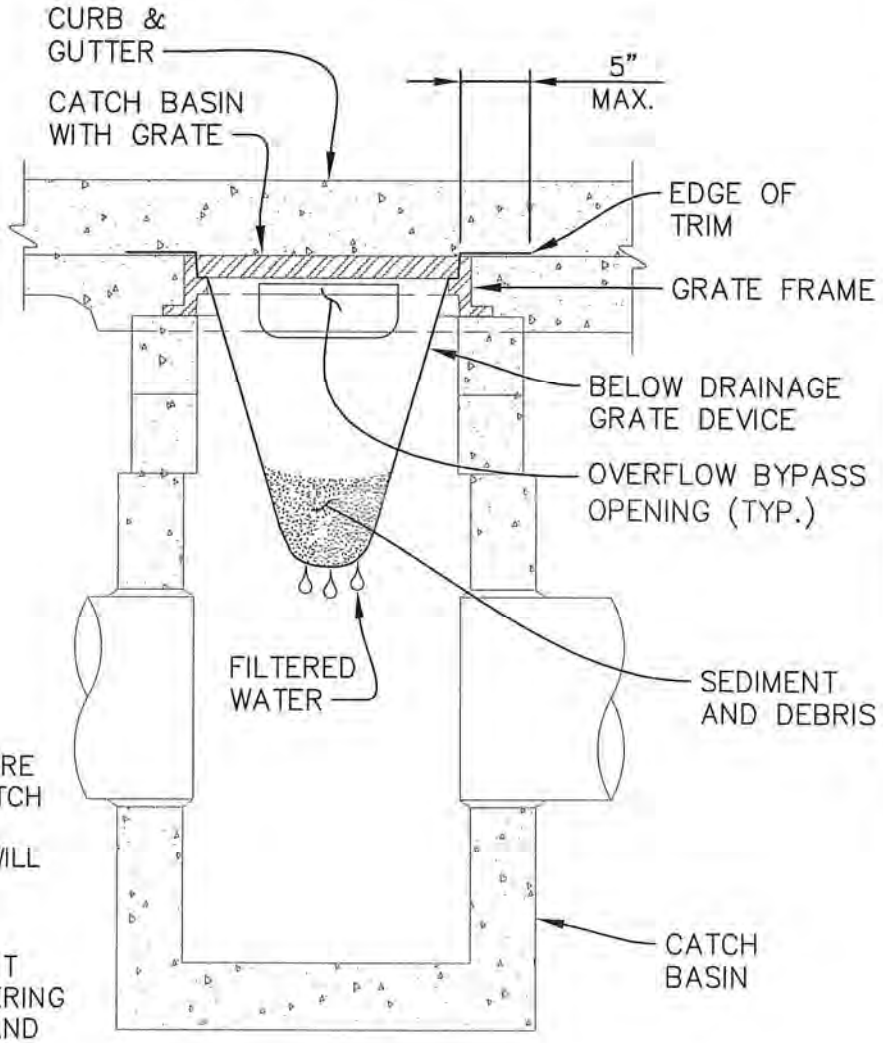
Plotted by: Craig Dobyns on 7/13/2016 File location: M:\Construction Standard Details\Approved Drawing Files (dwg)\Erosion Control\STDETL-E-02.1



SCHEMATIC DETAIL VIEW
NOT TO SCALE

MAINTENANCE STANDARDS:

1. ANY ACCUMULATED SEDIMENT ON OR AROUND THE FILTER FABRIC SHALL BE REMOVED PROMPTLY AND DISPOSED OF.
2. SEDIMENT SHALL NOT BE REMOVED WITH WATER INSIDE THE BASIN.
3. REGULAR MAINTENANCE IS REQUIRED. INSPECT WEEKLY ON ACTIVE SITES, MONTHLY ON INACTIVE SITES, & AFTER EACH STORM EVENT TO VERIFY PROTECTION IS STILL ADEQUATE. REPLACE AS NEEDED.
4. ANY SEDIMENT IN THE CATCH BASIN INSERT SHALL BE REMOVED WHEN IT HAS FILLED 1/3 OF THE STORAGE CAPACITY OF THE FILTER DEVICE.
5. THE GEOTEXTILE FABRIC FILTER MEDIA SHALL BE INSPECTED AFTER EACH STORM EVENT & CLEANED OR REPLACED WHEN 1/3 OF STORAGE CAPACITY IS REACHED, OR MONTHLY, UNDER NORMAL WEATHER CONDITIONS, WHICHEVER OCCURS FIRST.
6. REMOVE CATCH BASIN INLET PROTECTION DEVICE UPON COMPLETION OF THE WORK.



SECTION A–A
NOT TO SCALE

NOTES:

1. THIS DEVICE IS APPLICABLE TO WHERE PONDING OF WATER ABOVE THE CATCH BASIN WILL NOT CAUSE TRAFFIC PROBLEMS AND WHERE OVERFLOW WILL NOT RESULT
2. THIS INSERT DEVICE SHALL HAVE A MINIMUM OF 0.5 C.F. OF STORAGE. IT SHALL ALSO PROVIDE FOR DE-WATERING STORED SEDIMENT, AN OVERFLOW, AND EASE OF MAINTENANCE.
3. FOR ADDITIONAL TECHNICAL INFORMATION, REFER TO WSDOE BMP C220.

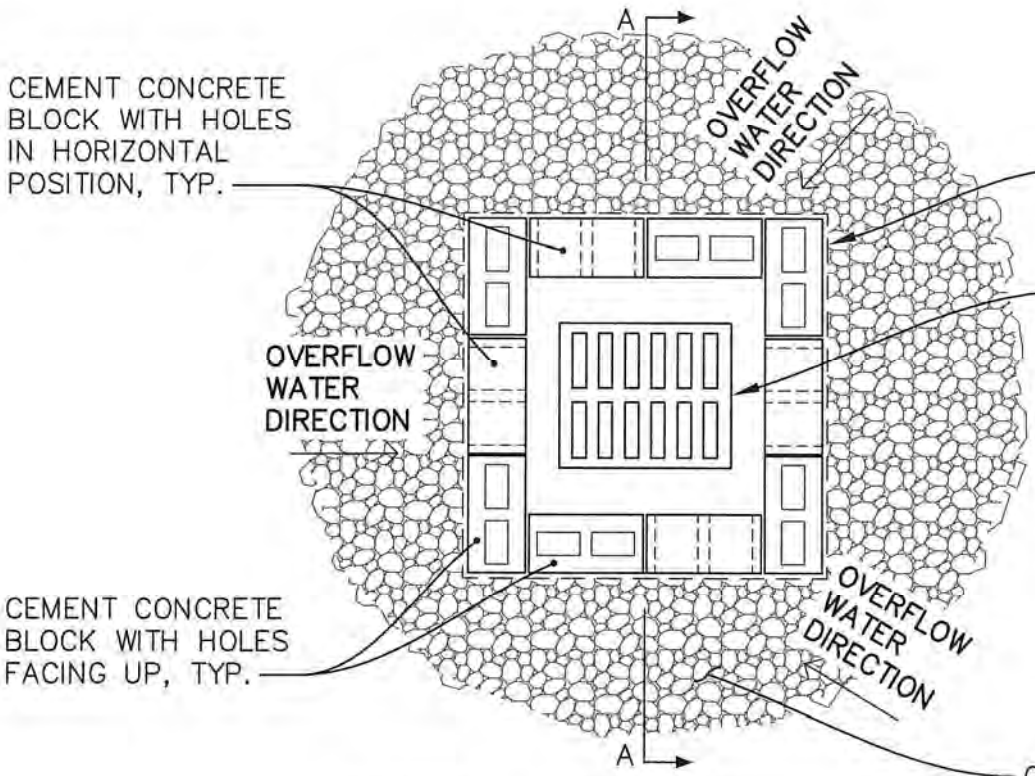
APPROVED BY CITY ENGINEER: DATE: 2/20/2018

CITY OF AUBURN WASHINGTON

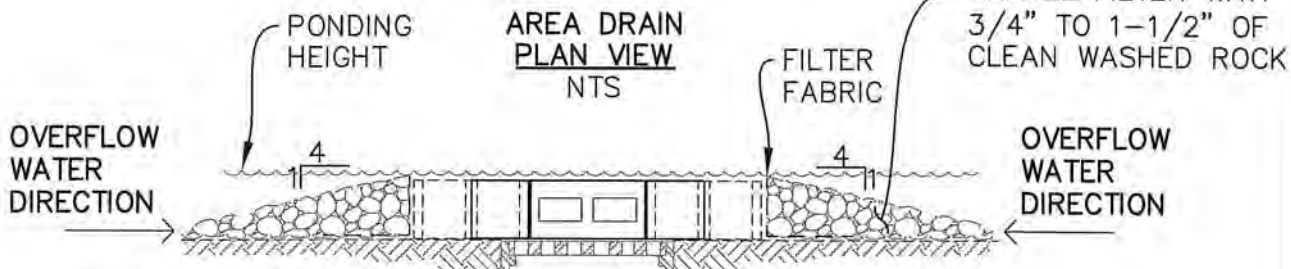
CATCH BASIN INLET PROTECTION

COMMUNITY DEVELOPMENT & PUBLIC WORKS DEPT. STANDARD DETAIL: E-03.2

Plotted by: Craig Dobyns on 2/2/2018 File location: M:\Construction Standard Details\Current Working DWG\Erosion Control\STDETL-E-03.2

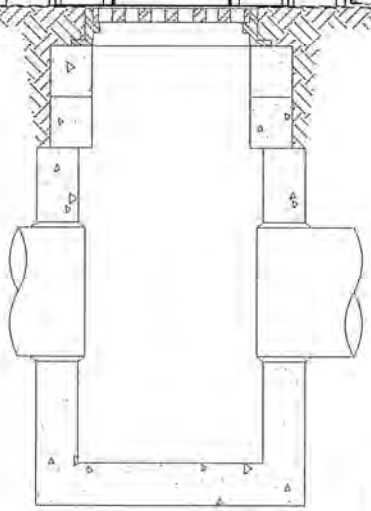


AREA DRAIN
PLAN VIEW
NTS

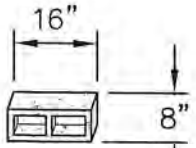


MAINTENANCE STANDARDS:

1. ANY ACCUMULATED SEDIMENT ON OR AROUND THE GRAVEL FILTER SHALL BE REMOVED PROMPTLY AND DISPOSED OF.
2. SEDIMENT SHALL NOT BE REMOVED WITH WATER INSIDE THE CATCH BASIN.
3. INSPECT WEEKLY ON ACTIVE SITES, MONTHLY ON INACTIVE SITES, & AFTER EACH STORM EVENT TO VERIFY PROTECTION IS STILL ADEQUATE. REPLACE AS NEEDED.
4. REMOVE CATCH BASIN PROTECTION UPON COMPLETION OF PROJECT.
5. THIS DETAIL IS APPLICABLE ONLY WHERE PAVEMENT DOES NOT EXIST AROUND THE CATCH BASIN.



SECTION A-A
NTS



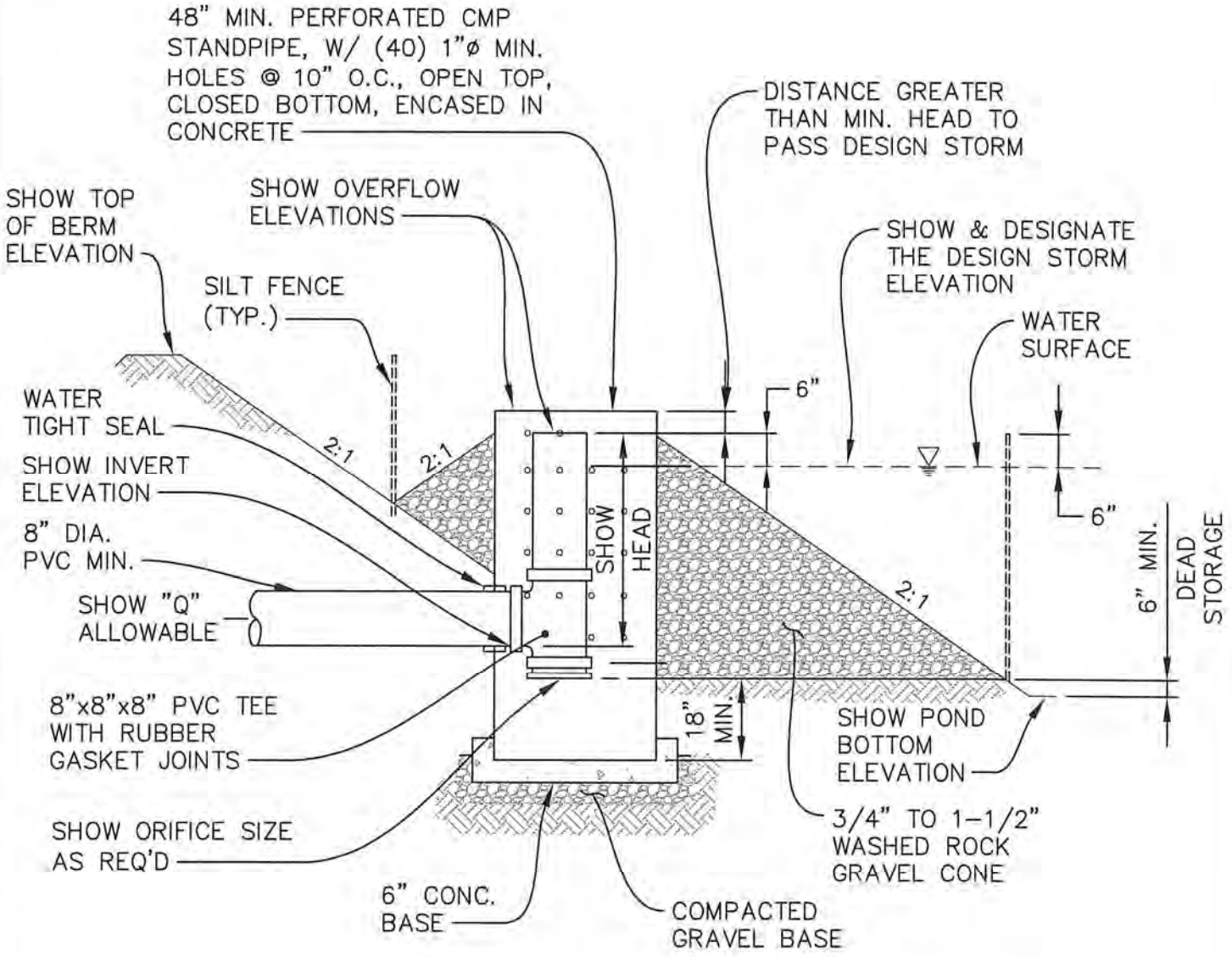
TYPICAL CEMENT CONCRETE BLOCK
NTS

NOTES:

1. BASIN INLET IN SOME AREAS MAY REQUIRE (2) STACKS OF CEMENT CONCRETE BLOCKS, AS DIRECTED BY THE ENGINEER.
2. FOR ADDITIONAL TECHNICAL INFORMATION, REFER TO WSDOE BMP C220.

APPROVED BY CITY ENGINEER:	DATE:	CITY OF AUBURN WASHINGTON	ALTERNATE CATCH BASIN INLET PROTECTION
[signature]	2/20/2018		
COMMUNITY DEVELOPMENT & PUBLIC WORKS DEPT.			STANDARD DETAIL: E-04.2

Plotted by: Craig Dobyns on 1/23/2018 File location: M:\Construction Standard Details\Current Working DWG\Erosion Control\STDETL-E-04.2

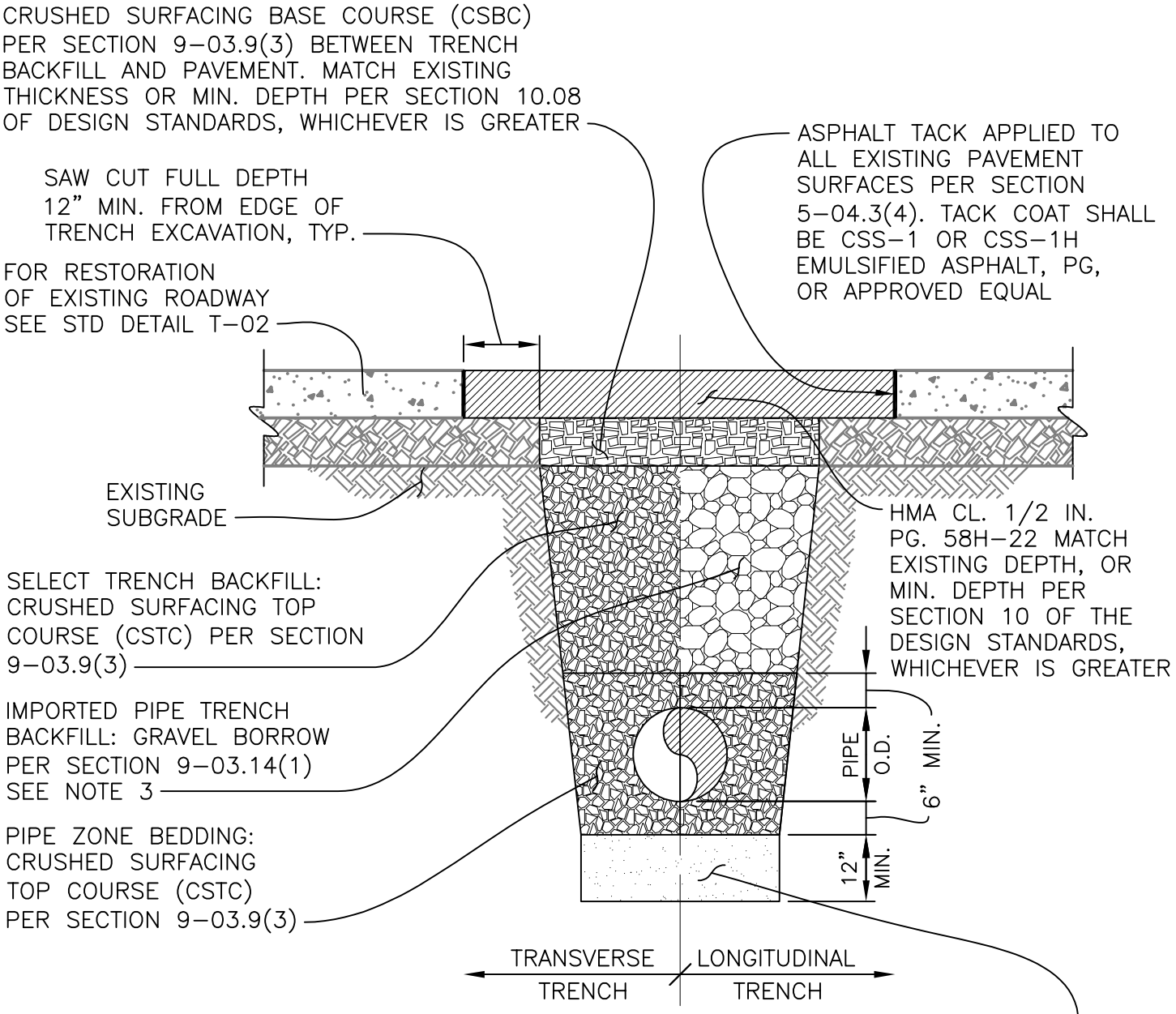


NOTES:

1. PROVIDE A RIP RAP LINED SPILLWAY, 6" MINIMUM ABOVE STANDPIPE, OPEN TOP.
2. A MULTIPLE PHASE POND SEPARATED BY PERVIOUS GRAVEL WINDOW MAY BE REQUIRED TO CONTROL AND TRAP SEDIMENT, AND TO REDUCE DISCHARGE ENERGY.
3. POND CHARACTERISTICS SUCH AS DESIGN VOLUME, INFLOW, OUTFLOW, AND MAXIMUM HEAD SHALL BE SHOWN ON PLANS.
4. THE OUTLET PIPE SHALL BE A MINIMUM OF 8" DIAMETER.
5. INDICATE SEASONAL HIGH GROUND WATER ELEVATION.
6. THIS DETAIL IS FOR DESIGN GUIDANCE ONLY, THE ENGINEER IS RESPONSIBLE FOR PROVIDING THE NECESSARY ELEVATIONS AND ORIFICE SIZES.
7. REFER TO WSDOE BMP 220 FOR ADDITIONAL INFORMATION.

APPROVED BY CITY ENGINEER:	DATE:	CITY OF AUBURN WASHINGTON	GRADING/EROSION DISCHARGE CONTROL STRUCTURE
	8/5/2016		
COMMUNITY DEVELOPMENT & PUBLIC WORKS DEPT.		STANDARD DETAIL:	E-05.1

Plotted by: Craig Dobyns on 7/13/2018 File location: M:\Construction Standard Details\Approved Drawing Files (dwg)\Erosion Control\STDETL-E-05.1

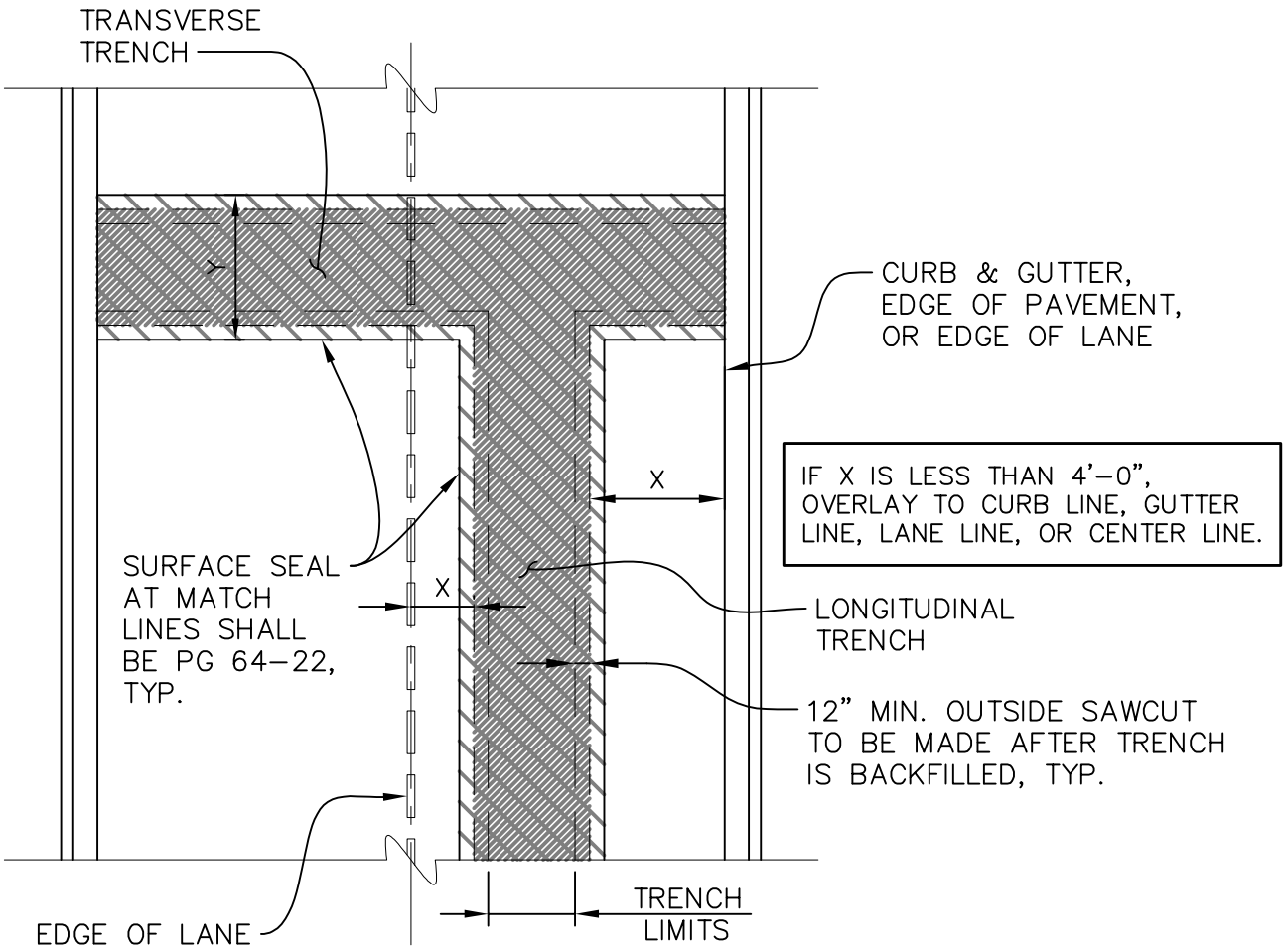


NOTES:

1. TRANSVERSE TRENCHES ARE TRENCHES THAT RUN PERPENDICULAR OR DIAGONAL ACROSS THE TRAVELED WAY OF THE ROAD. LONGITUDINAL TRENCHES ARE TRENCHES THAT RUN PARALLEL WITH THE TRAVELED WAY OF THE ROAD.
2. ALL BACKFILL SHALL BE COMPACTED TO 95% MAXIMUM DENSITY.
3. MAY USE NATIVE MATERIAL FOR LONGITUDINAL TRENCH BACKFILL IF MATERIAL MEETS REQUIREMENTS OF SECTION 9-03.14(1).

APPROVED BY CITY ENGINEER: Jacob Sweeting	DATE: 2/7/24	CITY OF AUBURN WASHINGTON	TYPICAL PIPE TRENCH BACKFILL
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: T-01.6

Plotted by: Craig Dobyns on 1/10/2024 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-01.6



TYPE OF STREET	Y
PRINCIPAL ARTERIAL	50'
MINOR ARTERIAL	40'
COLLECTOR	30'
LOCAL	20'

LEGEND:

GRIND & OVERLAY (2" MIN. DEPTH, 4' MIN. WIDTH)

FULL PAVEMENT DEPTH REPLACEMENT (SEE STD. DTL. T–01)

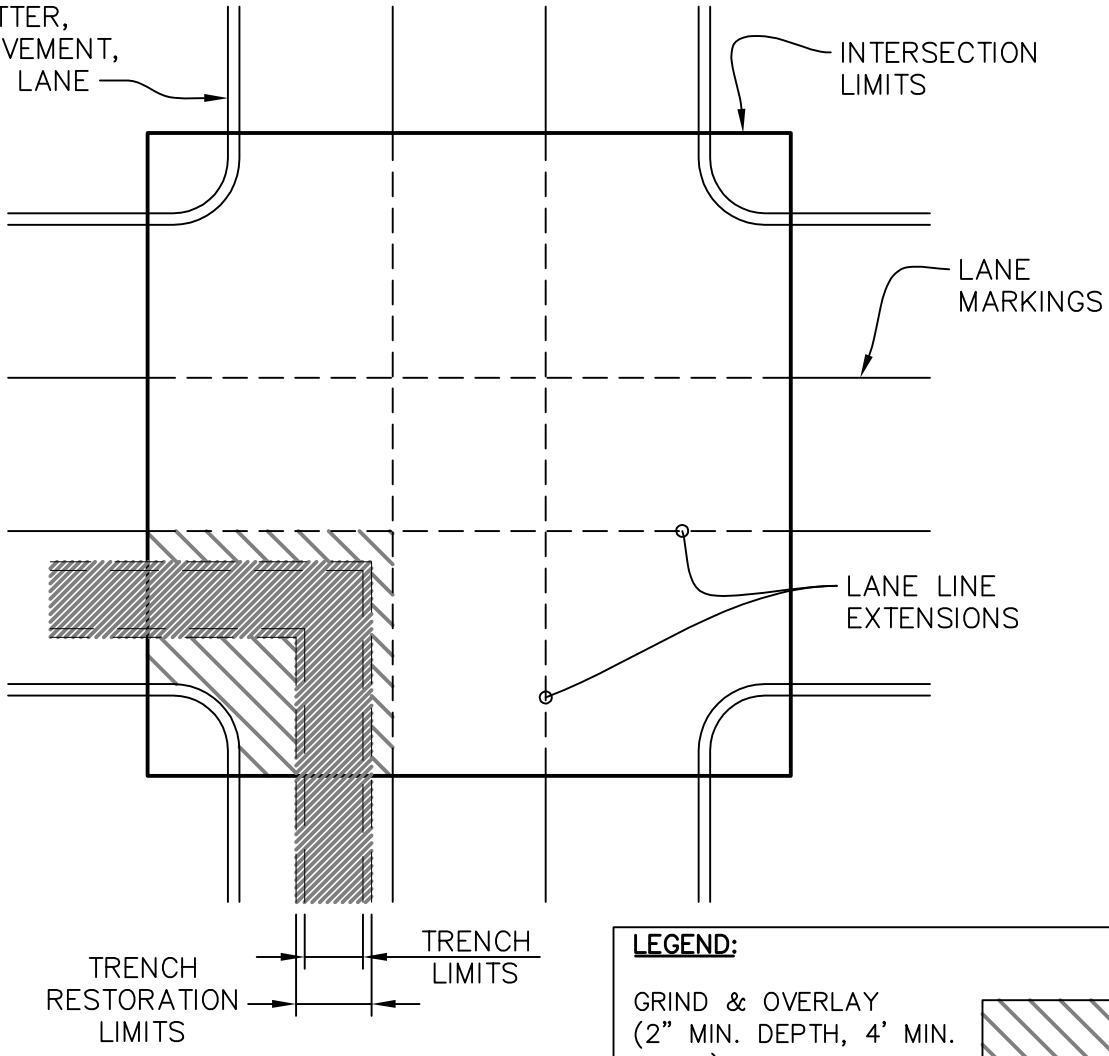
FULL DEPTH SAWCUT

NOTES:

1. ADDITIONAL RESTORATION OVERLAY MAY BE REQUIRED AS DIRECTED BY ENGINEER.
2. TRENCHES IN/ACROSS INTERSECTIONS SHALL BE RESTORED PER T–02A.
3. PAVEMENT SECTION SHALL MATCH EXISTING PAVEMENT THICKNESS AND GRADE, OR PER SECTION 10.05 OF THE DESIGN STANDARDS, WHICHEVER IS THICKER/STRONGER.
4. WHERE THE TRENCH CROSSES A CROSSWALK/PEDESTRIAN PATH AND THE TOTAL RESTORATION WIDTH EQUALS OR EXCEEDS HALF THE PEDESTRIAN PATH LENGTH, THE CONTRACTOR SHALL UPGRADE EXISTING CURB RAMPS THAT DO NOT MEET CURRENT ADA STANDARDS OR INSTALL NEW CURB RAMPS IF NOT PRESENT.

APPROVED BY CITY ENGINEER:	DATE:		EXISTING ROADWAY RESTORATION OF UTILITY TRENCHES
Jacob Sweeting	2/9/2023	CITY OF AUBURN WASHINGTON	
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: T–02.5

Plotted by: Craig Dobyns on 1/6/2022 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL–T–02.4



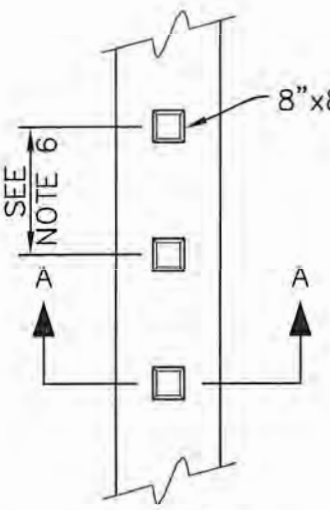
3

NOTES:

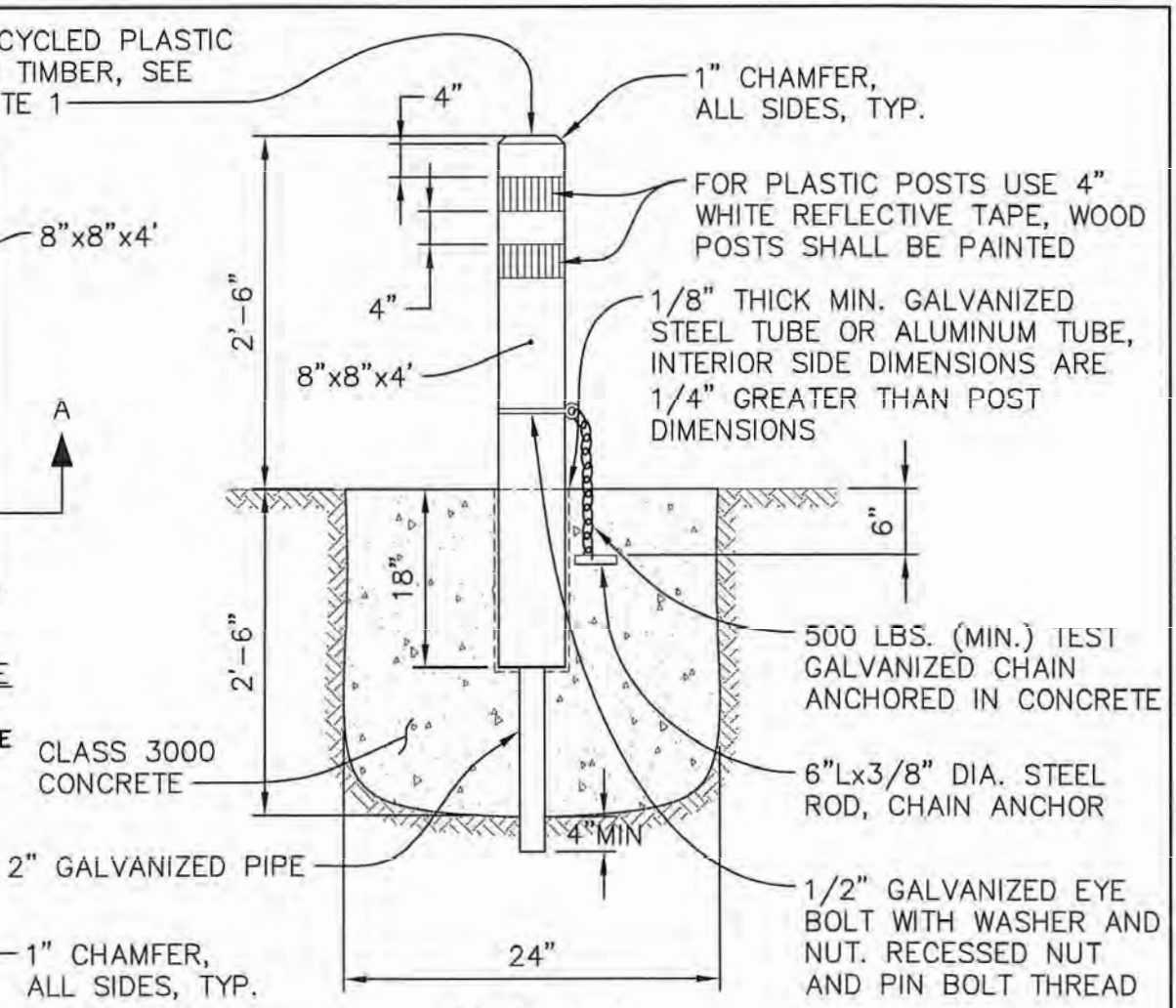
1. ADDITIONAL RESTORATION OVERLAY MAY BE REQUIRED AS DIRECTED BY ENGINEER.
2. PAVEMENT SECTION SHALL MATCH EXISTING PAVEMENT THICKNESS AND GRADE, OR PER SECTION 10.05 OF THE DESIGN STANDARDS, WHICHEVER IS THICKER/STRONGER.
3. WHERE NO LANE MARKINGS EXIST, THE INTERSECTION SHALL BE BROKEN INTO FOUR QUADRANTS.
4. WHENEVER TRENCH RESTORATION LIMITS CROSS INTO LANE LINE EXTENSION SECTION(S) OR QUADRANTS(S), GRIND AND OVERLAY RESTORATION LIMITS SHALL INCLUDE THE FULL EXTENT OF EACH SECTION OR QUADRANT THE IMPROVEMENTS IMPACT.
5. WHERE THE TRENCH CROSSES A CROSSWALK/PEDESTRIAN PATH AND THE TOTAL RESTORATION WIDTH EQUALS OR EXCEEDS HALF THE PEDESTRIAN PATH LENGTH, THE CONTRACTOR SHALL UPGRADE EXISTING CURB RAMPS THAT DO NOT MEET CURRENT ADA STANDARDS OR INSTALL NEW CURB RAMPS IF NOT PRESENT.
6. TRENCH BACKFILL SHALL CONFORM TO STD DETAIL T-01.

APPROVED BY CITY ENGINEER: Jacob Sweeting	DATE: 2/9/2023	CITY OF AUBURN WASHINGTON	EXISTING ROADWAY RESTORATION OF UTILITY TRENCHES IN INTERSECTION
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: T-02A.3

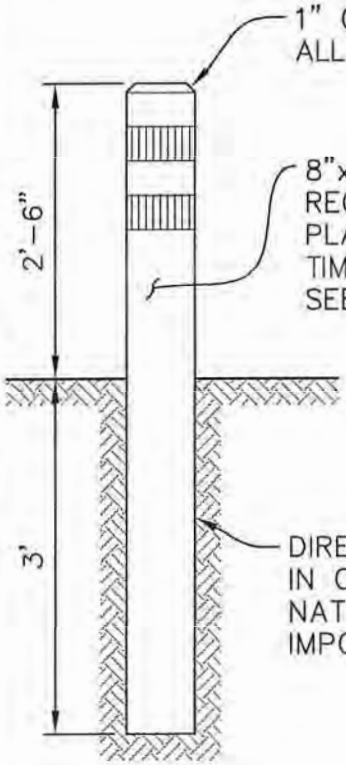
Plotted by: Craig Dobyns on 1/6/2022 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-02A.2



REMOVABLE BOLLARD
NOT TO SCALE



SECTION A–A
NOT TO SCALE



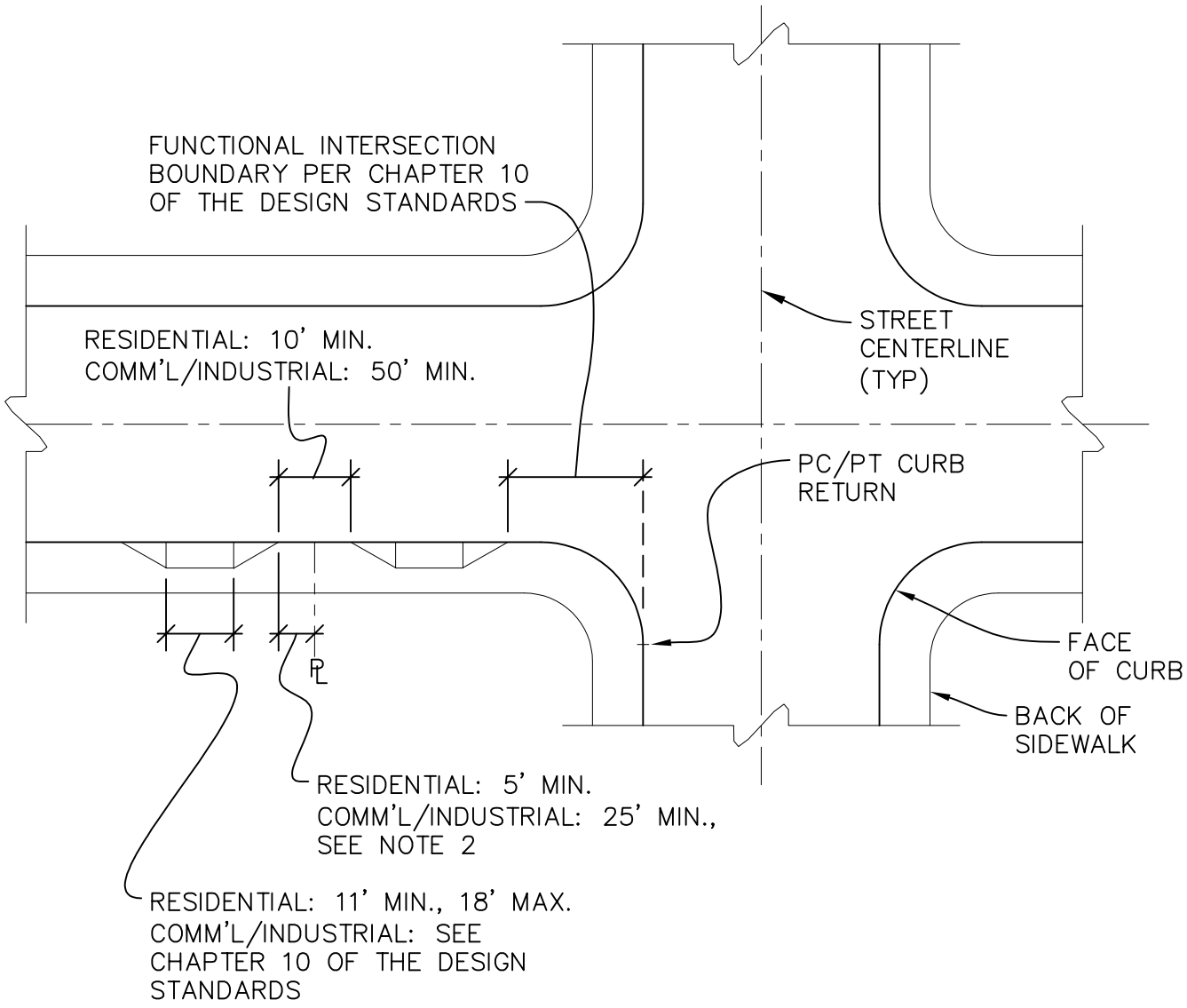
FIXED BOLLARD
NOT TO SCALE

NOTES:

1. RECYCLED PLASTIC BOLLARDS SHALL BE WHITE. TIMBER SHALL BE DOUGLAS FIR OF DENSE CONSTRUCTION GRADE, AND SHALL BE PRESSURE TREATED WITH WEATHER BORNE PRESERVATIVE (ACA, CCA, ACZA) IN ACCORDANCE WITH REQUIREMENTS OF SEC. 9-09.3(1) (GENERAL REQUIREMENTS) OF WSDOT STANDARD SPECIFICATIONS AND CITY'S AMENDMENTS THERETO. TOP 5" OF TIMBER SHALL BE PAINTED WHITE.
2. GALVANIZED STEEL TUBE SHALL CONFORM TO ASTM A53 GRADE A.
3. NUTS, BOLTS, & WASHERS SHALL CONFORM TO ASTM A307.
4. ALL STEEL PARTS SHALL BE GALVANIZED.
5. CEMENT CONCRETE SHALL BE CLASS 3000.
6. MINIMUM OF 5'-0" O.C. SPACING.
7. BOLLARD SHALL BE PLUMBED VERTICALLY IN ALL DIRECTIONS.

APPROVED BY CITY ENGINEER:	DATE:	CITY OF AUBURN WASHINGTON	TYPICAL BOLLARD INSTALLATION
	2/20/2018		
COMMUNITY DEVELOPMENT & PUBLIC WORKS DEPT.			STANDARD DETAIL: T-03.2

Plotted by: Craig Dobyns on 2/2/2018 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-03.2

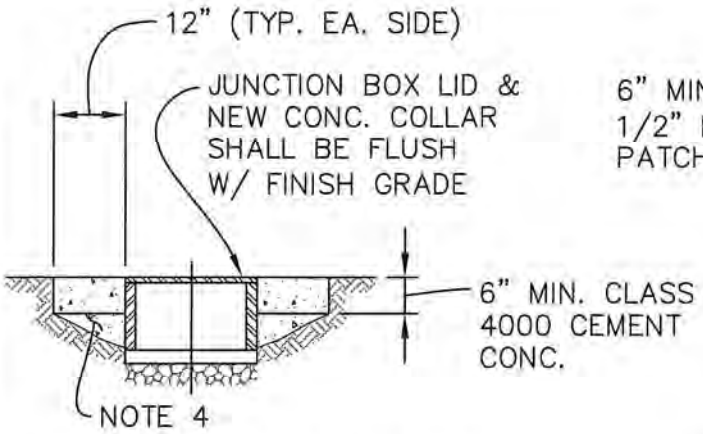


NOTES:

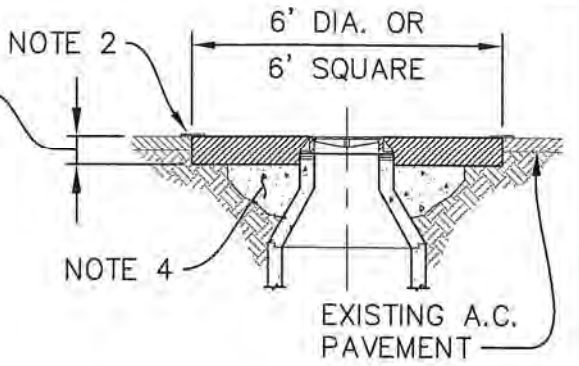
1. DRIVEWAY TO BE CONSTRUCTED PER STANDARD DETAIL T–34 OR T–35.
2. DOES NOT APPLY TO SHARED DRIVEWAYS IN ACCESS TRACTS/EASEMENTS AND EXISTING PANHANDLE/FLAG LOTS.

APPROVED BY CITY ENGINEER: Jacob Sweeting	DATE: 3/1/2023	CITY OF AUBURN WASHINGTON	DRIVEWAY WIDTHS AND LOCATION
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: T–04.6

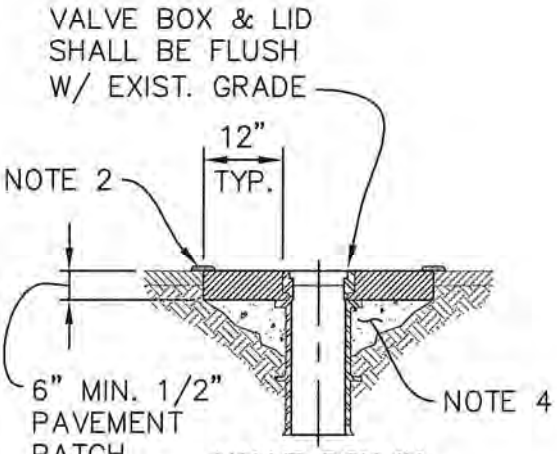
Plotted by: Craig Dobyns on 2/20/2023 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-04.6



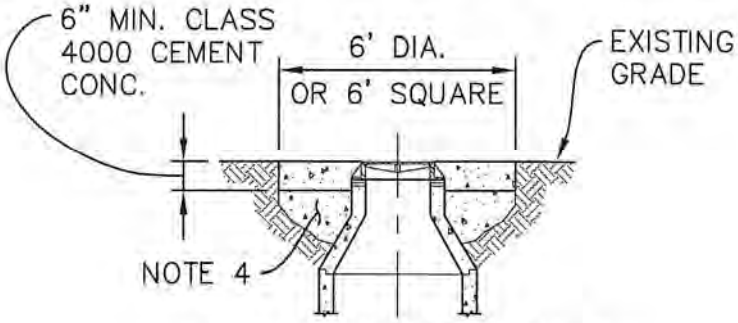
JUNCTION BOX IN UNIMPROVED OR PARTIAL ASPHALT AREA
NOT TO SCALE



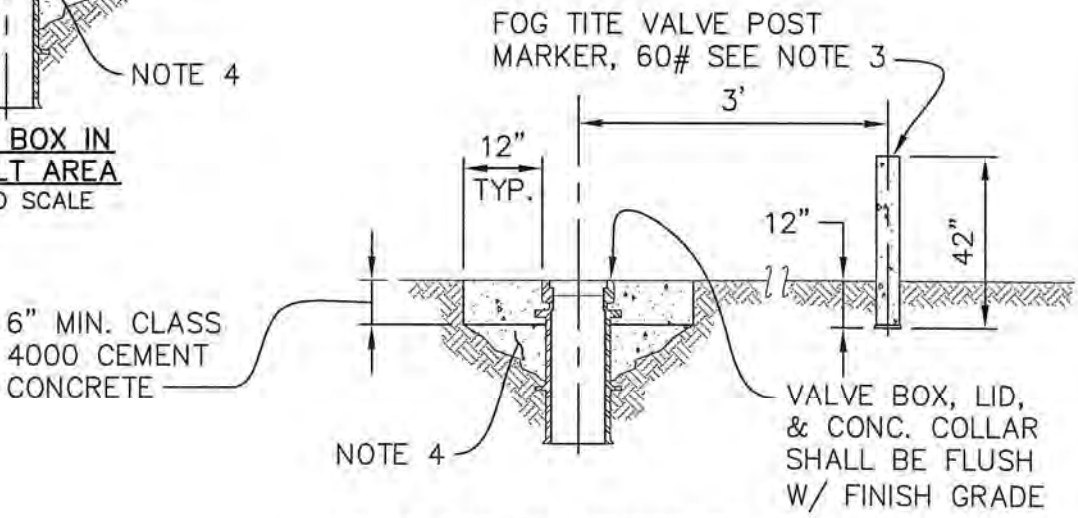
MANHOLE (OR CB) IN ASPHALT AREA
NOT TO SCALE



VALVE BOX IN ASPHALT AREA
NOT TO SCALE



MANHOLE OR CATCH BASIN IN UNIMPROVED AREA
NOT TO SCALE



VALVE BOX IN UNIMPROVED AREA
NOT TO SCALE

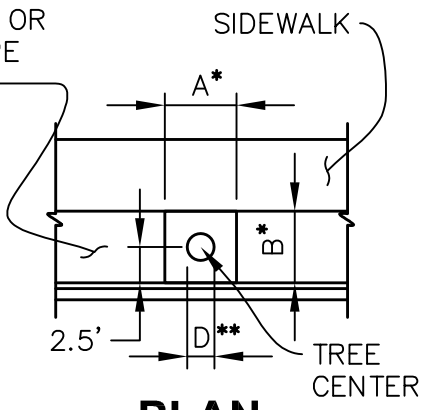
NOTES:

1. ADJUSTMENT OF SANITARY SEWER AND STORM STRUCTURES SHALL BE PER SECTION 7-05.3(1). ADJUSTMENT OF WATER UTILITY STRUCTURES SHALL BE PER SECTION 7-12.3(2).
2. SURFACE SEAL AT MATCHLINE SHALL BE CSS-1 OR CSS-1H EMULSIFIED ASPHALT OR PG.
3. VALVE IN UNIMPROVED AREAS SHALL HAVE A VALVE POST MARKER.
4. FILL ANY VOIDS OR DISTURBED AREAS BELOW 6" WITH QUICK SETTING CEMENT CONCRETE, DEPTH AS REQUIRED.
5. RISER RING HEIGHT 2" MIN. 25" MAX. ANY ADJUSTMENT OVER 18" REQUIRES A HAND HOLD.

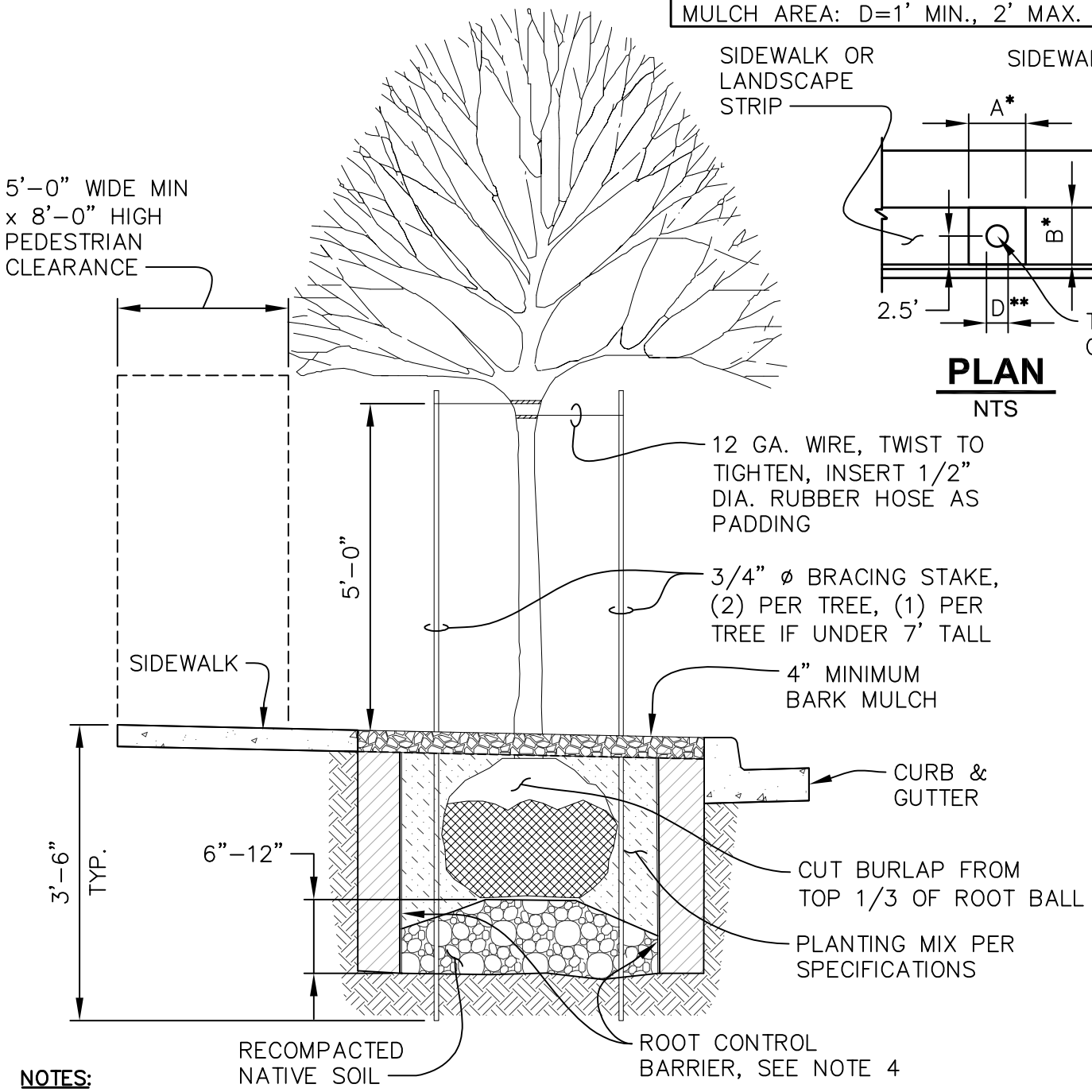
APPROVED BY CITY ENGINEER:	DATE:	CITY OF AUBURN WASHINGTON	ADJUSTMENT OF NEW AND EXISTING UTILITY STRUCTURES TO FINISH GRADE
	2/20/2018		
COMMUNITY DEVELOPMENT & PUBLIC WORKS DEPT.		STANDARD DETAIL:	T-05.2

Plotted by: Craig Dobyns on 2/15/2018 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-05.2

*TREE IN SIDEWALK, SQUARE MULCH AREA: A=5' B=5'
**TREE IN LANDSCAPE STRIP, CIRCULAR MULCH AREA: D=1' MIN., 2' MAX.



PLAN
NTS

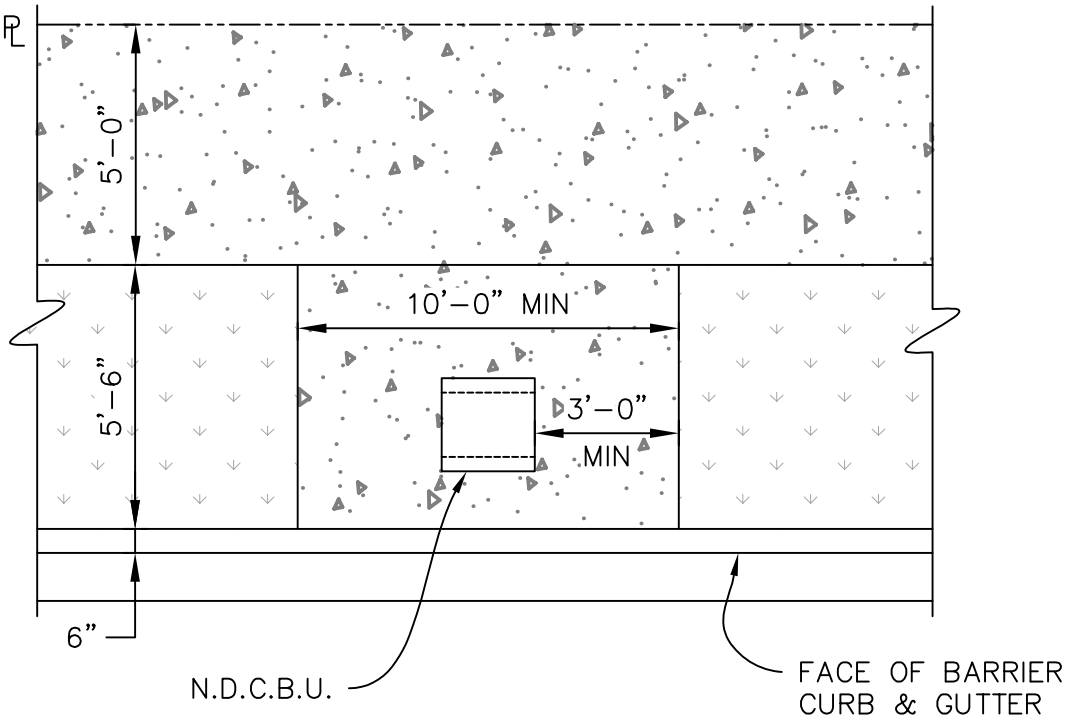


NOTES:

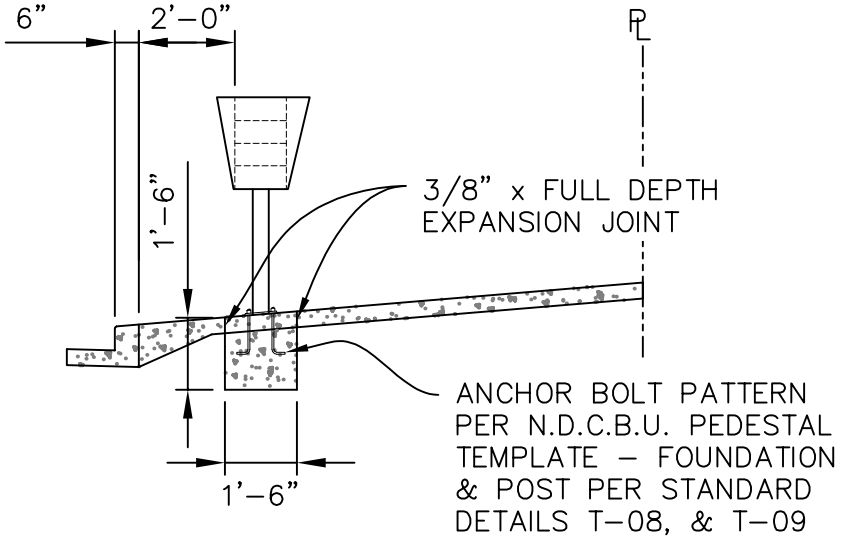
1. PLANT TREES 1" HIGHER THAN GROWN IN NURSERY.
2. TREE PIT SHALL NOT BE LESS THAN 2 TIMES THE ROOT BALL DIAMETER.
3. STREET TREES SHALL BE SELECTED FROM THE CITY APPROVED LIST OF STREET TREES.
4. INSTALL A MINIMUM 18" TO 24" DEEP ROOT CONTROL BARRIER AT GRADE TO AT LEAST 6" BELOW ROOT BALL. ROOT BARRIER MATERIAL SHALL BE PER SECTION 10 OF THE DESIGN STDS.
5. TREE SHALL HAVE MIN. 2" DIAMETER TRUNK AT 2' ABOVE ROOT BALL WHEN PLANTED.
6. STREET TREE IN SIDEWALK AREA MAY REQUIRE TREE GRATE PER STD DETAIL T-30 TO PROVIDE MIN. PEDESTRIAN CLEARANCE.

APPROVED BY CITY ENGINEER:	DATE:	CITY OF AUBURN WASHINGTON	STREET TREE DETAIL
Jacob Sweeting	2/7/24		
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: T-06.6

Plotted by: Craig Dobyns on 1/12/2024 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-06.6



PLAN VIEW



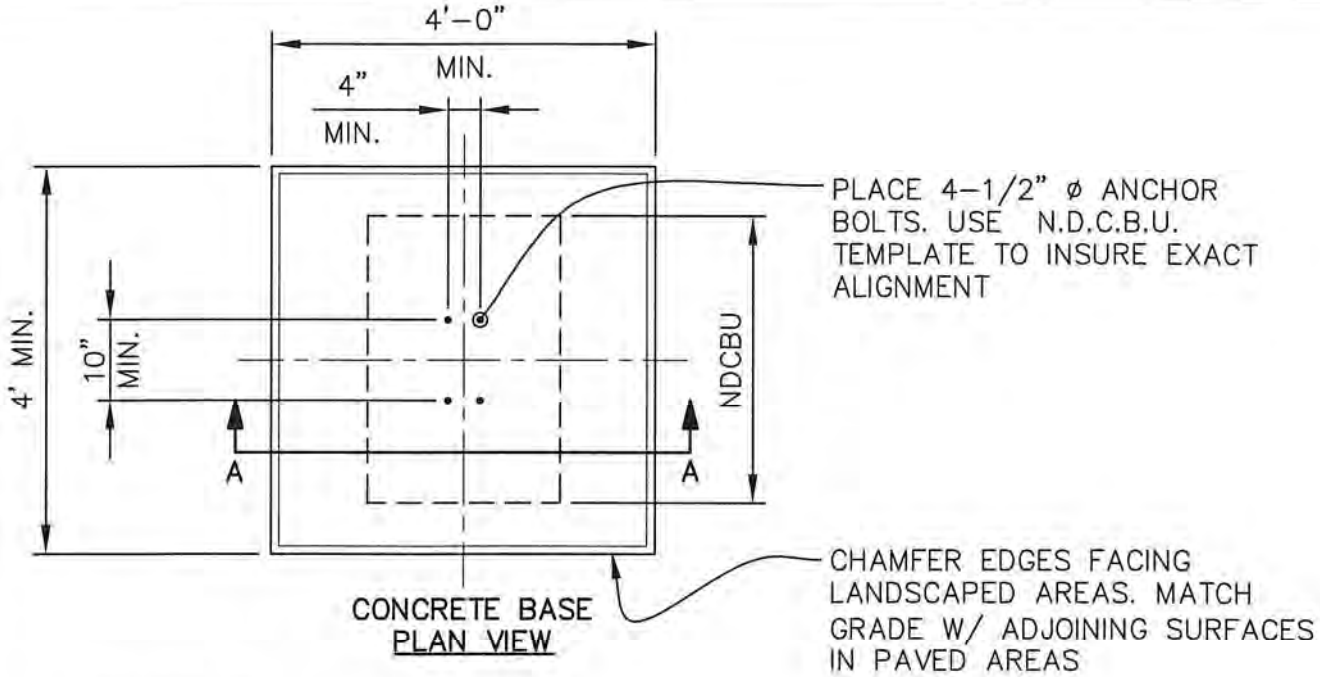
SIDE VIEW

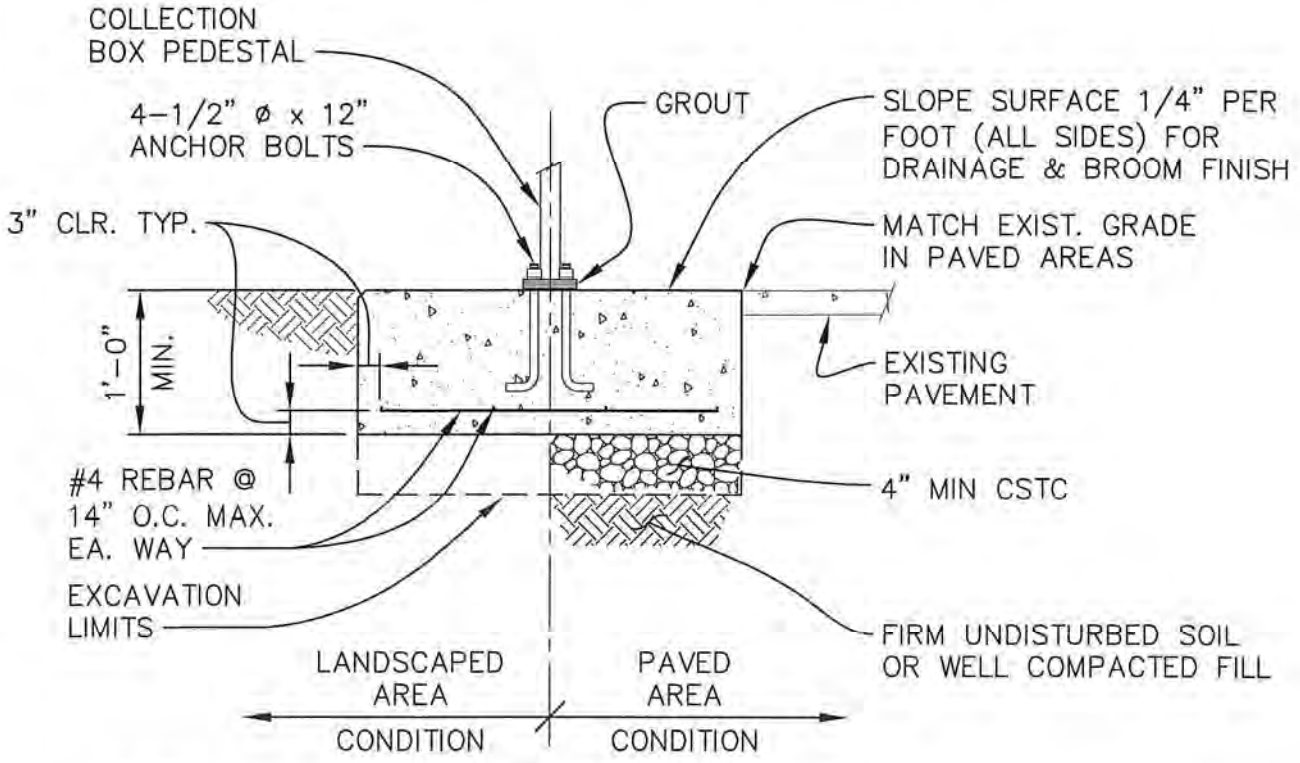
NOTE:

MAILBOX LOCATIONS SHALL BE COORDINATED WITH THE SERVING POST OFFICE AND APPROVED BY THE CITY OF AUBURN.

APPROVED BY CITY ENGINEER: Jacob Sweeting	DATE: 1/17/2022	CITY OF AUBURN WASHINGTON	NEIGHBORHOOD DELIVERY & COLLECTION BOX UNIT (N.D.C.B.U.) INSTALLATION
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: T–07.2

Plotted by: Craig Dobyns on 1/6/2022 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-07.2





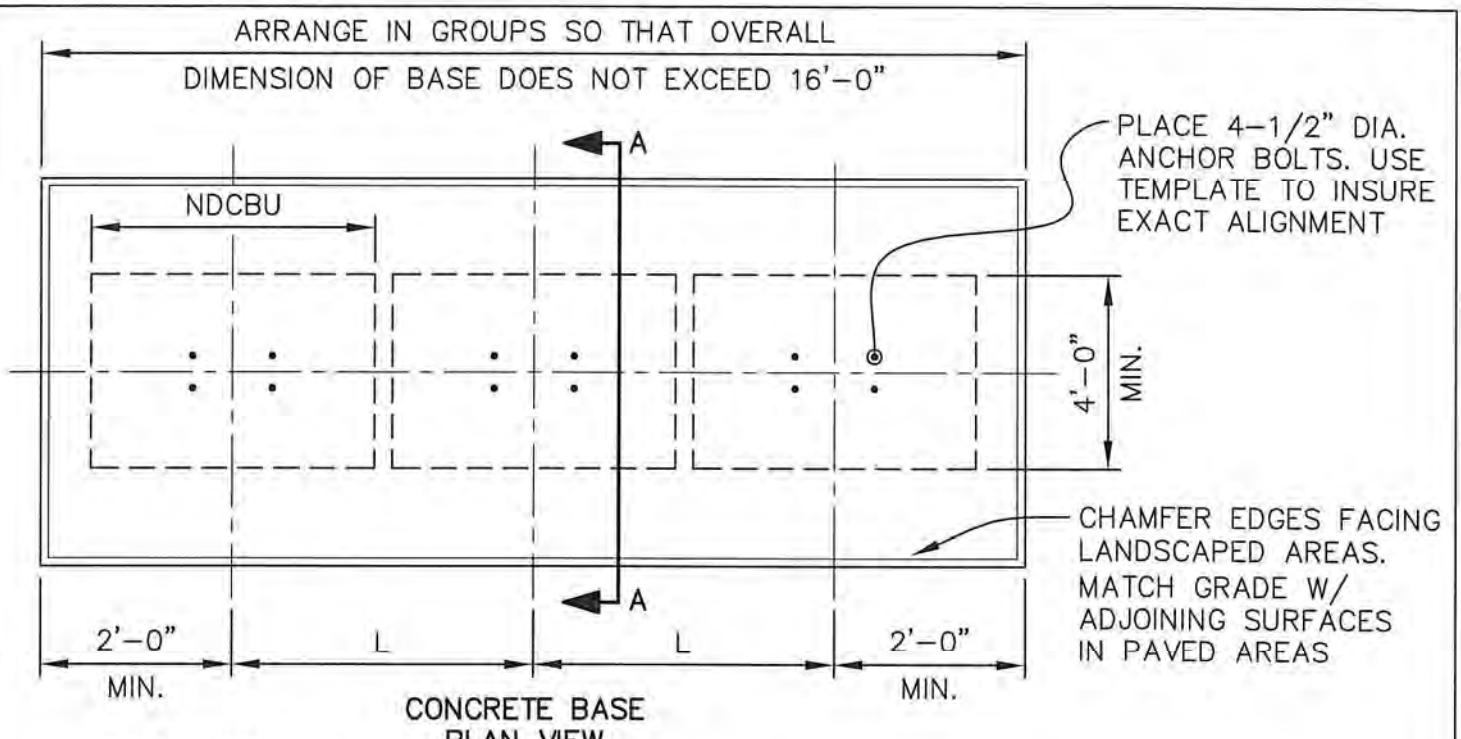
SECTION A–A

NOTES:

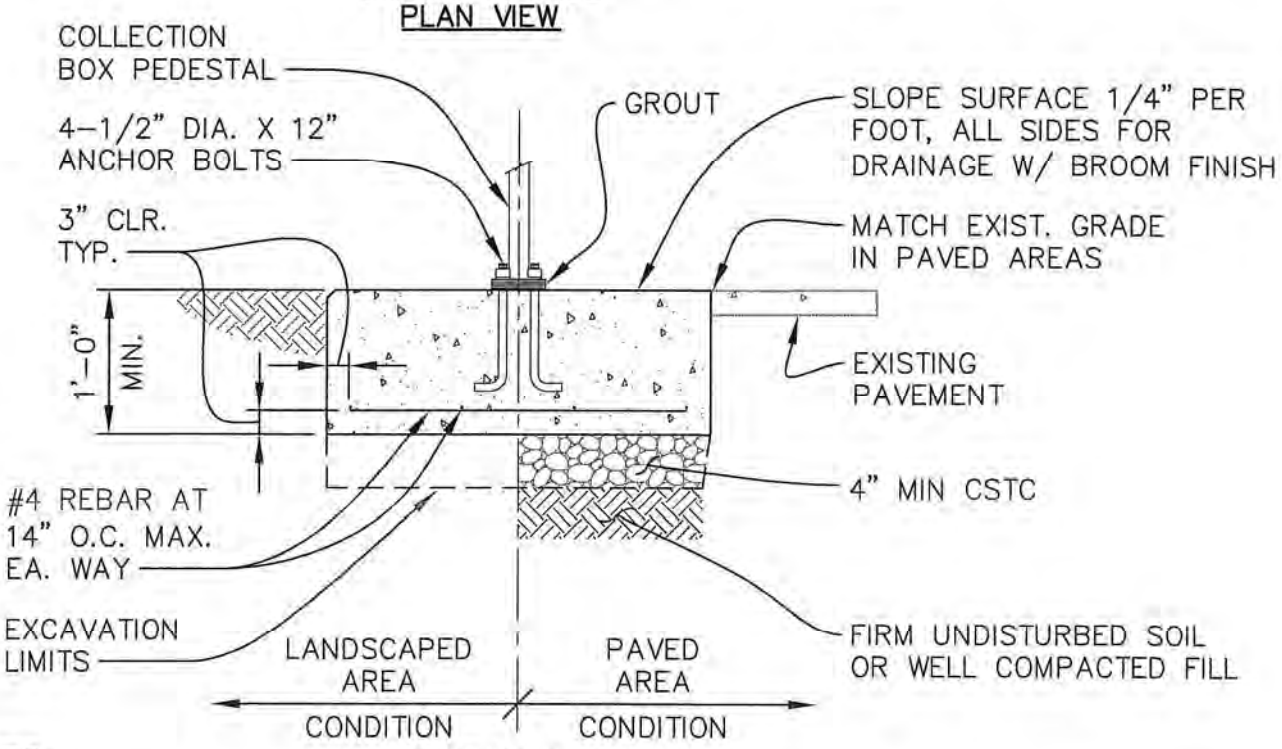
1. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, CONTAIN 4% MIN. TO 6% MAX. AIR ENTRAINMENT AND BE PLACED WITH A 3–1/2" TO 4–1/2" SLUMP IN ACCORDANCE WITH ACI 301.
2. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 40.
3. ANCHOR BOLTS SHALL CONFORM TO ASTM A307, GALVANIZED CARBON STEEL OR ASTM A193, B8M (316) STAINLESS STEEL.
4. GROUT SHALL BE NON–SHRINK, NON–METALLIC.

APPROVED BY CITY ENGINEER:	DATE:	CITY OF AUBURN WASHINGTON	NEIGHBORHOOD DELIVERY & COLLECTION BOX UNIT (N.D.C.B.U.) SINGLE UNIT
	2/20/2018		
COMMUNITY DEVELOPMENT & PUBLIC WORKS DEPT.		STANDARD DETAIL:	T–08.2

Plotted by: Vlad Rubashka on 1/18/2018 File location: M:\Construction Standard Details\Current WorKing DWG\Traffic\STDETL-T-08.2



CONCRETE BASE
PLAN VIEW



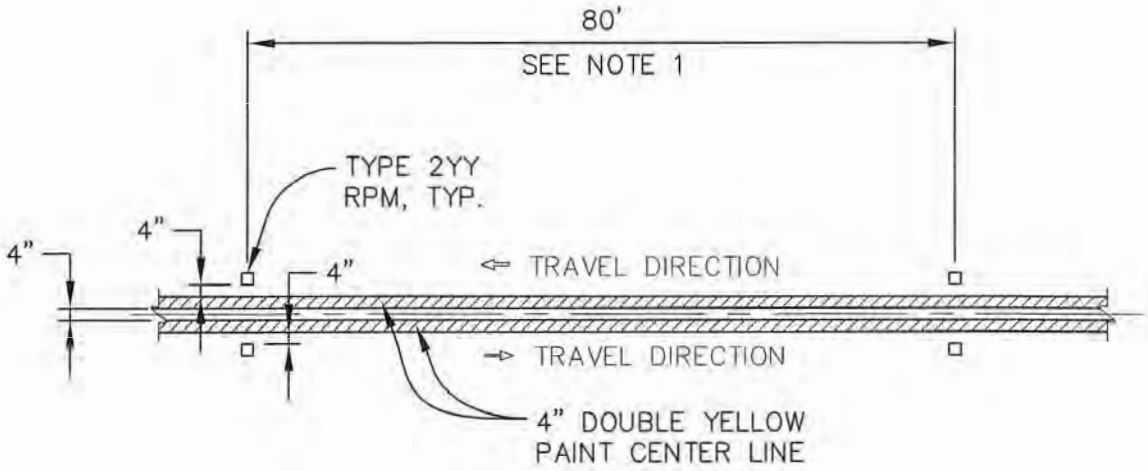
SECTION A-A

NOTES:

1. CONCRETE BASE DIMENSION "L" IS THE WIDTH OF NDCBU PLUS 2". FOUNDATION CAN BE EXTENDED BY LENGTH "L" TO ACCOMODATE ADDITIONAL UNITS.
2. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, CONTAIN 4% MIN. TO 6% MAX. AIR ENTRAINMENT AND BE PLACED W/ A 3 1/2" TO 4 1/2" SLUMP IN ACCORDANCE W/ ACI 301.
3. REINFORCING STALL SHALL CONFORM TO ASTM A615, GRADE 40.
4. ANCHOR BOLTS SHALL CONFORM TO ASTM A307, GALVANIZED CARBON STEEL OR ASTM A193, B8M (316) STAINLESS STEEL.

APPROVED BY CITY ENGINEER:	DATE:	CITY OF AUBURN WASHINGTON	NEIGHBORHOOD DELIVERY & COLLECTION BOX UNIT (N.D.C.B.U.) MULTIPLE UNITS
	2/20/2018		
COMMUNITY DEVELOPMENT & PUBLIC WORKS DEPT.		STANDARD DETAIL:	T-09.2

Plotted by: Vlad Rubashko on 1/18/2018 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-09.2



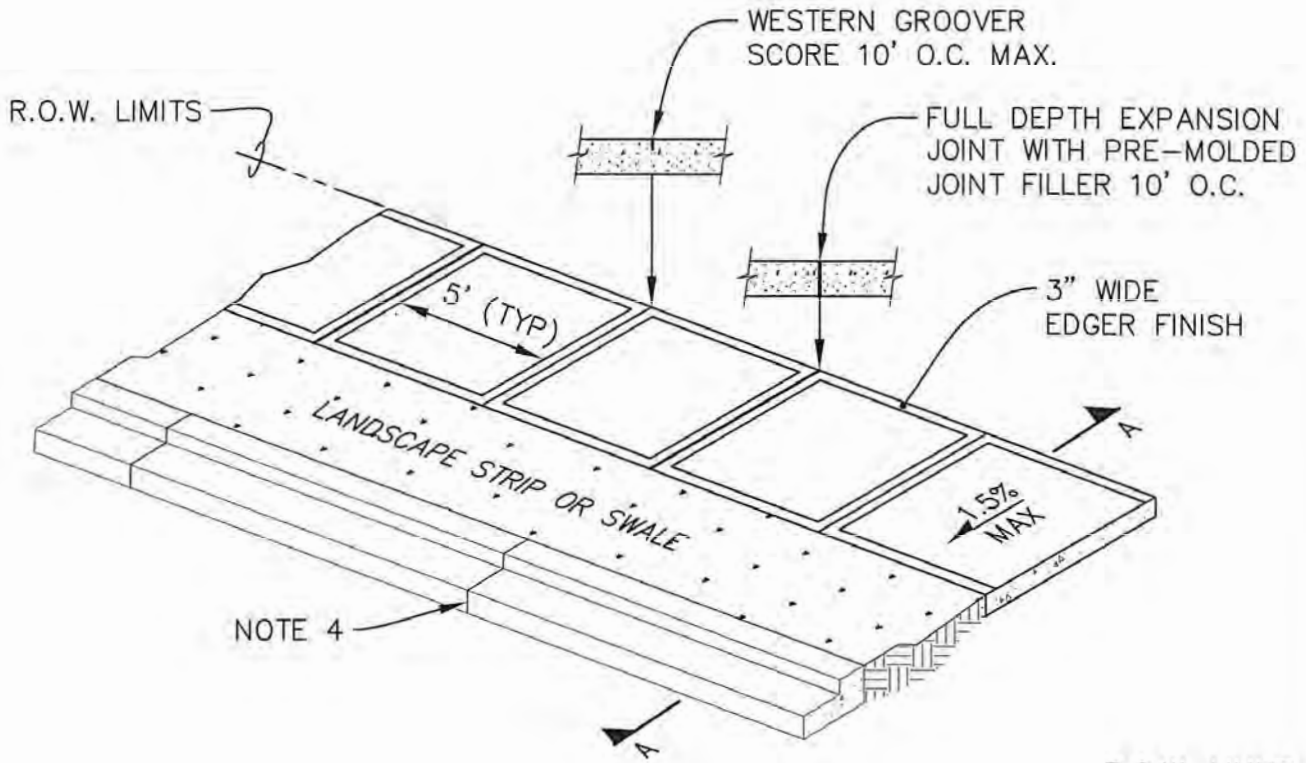
PLAN
DOUBLE CENTERLINE

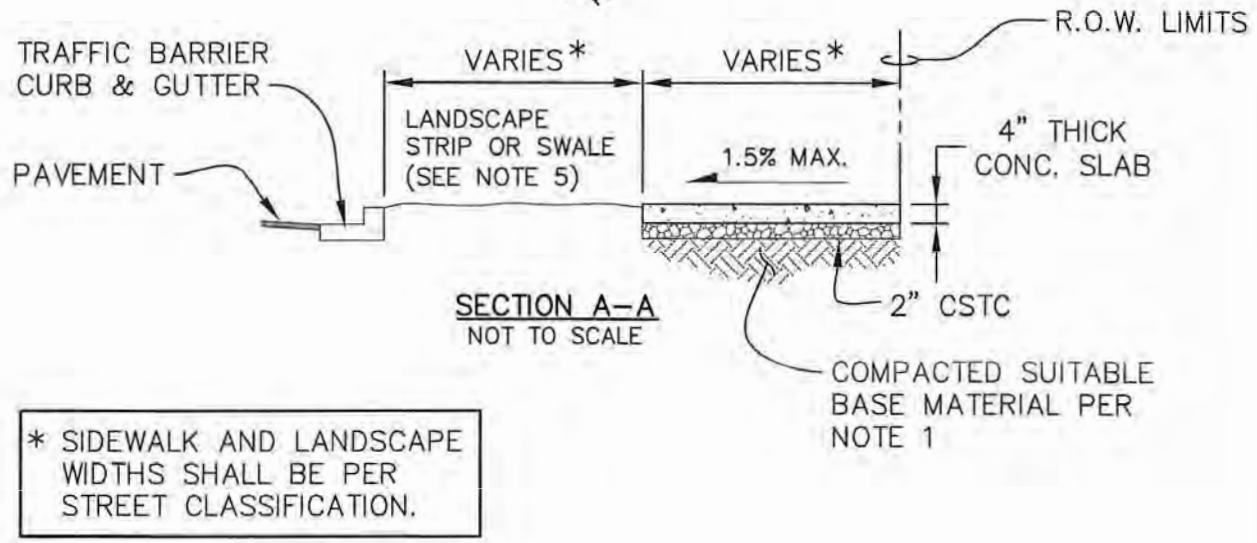
NOTES:

1. RAISED PAVEMENT MARKERS SHALL BE SPACED AT 80' (FT.) INTERVALS ON TANGENTS AND ON HORIZONTAL CURVES W/ A RADIUS OF 1500' (FT.) OR MORE, AND 40' (FT.) INTERVALS ON HORIZONTAL CURVES HAVING RADII OF LESS THAN 1500' (FT.).

APPROVED BY CITY ENGINEER: FOR Jacob Sunding	DATE: 10/14/16	CITY OF AUBURN WASHINGTON	DOUBLE CENTERLINE WITH RAISED PAVEMENT MARKERS
COMMUNITY DEVELOPMENT & PUBLIC WORKS DEPT.			STANDARD DETAIL: T-12.1

Plotted by: Craig Dobyne on 9/12/2016 File location: M:\Construction Standard Details\Approved Drawing Files (dwg)\Traffic\STDETL-T-12.1





SECTION A-A
NOT TO SCALE

* SIDEWALK AND LANDSCAPE WIDTHS SHALL BE PER STREET CLASSIFICATION.

NOTES:

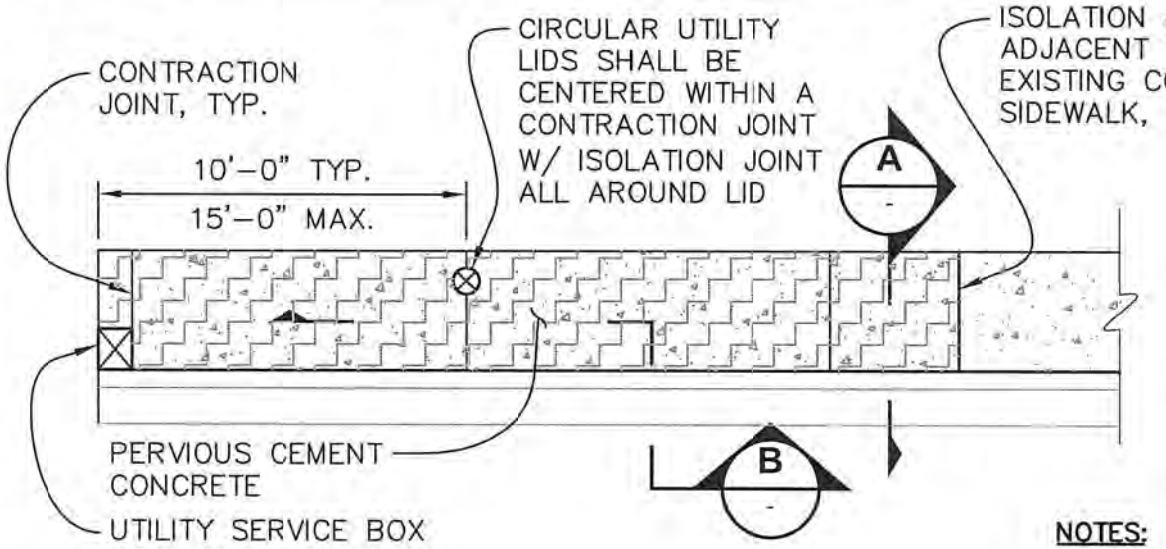
1. PLACE CEMENT CONCRETE ON COMPACTED SUITABLE BASE, AS PER SPECIFICATION SECTION 2-06.3 AND AS APPROVED BY THE ENGINEER.
2. CEMENT CONCRETE SHALL BE CLASS 3000 PER SPECIFICATION SECTION 6-02.3 WITH 5% AIR ENTRAINMENT.
3. INSPECTION REQUIRED FOR FORM AND SUB GRADE APPROVAL BEFORE POURING CONCRETE.
4. MATCH JOINTS ON SIDEWALK WITH JOINTS ON CURB OR AT 10' O.C.
5. LANDSCAPE STRIP SHALL GENERALLY BE GRADED TOWARDS THE CURB AT 1.5%. OTHER GRADES MAY BE ALLOWED WHERE IT CAN BE DEMONSTRATED TO NOT CAUSE DRAINAGE OR MAINTENANCE ISSUES.

APPROVED BY CITY ENGINEER:	DATE:	CITY OF AUBURN WASHINGTON	CEMENT CONCRETE SIDEWALK WITH LANDSCAPE STRIP
	2/20/2018		
COMMUNITY DEVELOPMENT & PUBLIC WORKS DEPT.		STANDARD DETAIL:	T-13.2

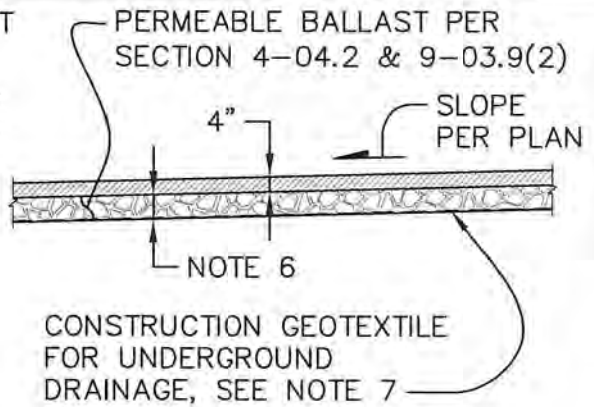
Plotted by: Craig Dobyns on 2/2/2018 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-13.2

Plotted by: Craig Dobyns on 8/1/2016 File location: M:\Construction Standard Details\Approved Drawing Files (dwg)\Traffic\STDETL-T-14.1

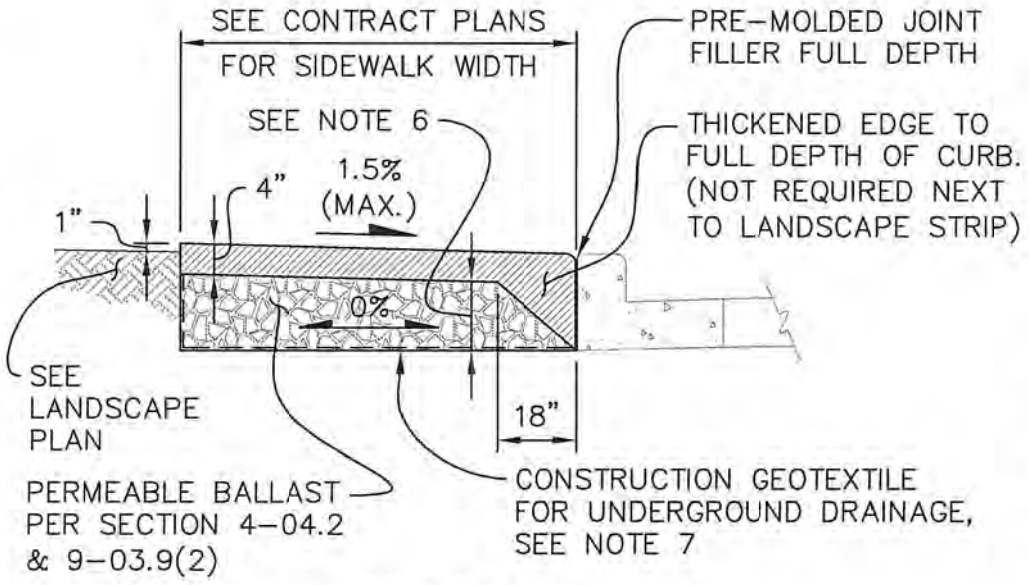
APPROVED BY CITY ENGINEER: Paul Sachs DATE: 8/5/2016
COMMUNITY DEVELOPMENT & PUBLIC WORKS DEPT.
CITY OF AUBURN WASHINGTON
PERVIOUS CEMENT CONCRETE SIDEWALK
STANDARD DETAIL: T-14.1



PLAN
NTS



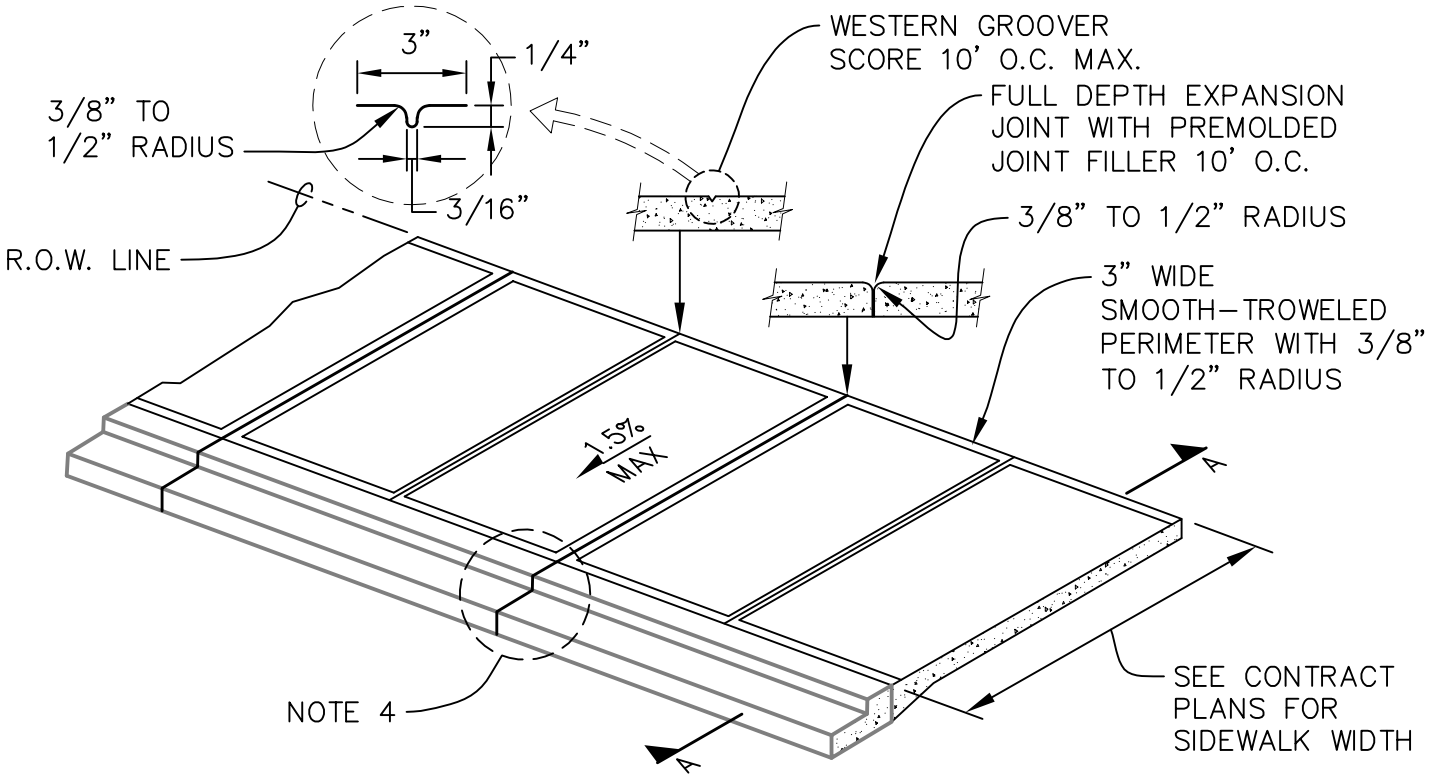
SECTION B
NTS

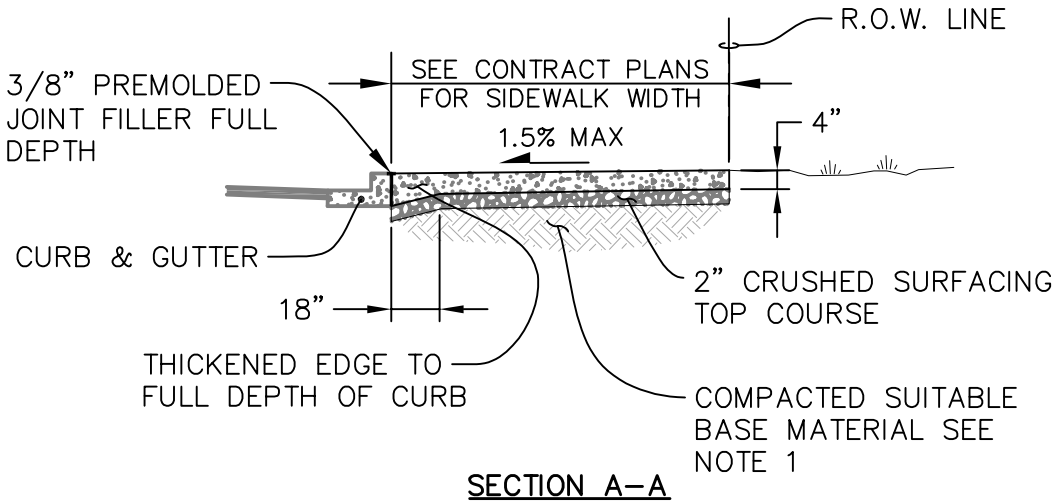


SECTION A
NTS

NOTES:

1. ISOLATION JOINTS SHALL BE FULL DEPTH WITH 3/8" PREMOLDED JOINT FILLER.
2. CONTRACTION JOINTS SHALL HAVE A MINIMUM DEPTH OF 1/3 OF THE PERVIOUS CONCRETE THICKNESS AND 1/8" MAXIMUM WIDTH (UNLESS OTHERWISE APPROVED BY THE ENGINEER).
3. ALL JOINTS SHALL BE CLEAN & EDGED WITH A 1/2" RADIUS EDGER.
4. SUBGRADE PREPARATION SHALL BE IN ACCORDANCE WITH SECTION 2-06.3(3) (SUBGRADE FOR PERMEABLE PAVEMENTS). ALL SOFT & YIELDING FOUNDATION MATERIAL SHALL BE REMOVED & REPLACED WITH PERMEABLE BALLAST
5. FOR BALLAST DEEPER THAN CURB, PROVIDE A GEOMEMBRANE BARRIER BETWEEN PERMEABLE BALLAST & ROAD SECTION UNLESS ADJACENT ROAD IS PERMEABLE AS REQUIRED BY THE ENGINEER.
6. DEPTH OF PERMEABLE BALLAST VARIES. SEE SWMM FOR SPECIFIC REQUIREMENTS.
7. CONSTRUCTION GEOSYNTHETIC MAY BE REQUIRED BETWEEN NATIVE SOILS & PERMEABLE BALLAST IF DIRECTED BY THE ENGINEER. WHEN REQUIRED, THE GEOTEXTILE SHALL BE CLASS A, MODERATE SURVIVABILITY PER SECTION 9.33.2(1) TABLES 1 & 2 (UNLESS OTHERWISE APPROVED BY THE ENGINEER).





SECTION A-A
NOT TO SCALE

NOTES:

1. PLACE CEMENT CONCRETE ON COMPACTED SUITABLE BASE, AS PER SPECIFICATION SECTION 2-06.3 AND AS APPROVED BY THE ENGINEER.
2. CEMENT CONCRETE SHALL BE CLASS 3000 PER SPECIFICATION SECTION 6-02.3.
3. INSPECTION REQUIRED FOR FORM AND SUB GRADE APPROVAL BEFORE POURING CONCRETE.
4. MATCH EXPANSION JOINTS ON SIDEWALK WITH EXPANSION JOINTS ON CURB OR AT 10' O.C.

APPROVED BY CITY ENGINEER: Jacob Sweeting	DATE: 02/09/2023	CITY OF AUBURN WASHINGTON	CEMENT CONCRETE SIDEWALK WITHOUT LANDSCAPE STRIP
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: T-15.2

Plotted by: Craig Dobyns on 2/8/2023 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-15.2

Plotted by: Craig Dobyns on 1/6/2022 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-17.3

PUBLIC WORKS DEPARTMENT

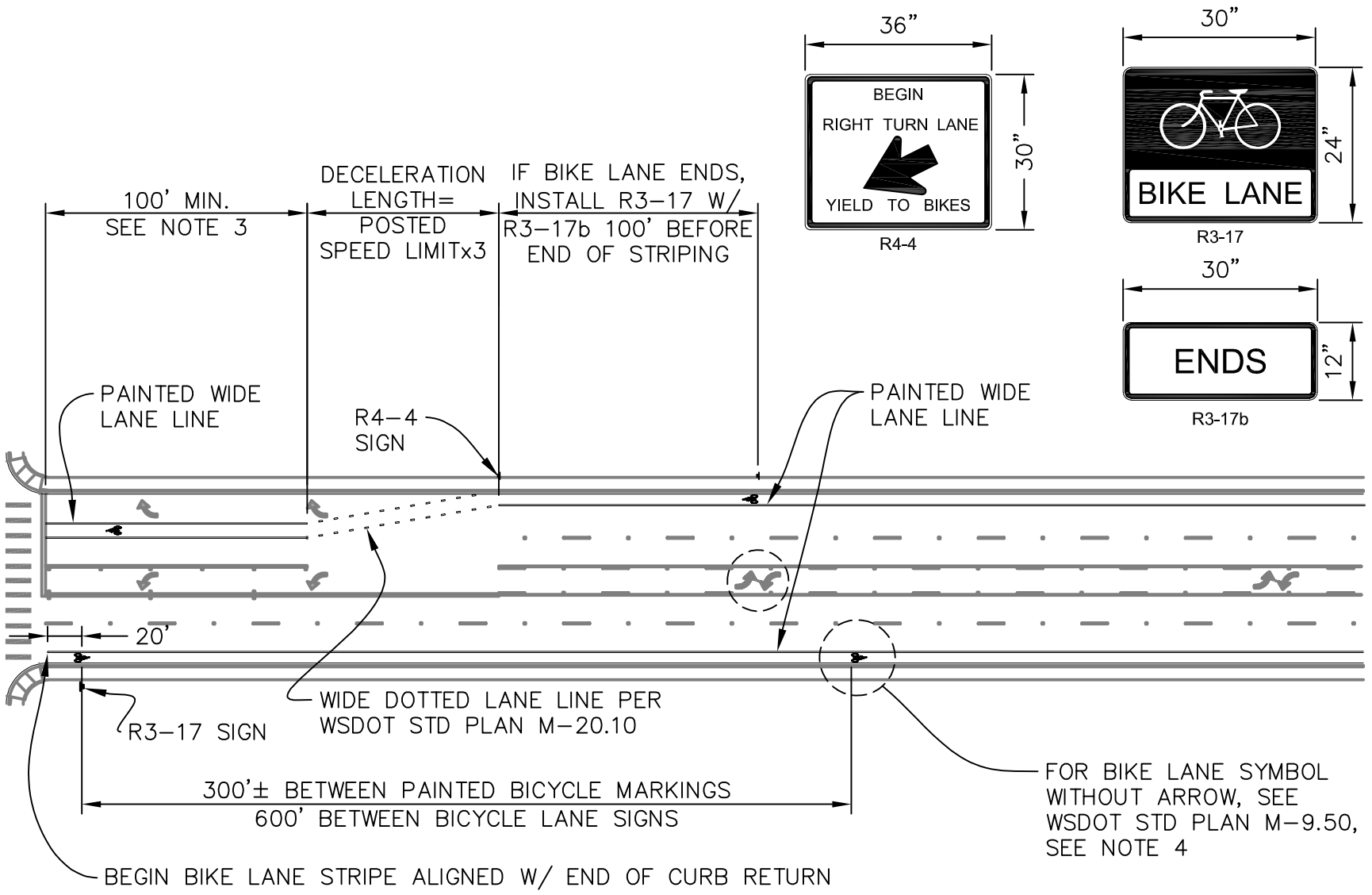
APPROVED BY CITY ENGINEER: Jason Sheeting

DATE: 1/17/2022

CITY OF AUBURN WASHINGTON

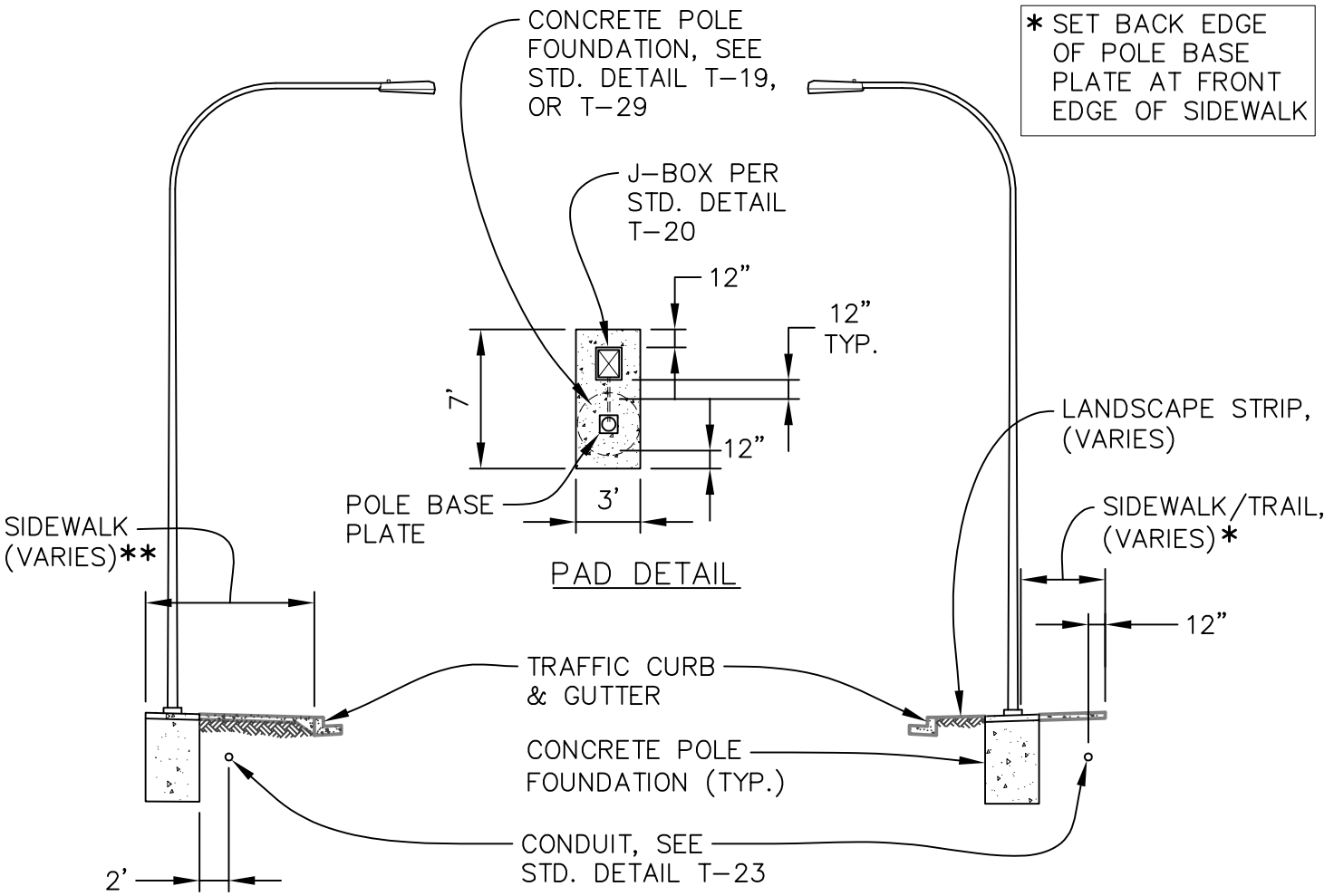
BICYCLE LANE MARKINGS

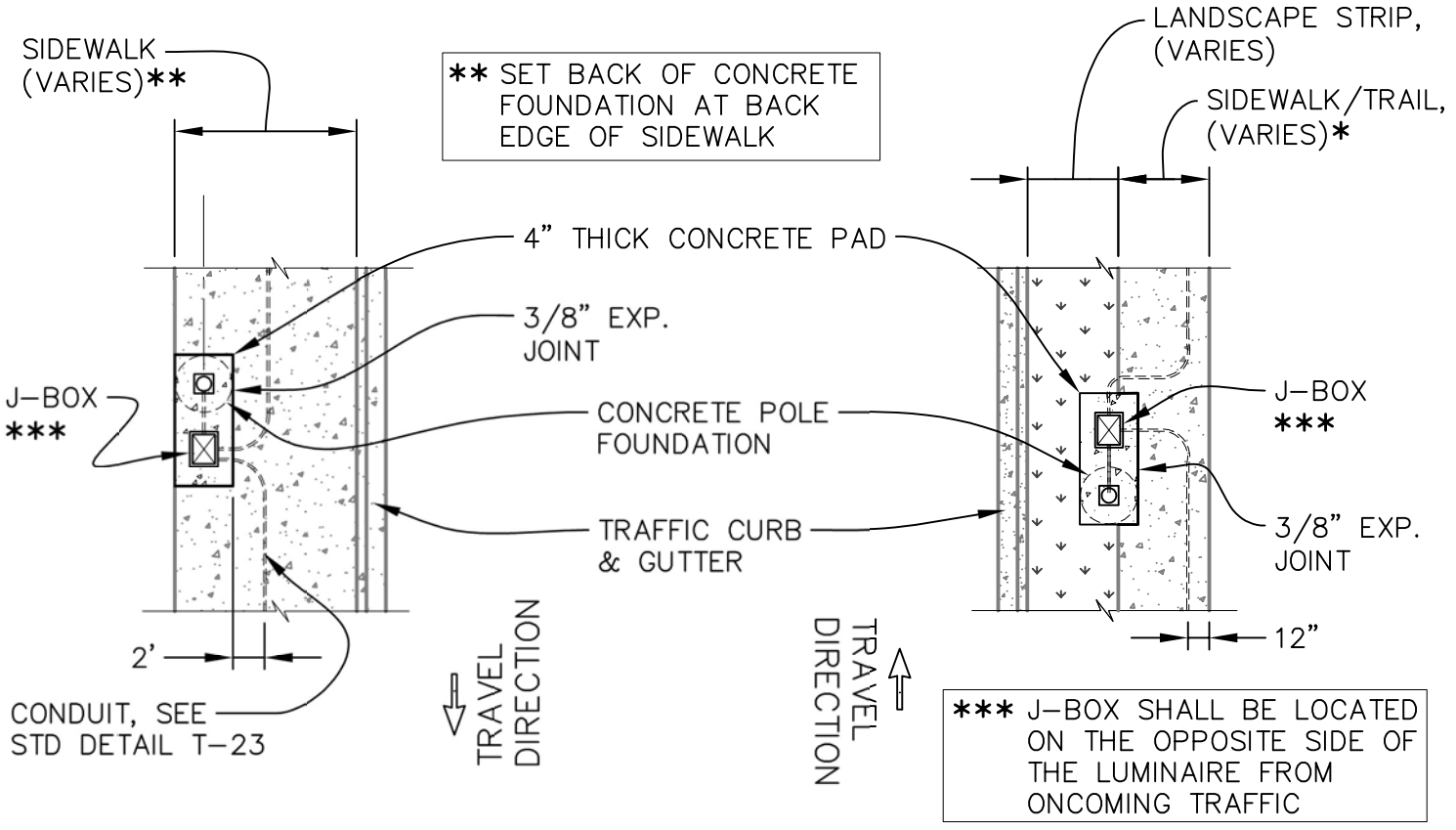
STANDARD DETAIL: T-17.3



NOTES:

1. BIKE LANE WIDTH SHALL BE 6' WIDE, MINIMUM.
2. RIGHT TURN LANE LENGTH SHALL BE DETERMINED BY THE 95TH PERCENTILE OF THE QUEUE LENGTH VALUE.
3. LENGTH SHORTER THAN 100' MAY BE JUSTIFIED WITH TRAFFIC STUDIES.
4. BICYCLE RIDER SYMBOL DESIGNATING BICYCLE LANE SHALL BE INSTALLED WITH WHITE PAINT.





APPROVED BY CITY ENGINEER: Jacob Sweeting	DATE: 01/05/2021	CITY OF AUBURN WASHINGTON	LUMINAIRE AND CONDUIT LAYOUT DETAIL
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: T-18.3

Plotted by: Craig Dobyns on 12/09/20 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-18.3

Plotted by: Craig Dobyns on 1/10/2024 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-19.4

PUBLIC WORKS DEPARTMENT

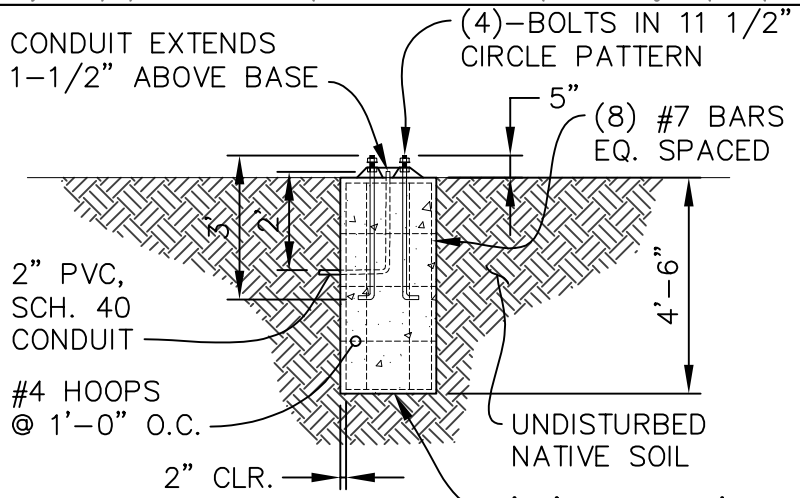
APPROVED BY CITY ENGINEER: Jason Sweeting

DATE: 2/7/24

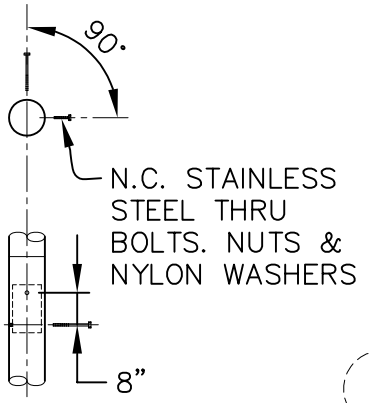
CITY OF AUBURN WASHINGTON

LUMINAIRE POLE

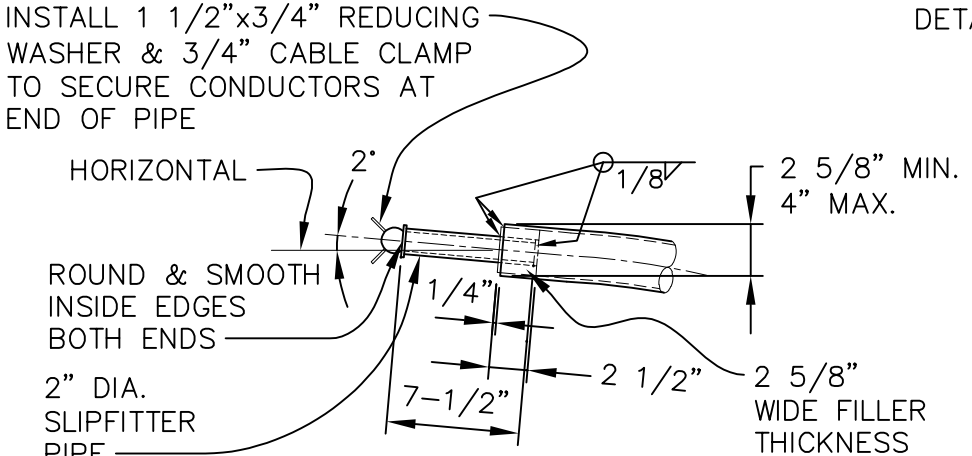
STANDARD DETAIL: T-19.4



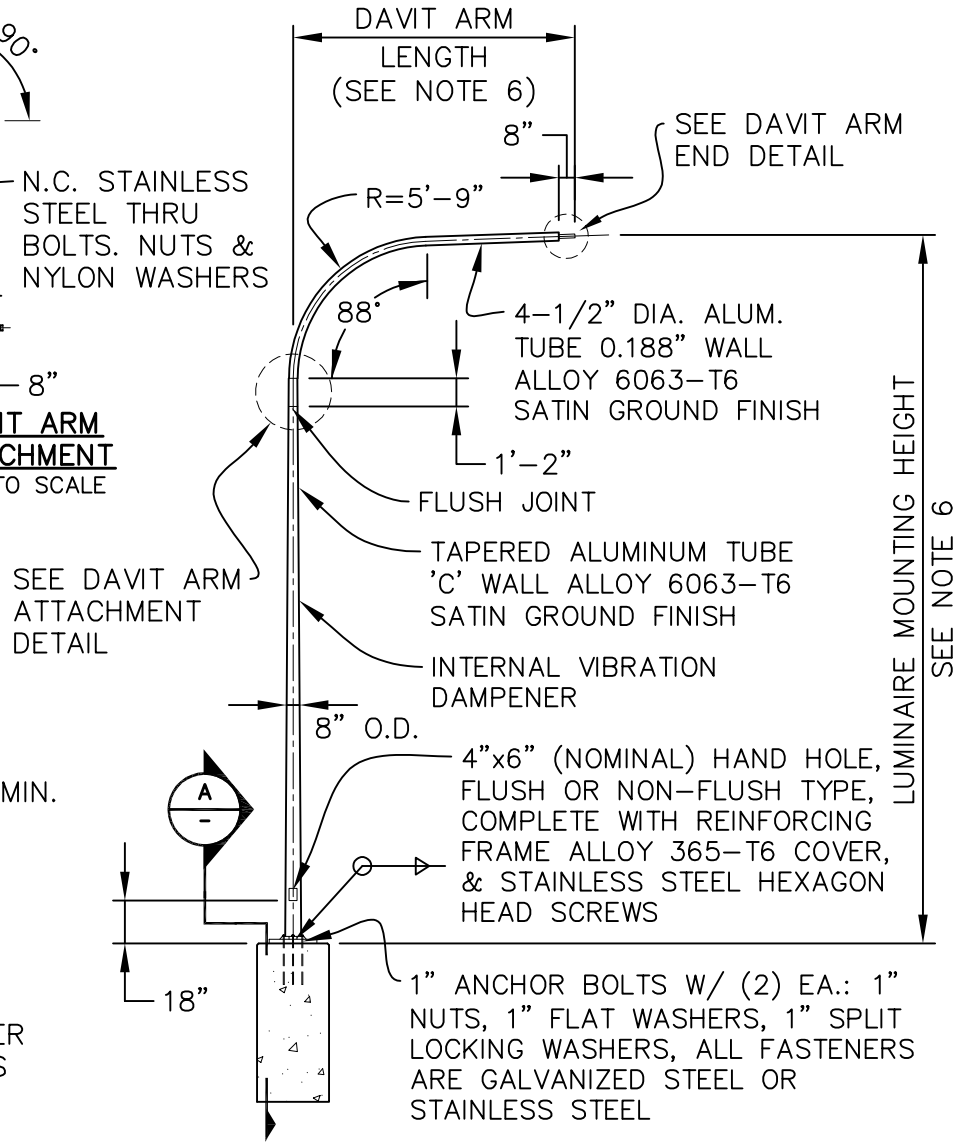
SECTION A-A
NOT TO SCALE



DAVIT ARM ATTACHMENT
NOT TO SCALE



DAVIT ARM END
NOT TO SCALE



ELEVATION
NOT TO SCALE

NOTES:

1. POLE ASSEMBLIES DESIGNED TO SUPPORT MAXIMUM LUMINAIRE SIZE OF 1.5 SQ. FT. E.P.A. AND 60 LBS. IN A 100 MPH ISOTACH/130 MPH GUST VELOCITY WIND.
2. 4043 FILLER WIRE USED FOR WELDING.
3. ONLY THE BASE FLANGE WELDS ARE HEAT TREATED.
4. BASE FLANGE SHALL ACCOMMODATE 11" TO 12" BOLT CIRCLE.
5. 1"-8NC STEEL ANCHOR BOLT ASTM A576, AISI GRADE 1021-1046, 50,000 PSI=MIN. YIELD MEAN DIA. OF ROD STOCK 0.908± 0.011", OUT OF ROUND TOLERANCE: ± 0.012" ROLLED OR CUT THREADS PER A307, CLASS 2A, TOP 10" GALV. PER ASTM A153 COMPLETE WITH (8) 1" 8NC GALV. STL. HEX NUTS & (8) 1" GALV. STL. FLAT WASHERS.
6. SEE SECTION 10 OF THE DESIGN STANDARDS.
7. SEE STD. DETAIL T-18 FOR POLE, CONDUIT, AND FOUNDATION PLACEMENT.

Plotted by: Craig Dobyns on 2/15/2018 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-20.2

APPROVED BY CITY ENGINEER: DATE: 2/20/2018

CITY OF AUBURN WASHINGTON

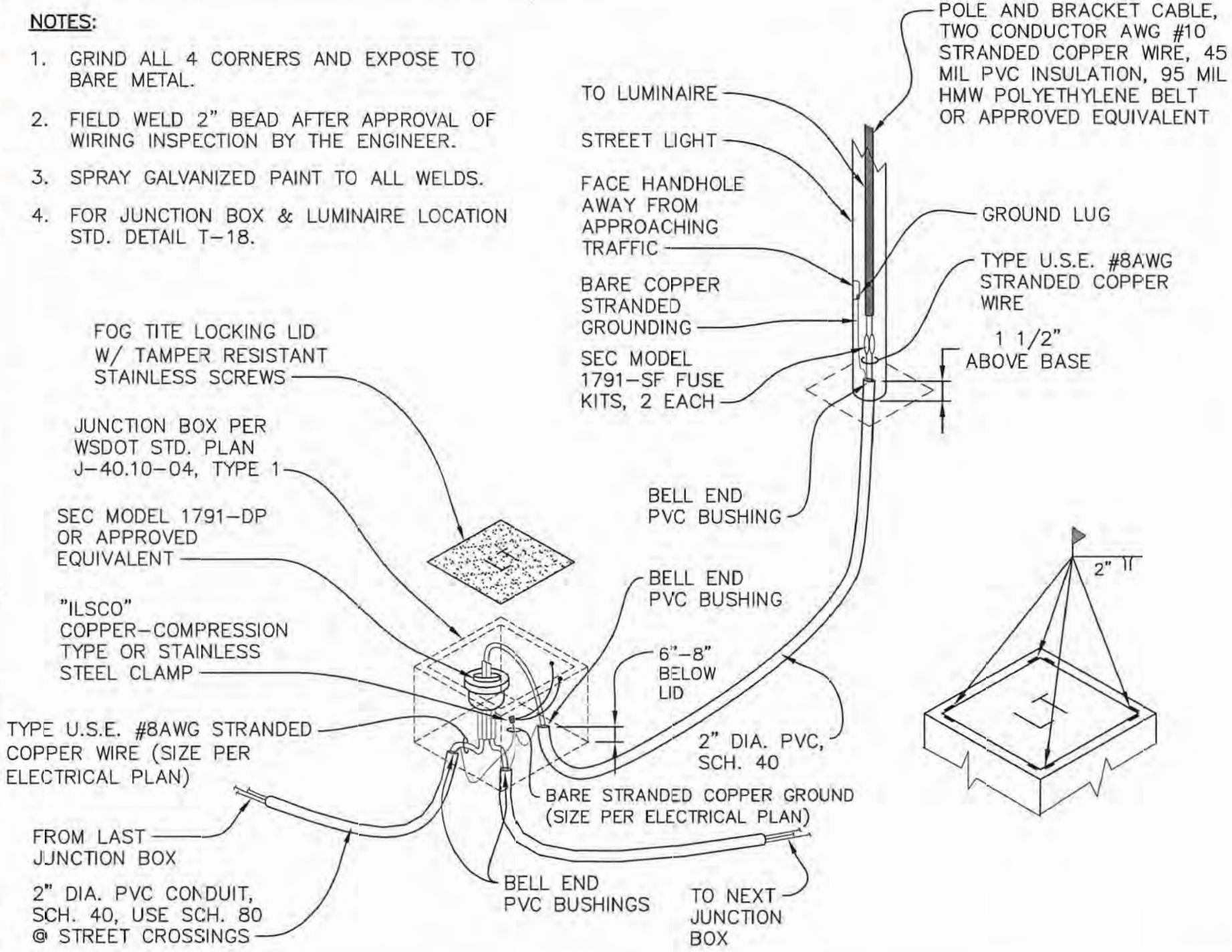
COMMUNITY DEVELOPMENT & PUBLIC WORKS DEPT.

UNIFORM LUMINAIRE WIRING DETAIL

STANDARD DETAIL: T-20.2

NOTES:

1. GRIND ALL 4 CORNERS AND EXPOSE TO BARE METAL.
2. FIELD WELD 2" BEAD AFTER APPROVAL OF WIRING INSPECTION BY THE ENGINEER.
3. SPRAY GALVANIZED PAINT TO ALL WELDS.
4. FOR JUNCTION BOX & LUMINAIRE LOCATION STD. DETAIL T-18.



Plotted by: Craig Dobyns on 1/6/2022 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-21.4

PUBLIC WORKS DEPARTMENT

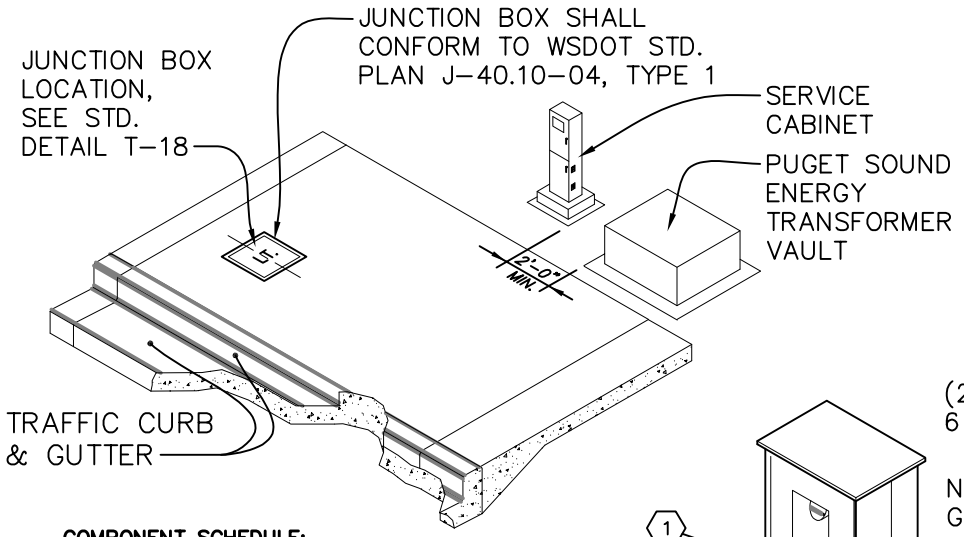
APPROVED BY CITY ENGINEER: Jason Sweeting

DATE: 1/17/2022

CITY OF AUBURN WASHINGTON

POWER SERVICE CABINET DETAIL

STANDARD DETAIL: T-21.4



COMPONENT SCHEDULE:

1. METERBASE: 100 AMP, 4 JAW, B-LINE U264, MANUAL BYPASS TYPE, W/ 5th JAW AT 9:00 POSITION, (CONTRACTOR TO VERIFY W/ SERVING UTILITY).

2. PANELBOARD: 120/240 VAC, 100 AMP SILVER PLATED COPPER BUS, 1 PHASE, 3 WIRE, 12 CIRCUIT MAIN BREAKER: 100 AMP FRAME, 100 AMP TRIP, EATON #BAB2100 (BACK-FED) 10K AIC BOLT-ON BRANCH BREAKERS, EATON TYPE BAB

   (2)-20/2 ILLUMINATION BRANCH A1 & B2

   (1)-20/1 GROUND FAULT RECEPTACLE BRANCH

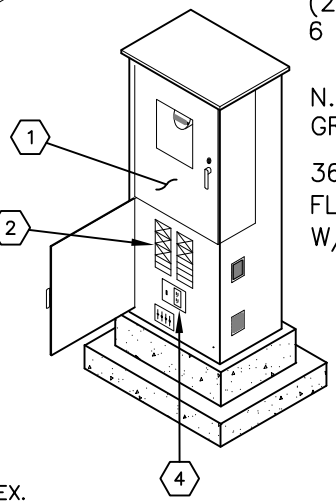
4. GROUND FAULT RECEPTACLE: 20 AMP, 120 VAC DUPLEX.

5. CABINET:

   NEMA 3R, PADMOUNT, 1/8" ALUMINUM 5052-H32 CONSTRUCTION, DRIP HOOD, OPEN BOTTOM FRAMED W/ 2" ANGLE, 2-SCREENED & GASKETED VENTS.

   DOORS: HEAVY DUTY WELDED HINGES, LIFT-OFF TYPE STAINLESS STEEL VAULT HANDLES W/ 3-POINT LATCH, PADLOCKABLE METERING DOOR. "BEST" CX LOCK W/ BLUE CORE ON DISTRIBUTION DOOR, CLOSED CELL NEOPRENE GASKET, 1/4" POLISHED WIRE GLASS METER VIEWING PORT.

   FINISH: MILL FINISH ALUMINUM.



SKYLINE SERIES 47700-A1-R3, METERED, LOCKABLE SERVICE CABINET. CABINET MUST BE LOCATED WITHIN 50' OF DESIGNATED POWER SOURCE. (ADDRESS & USE REQ'D ON PHENOL TAG FOR PSE METER).

INSTALL & CONNECT TO GROUND RODS PER WSDOT 8-20.3(9), CASE NOT REQ'D IF GROUND IS IN J-BOX

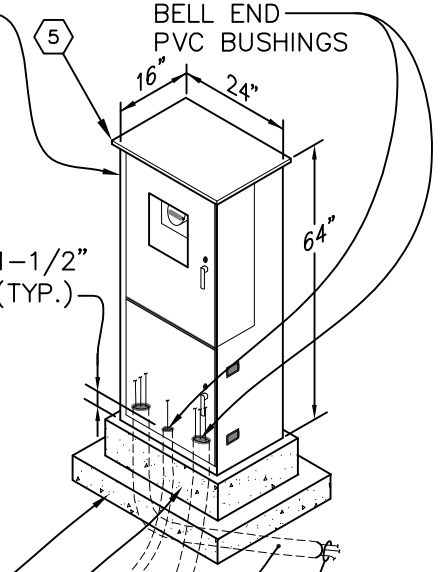
(2) GROUND RODS REQ'D, 6 FT. APART, MIN.

N.E.C. SERVICE GROUND

36"x28"x6" CONC. BASE FLUSH W/ SIDEWALK REINF. W/ 6"x6"x#10 W.W.F.

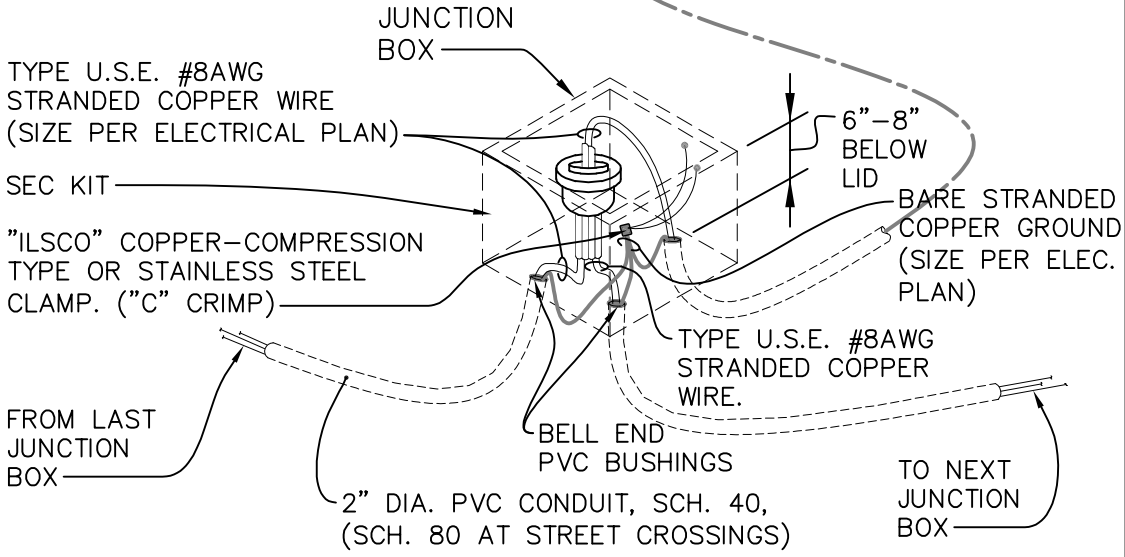
1/2" DIA. PVC, SCH. 40, CONDUIT (OR APPROVED EQUIV.)

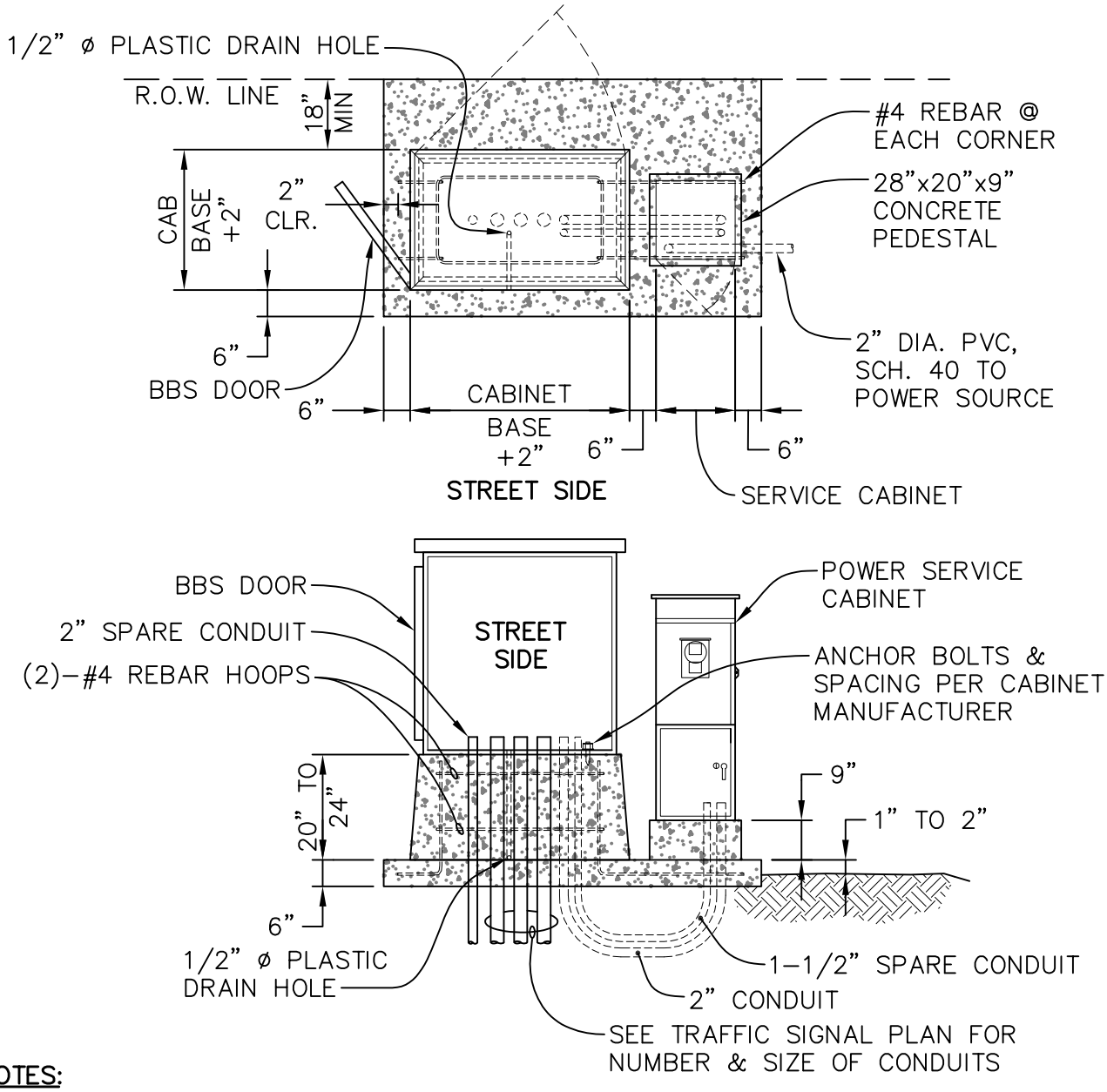
28"X20"X9" CONC. PEDESTAL. CABINET MOUNTED TO PEDESTAL W/ (4) HOT DIPPED, GALVANIZED FOUNDATION BOLTS, NUTS, & WASHERS



2" DIA. PVC, SCH. 40, OR APPROVED EQ.

AWG U.S.E. STRANDED COPPER. WIRE SIZE TO MEET N.E.C. IT ENTERS CABINET ON LEFT SIDE.



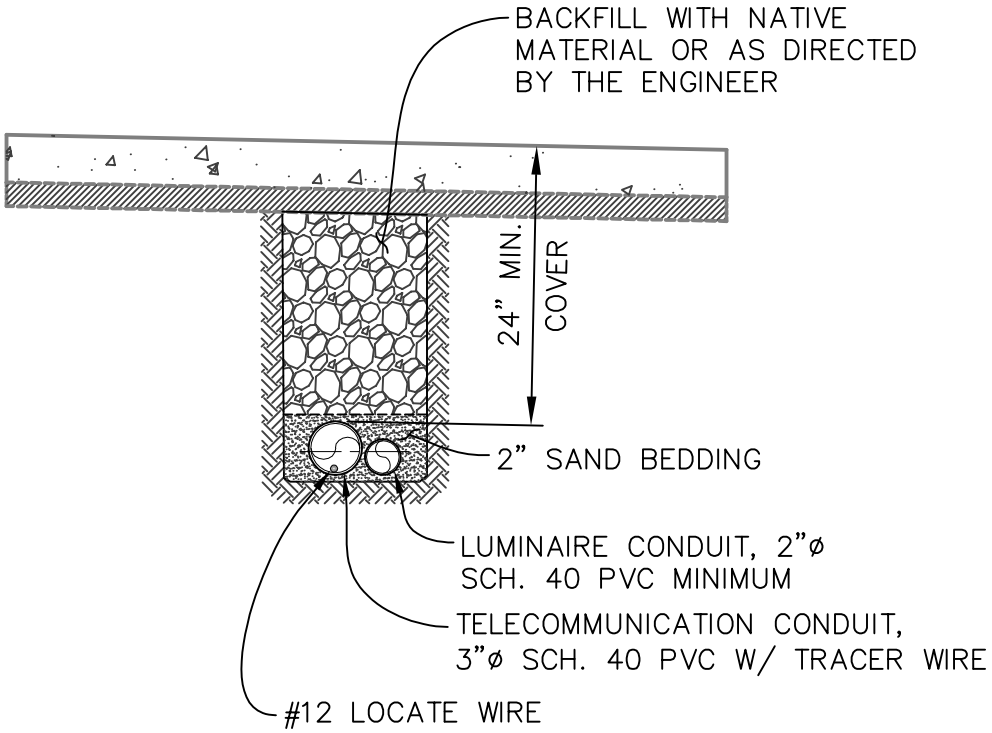


NOTES:

1. FOUNDATION SHALL BE CONSTRUCTED WITH CLASS 3000 CONCRETE WITH 3/4" CHAMFERED EDGE ON THE LOWER PAD.
2. CONDUITS SHALL BE EXTENDED NO MORE THAN 2" ABOVE CONCRETE SURFACE, ALIGNED, AND CENTERED ON CABINET.
3. CABINET POWER CONDUIT SHALL BE ON THE RIGHT SIDE WHEN FACING FRONT OF CABINET.
4. 2" DIA. SPARE CONDUIT SHALL BE INSTALLED AND RUN INTO THE JUNCTION BOX.
5. ENDS OF 1/2" DIA. DRAIN POLY TUBING SHALL BE CUT FLUSHED WITH CONCRETE SURFACE.
6. 1-1/2" DIA. SPARE CONDUIT SHALL BE INSTALLED AND RUN INTO SERVICE CABINET.
7. JOINT BETWEEN CABINET AND FOUNDATION SHALL BE SEALED USING A CLEAR WATERPROOF ADHESIVE CAULK.

APPROVED BY CITY ENGINEER:	DATE:	CITY OF AUBURN WASHINGTON	TRAFFIC SIGNAL CONTROLLER & FOUNDATION DETAIL
Jacob Sweeting	1/17/2022		
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: T-22.4

Plotted by: Craig Dobyns on 1/6/2022 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-22.4

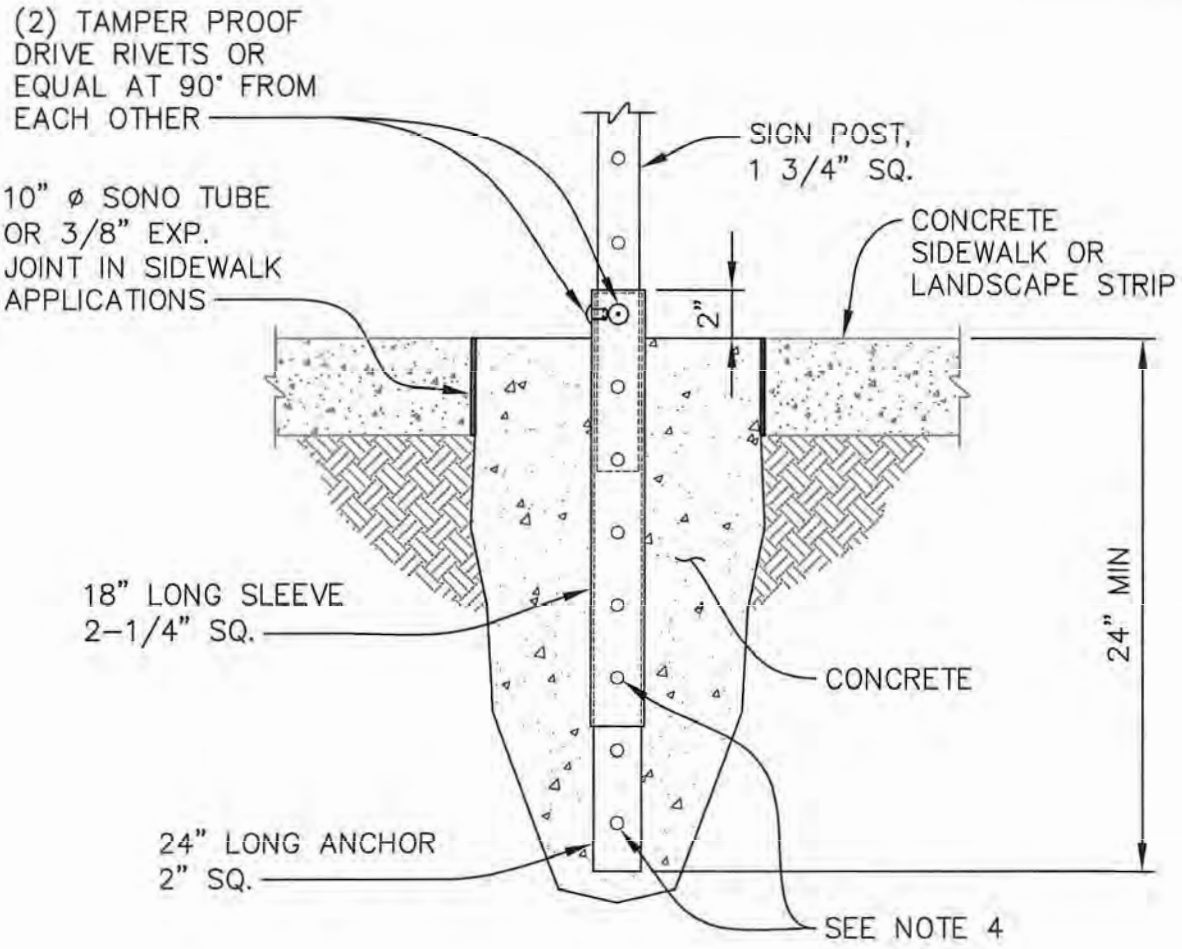


NOTES:

1. PULL STRING SHALL BE INSTALLED IN ALL SPARE CONDUIT.
2. SEE STD. DETAIL T–18 FOR CONDUIT PLACEMENT.

APPROVED BY CITY ENGINEER: Jacob Sweeting	DATE: 01/05/2021	CITY OF AUBURN WASHINGTON	TELECOMMUNICATION AND LUMINAIRE ELECTRICAL TRENCH
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: T–23.3

Plotted by: Craig Dobyns on 12/30/2020 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-23.3



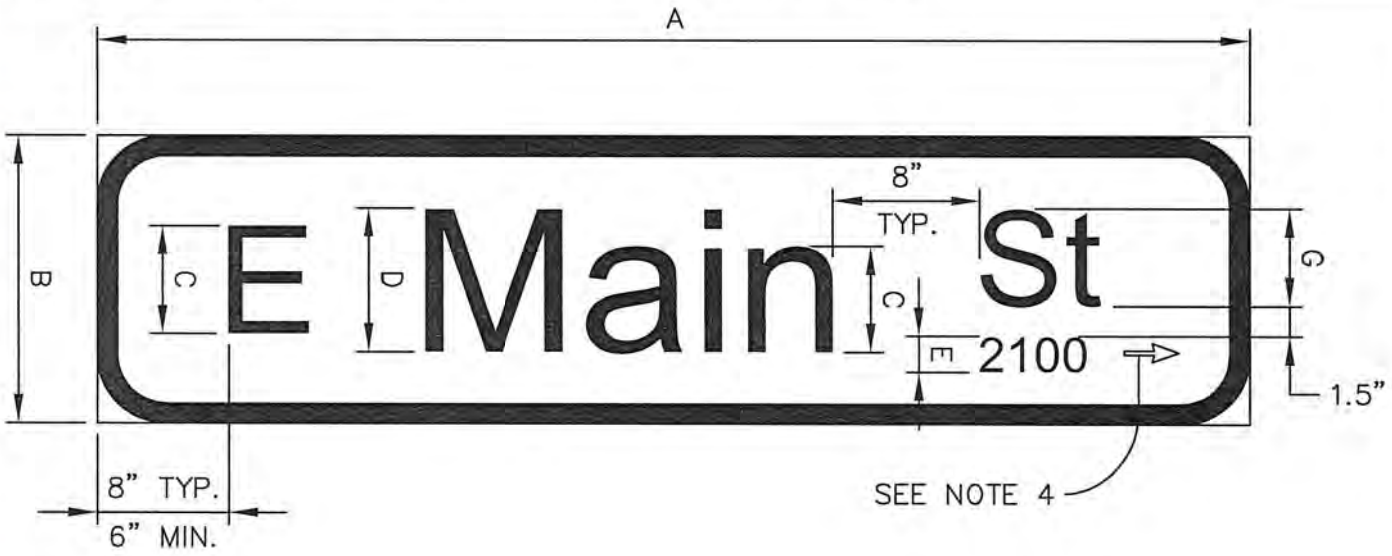
NOTES:

1. ALL TUBING MATERIAL SHALL BE "UNISTRUT TELESPAR" TYPE GALVANIZED STEEL (ASTM A570 GRADE 33) OR ENGINEER APPROVED EQUIVALENT.
2. SIDEWALKS AND PAVED AREAS SHALL BE CORE DRILLED BEFORE SIGN INSTALLATION.
3. SIGNS SHALL HAVE A MIN. HEIGHT OF 7 FT. FROM THE LOWER EDGE OF THE SIGN TO SIDEWALK GRADE, AND A 2 FT. LATERAL OFFSET FROM THE FACE OF CURB TO THE NEAR EDGE OF SIGN. SIGN LOCATION SHALL BE AS SHOWN ON PLANS AND PER MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D).
4. WRAP ANCHOR TUBING WITH TAPE BEFORE PLACING IN CONCRETE.
5. DEMONSTRATE SIGN POST IS REMOVABLE BEFORE RIVETING.

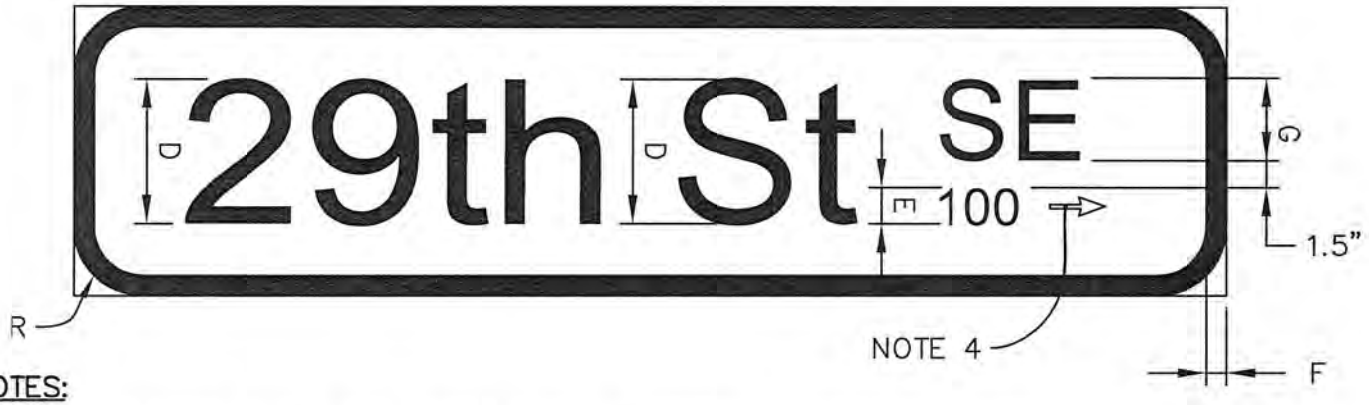
APPROVED BY CITY ENGINEER:	DATE:	CITY OF AUBURN WASHINGTON	TYPICAL SIGN POST INSTALLATION
	2/20/2018		
COMMUNITY DEVELOPMENT & PUBLIC WORKS DEPT.			STANDARD DETAIL: T-24.2

Plotted by: Craig Dobyns on 2/2/2018 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-24.2

Plotted by: Craig Dobyns on 7/13/2016 File location: M:\Construction Standard Details\Approved Drawing Files (dwg)\Traffic\STDETL-T-25.1



SIGN STANDARDS	
DIMENSION	INCHES
A	VARIES
B	16
C	6
D	8
E	2
F	1 1/4
G	4 1/2
R	3



NOTES:

1. SIGN BLADES SHALL BE 0.125" THICK TEMPERED ALUMINUM ALLOY.
2. BACKGROUND FOR STREET NAME SIGNS SHALL BE GREEN COLOR, ENGINEERING GRADE REFLECTIVE SHEETING.
3. ALL LETTERING AND 1-1/4" BORDER FOR STREET NAME SIGNS SHALL BE WHITE COLOR, REFLECTIVE HIGH INTENSITY GRADE SHEETING.
4. ARROW ON THE RIGHT SIDE OF THE BLOCK NUMBER INDICATES AN INCREASING BLOCK NUMBER IN THE ARROW DIRECTION.
5. FOR GUIDANCE ON LETTERING AND NUMERAL WIDTHS AND SPACING, SEE WSDOT "SIGN FABRICATION MANUAL" APPENDIX C.
6. ENGINEER APPROVAL OF SIGN PROOF(S) REQUIRED BEFORE FABRICATION.

APPROVED BY CITY ENGINEER: [signature] DATE: 8/5/2016

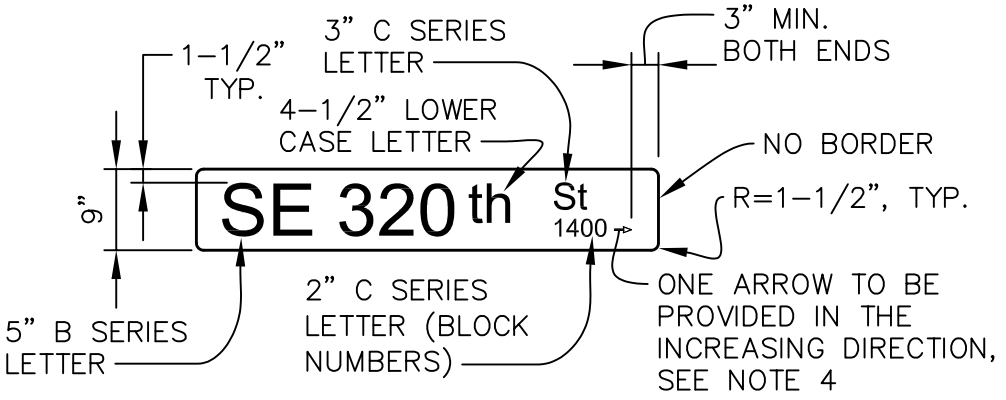
CITY OF AUBURN WASHINGTON

COMMUNITY DEVELOPMENT & PUBLIC WORKS DEPT.

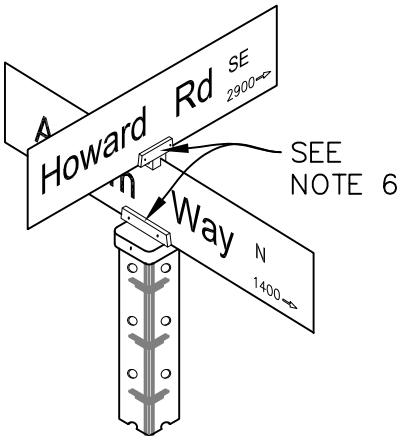
MAST ARM MOUNTED, STREET NAME SIGN DETAIL

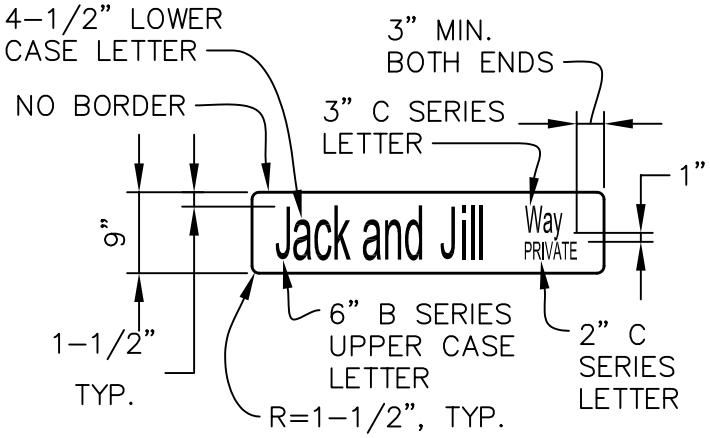
STANDARD DETAIL: T-25.1

STREET NAME STANDARD	
NAME	ABBREVIATION
AVENUE	Ave
BOULEVARD	Blvd
COURT	Ct
DRIVE	Dr
LANE	Ln
LOOP	Lp
PARKWAY	Pkwy
PLACE	Pl
ROAD	Rd
STREET	St
STREET SOUTHEAST	St SE
WAY	Way

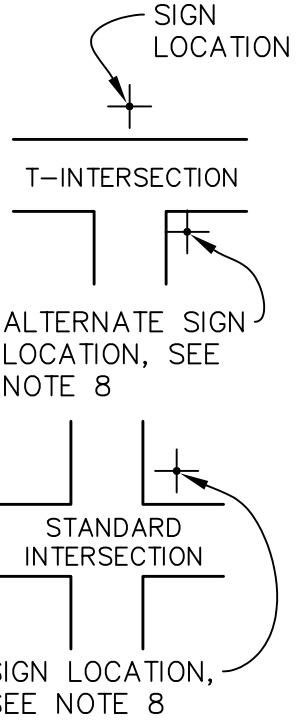


PUBLIC ROAD SIGN



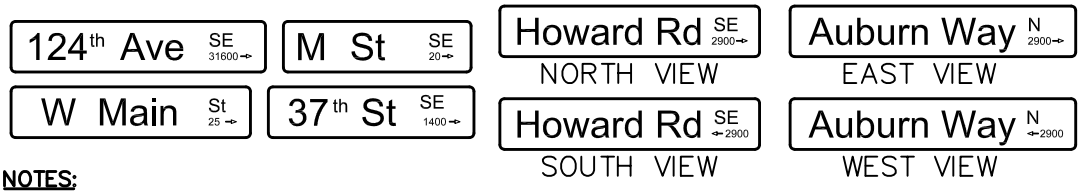


PRIVATE ROAD SIGN



SIGN PLACEMENT

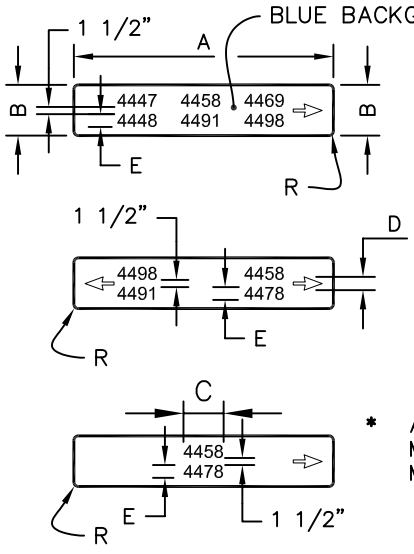
EXAMPLES:



NOTES:

1. NAME PLATE SHALL BE 9" WIDE X VARIABLE LENGTH OF FLAT BLANK, 0.080 GAUGE ALUMINUM, TREATED WITH ALODINE 1200 CONVERSION COATING, ZUMAR OR APPROVED EQUIVALENT.
2. BACKGROUND FOR PUBLIC ROAD STREET NAME SIGNS SHALL BE GREEN COLOR, ENGINEERING GRADE REFLECTIVE SHEETING.
3. BACKGROUND FOR PRIVATE ROAD STREET NAME SIGNS SHALL BE BLUE COLOR, ENGINEERING GRADE REFLECTIVE SHEETING.
4. ALL LETTERING FOR STREET NAME SIGNS SHALL BE WHITE COLOR, REFLECTIVE HIGH INTENSITY GRADE SHEETING.
5. POST INSTALLATION SHALL CONFORM TO REQUIREMENTS SET BY STANDARD DETAIL T-24.
6. HARDWARE SHALL BE ZUMAR STYLE 850FL2, 808F90A, OR APPROVED EQUIVALENT.
7. MOUNTING HEIGHT SHALL BE 8'-0".
8. WHEN AN INTERSECTION IS STOP SIGN CONTROLLED, THE STREET NAME SIGN SHALL BE PLACED ON THE SAME POST AND ABOVE THE STOP SIGN.
9. ENGINEER APPROVAL OF SIGN PROOF(S) SHALL BE REQUIRED BEFORE FABRICATION.

PRIVATE TRACT SIGNS:

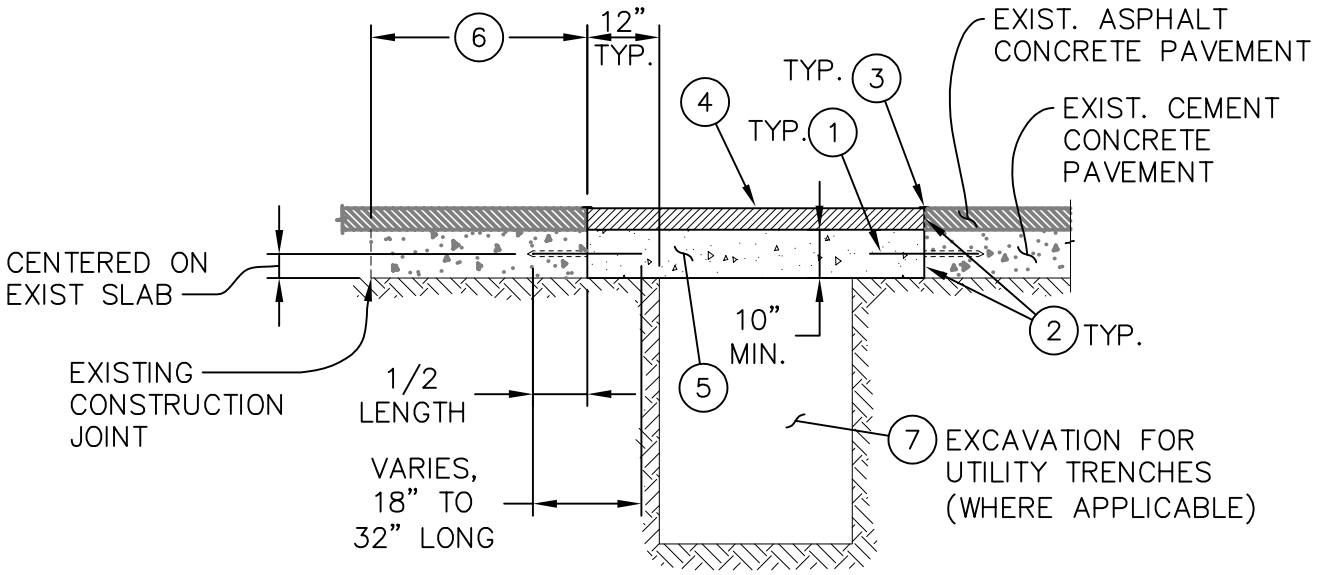


PRIVATE TRACT SIGN STANDARDS	
DIMENSION	INCHES
A	42*
B	12
C	12*
D	4
E	4
R	1½

* ADDITIONAL REQUIREMENTS MAY APPLY OR DIMENSIONS MAY VARY.

APPROVED BY CITY ENGINEER:	DATE:		
Jacob Sweeting	02/09/2023	CITY OF AUBURN WASHINGTON	POST MOUNTED, STREET NAME SIGN DETAIL
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: T-26.4

Plotted by: Craig Dobyns on 1/23/2023 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-26.4



NOTES:

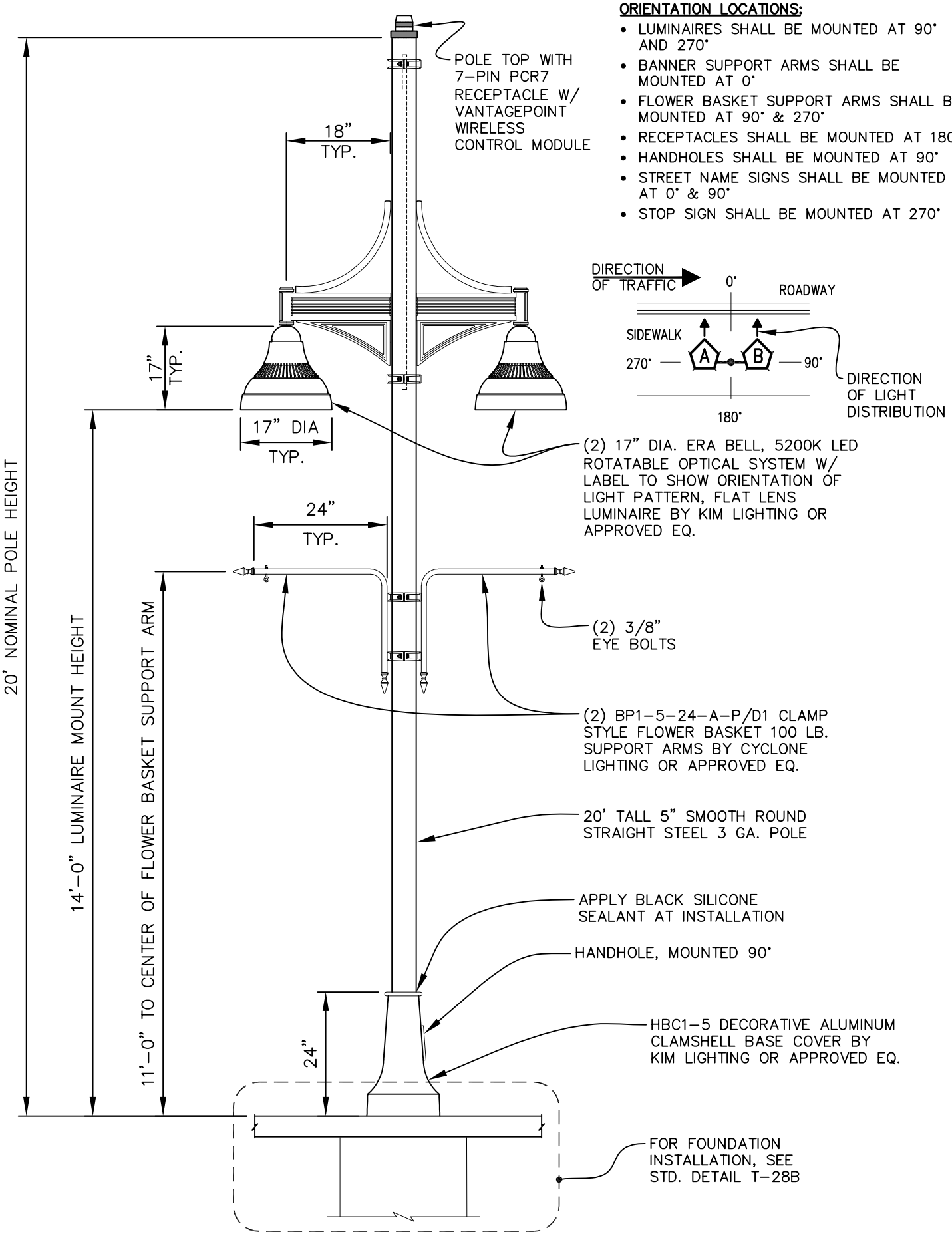
1. FOR TRANSVERSE JOINTS CONSTRUCTION, THE DOWEL BARS SHALL BE 1 1/2" DIA. x 18" LONG AND INSTALLED AT 12" ON CENTER. FOR LONGITUDINAL JOINTS CONSTRUCTION, TIE BARS SHALL BE #5 x 32" LONG AND INSTALLED AT 36" ON CENTER. DRILL HOLES TO EXISTING ADJACENT CONCRETE PANELS AND PARALLEL TO EXISTING GRADE. HOLES SHALL BE BLOWN CLEAN WITH COMPRESSED AIR PRIOR TO APPLYING EPOXY RESIN INTO THE HOLES. THEN INSERT EPOXY RESIN COATED BARS IN THE HOLES SUCH THAT THE BACK OF THE HOLES ARE FILLED FIRST.
2. APPLY HOT POURED ELASTIC TYPE SEALANT TO ENTIRE EDGE AND FULL DEPTH OF THE JOINTS BEFORE PAVING.
3. APPLY SURFACE SEAL WITH ASPHALT CEMENT AR-4000 AT MATCHLINES.
4. WHERE REPLACEMENT OF EXISTING ASPHALT CONCRETE PAVEMENT IS REQUIRED, APPLY NEW HMA CL. 1/2" TO MATCH EXISTING THICKNESS.
5. MATCH THICKNESS OF EXISTING CEMENT CONCRETE PAVEMENT, BUT IN NO CASE SHALL IT BE LESS THAN 10". CEMENT CONCRETE SHALL BE CL. 4000 WITH 5% AIR ENTRAINMENT. TRAFFIC SHALL BE KEPT OFF NEW PAVEMENT FOR 7 DAYS OR UNTIL DESIGN STRENGTH IS ACHIEVED, WHICHEVER COMES FIRST.
6. WHENEVER A REMAINING CONCRETE PANEL IS 3' WIDE OR LESS IN ANY DIRECTION FROM EXISTING CONSTRUCTION JOINT TO NEW CONSTRUCTION JOINT, IT SHALL BE REMOVED AND REPLACED AS PART OF THE NEW PANEL.
7. BEDDING/BACKFILL SHALL BE PER STANDARD DETAIL T-01.

APPROVED BY CITY ENGINEER: Jacob Sweeting	DATE: 02/09/2023	CITY OF AUBURN WASHINGTON	REPAIR OF EXISTING CEMENT CONCRETE PANEL IN ROADWAY
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: T-27.2

Plotted by: Craig Dobyns on 2/6/2023 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-27.1

ORIENTATION LOCATIONS:

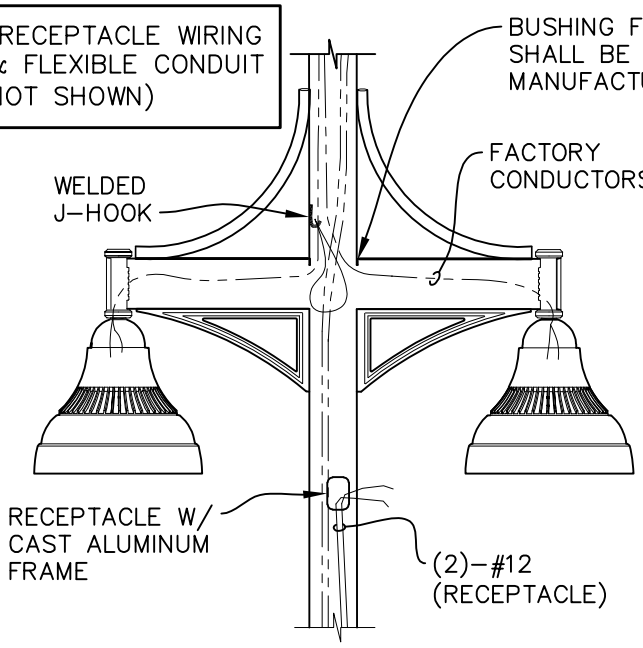
- LUMINAIRES SHALL BE MOUNTED AT 90° AND 270°
- BANNER SUPPORT ARMS SHALL BE MOUNTED AT 0°
- FLOWER BASKET SUPPORT ARMS SHALL BE MOUNTED AT 90° & 270°
- RECEPTACLES SHALL BE MOUNTED AT 180°
- HANDHOLES SHALL BE MOUNTED AT 90°
- STREET NAME SIGNS SHALL BE MOUNTED AT 0° & 90°
- STOP SIGN SHALL BE MOUNTED AT 270°



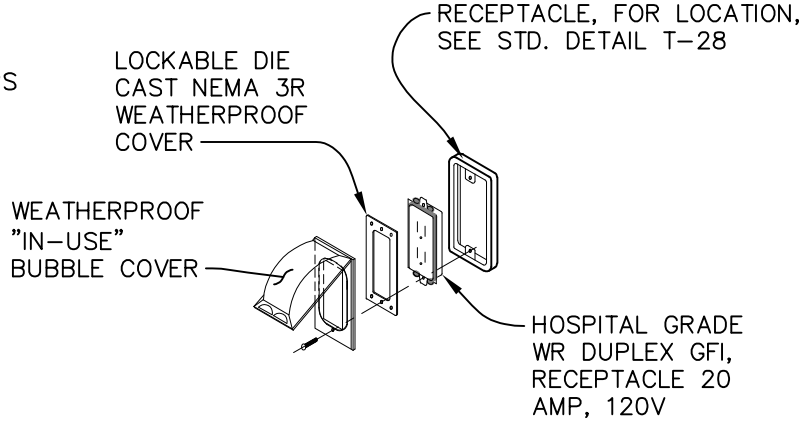
APPROVED BY CITY ENGINEER: Jacob Sweeting	DATE: 1/17/2022	CITY OF AUBURN WASHINGTON	DOWNTOWN PEDESTRIAN POLE MOUNT LIGHTING STANDARD
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: T-28.4

Plotted by: Craig Dobyns on 1/6/2022 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-28.4

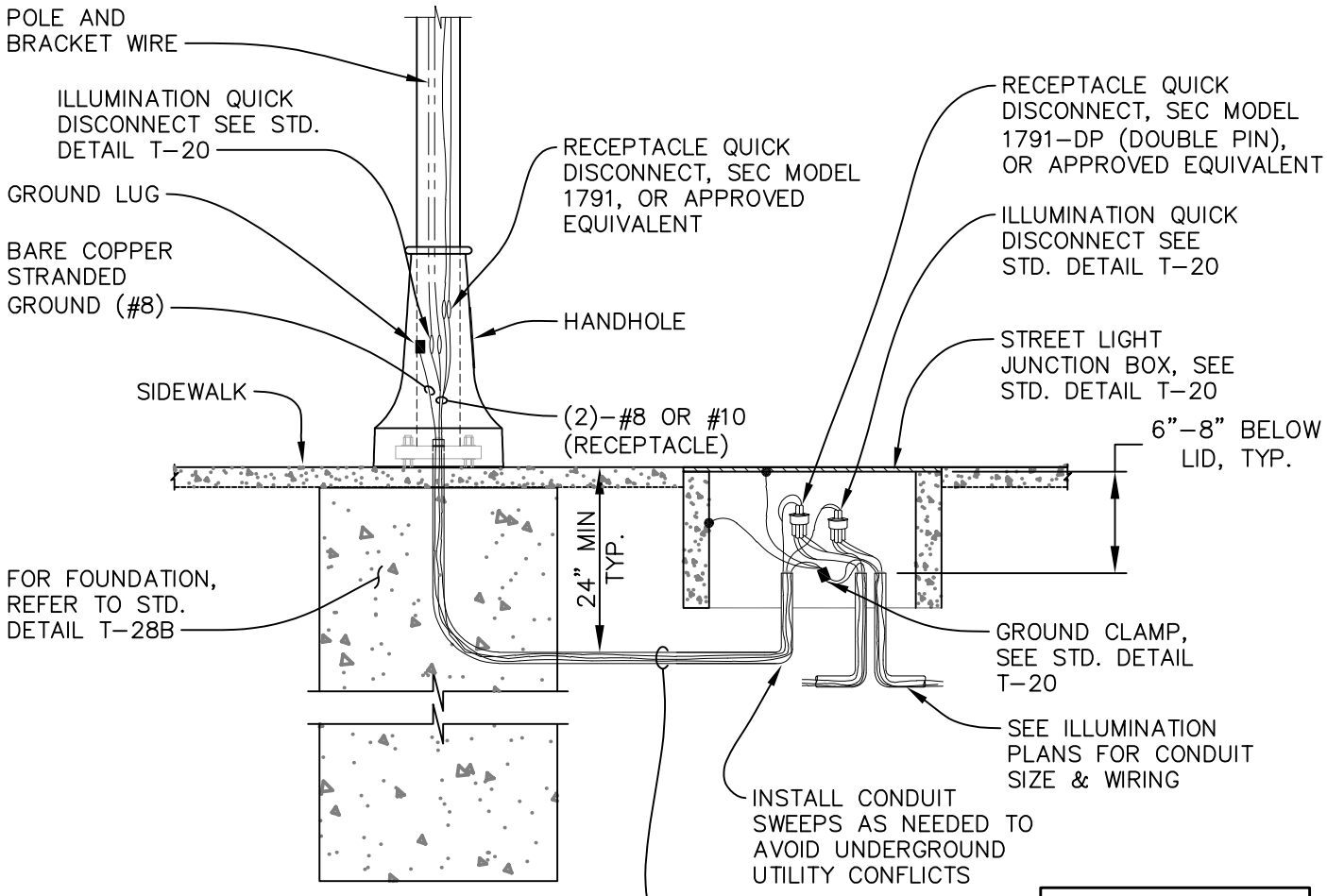
(RECEPTACLE WIRING & FLEXIBLE CONDUIT NOT SHOWN)



LUMINAIRE WIRING
NOT TO SCALE



POLE RECEPTACLE
NOT TO SCALE

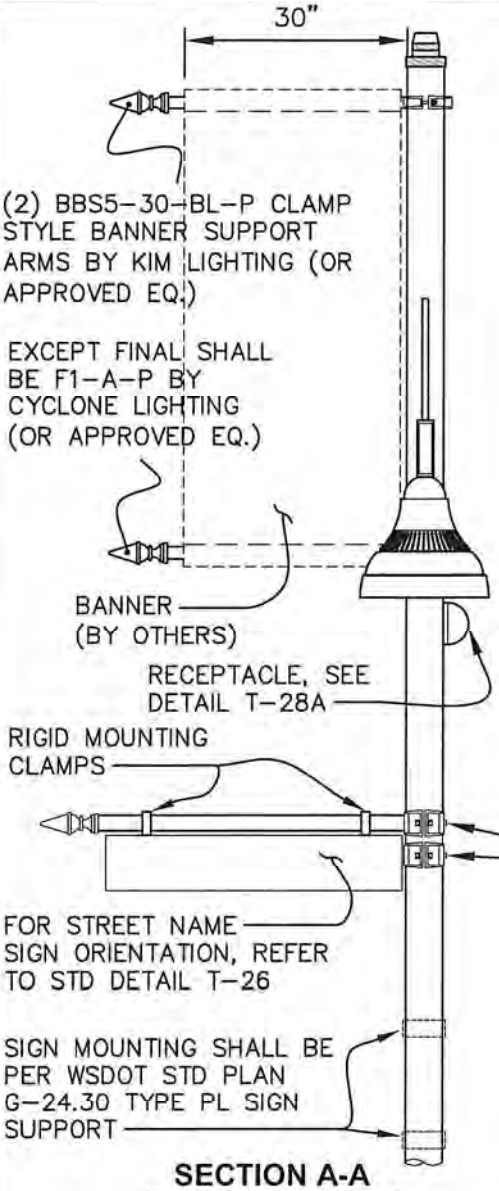


TYPICAL LUMINAIRE/ JUNCTION BOX WIRING
NOT TO SCALE

* REFER TO STD. DETAIL T-20 FOR INFORMATION NOT SHOWN
* SPARE/EMPTY CONDUITS SHALL CONTAIN DETECTABLE PULL TAPE

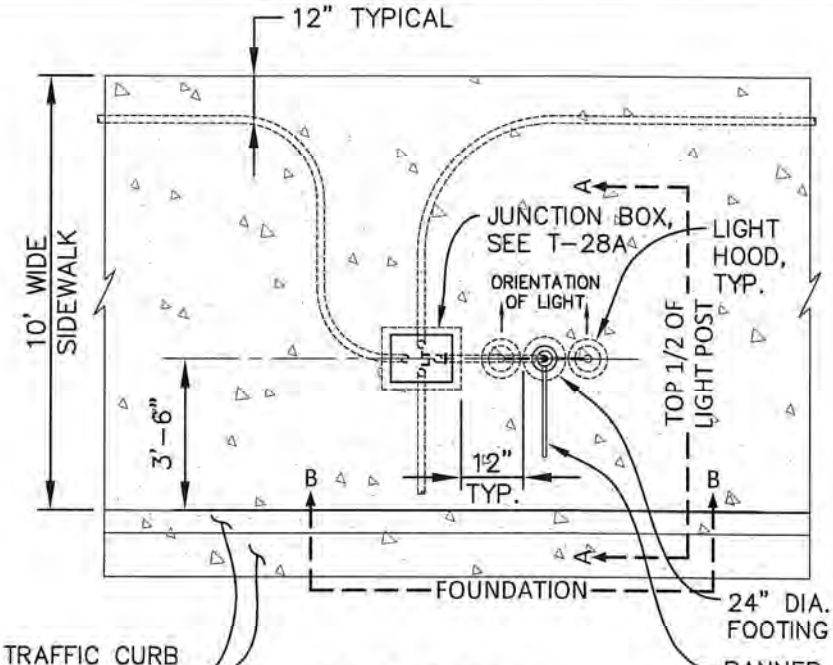
APPROVED BY CITY ENGINEER: Jacob Sweeting	DATE: 02/09/2023	CITY OF AUBURN WASHINGTON	DOWNTOWN PEDESTRIAN POLE MOUNT LIGHTING STANDARD
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: T-28A.4

Plotted by: Craig Dobyns on 2/6/2023 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-28A.4



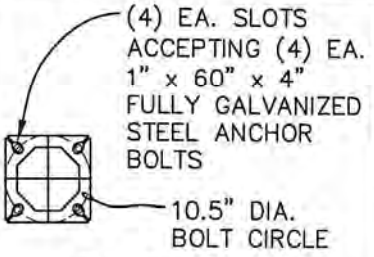
SECTION A-A

NTS



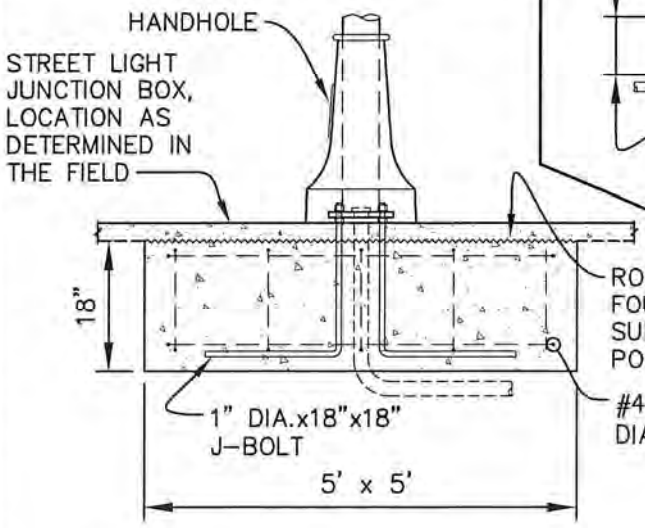
PLAN VIEW

NTS



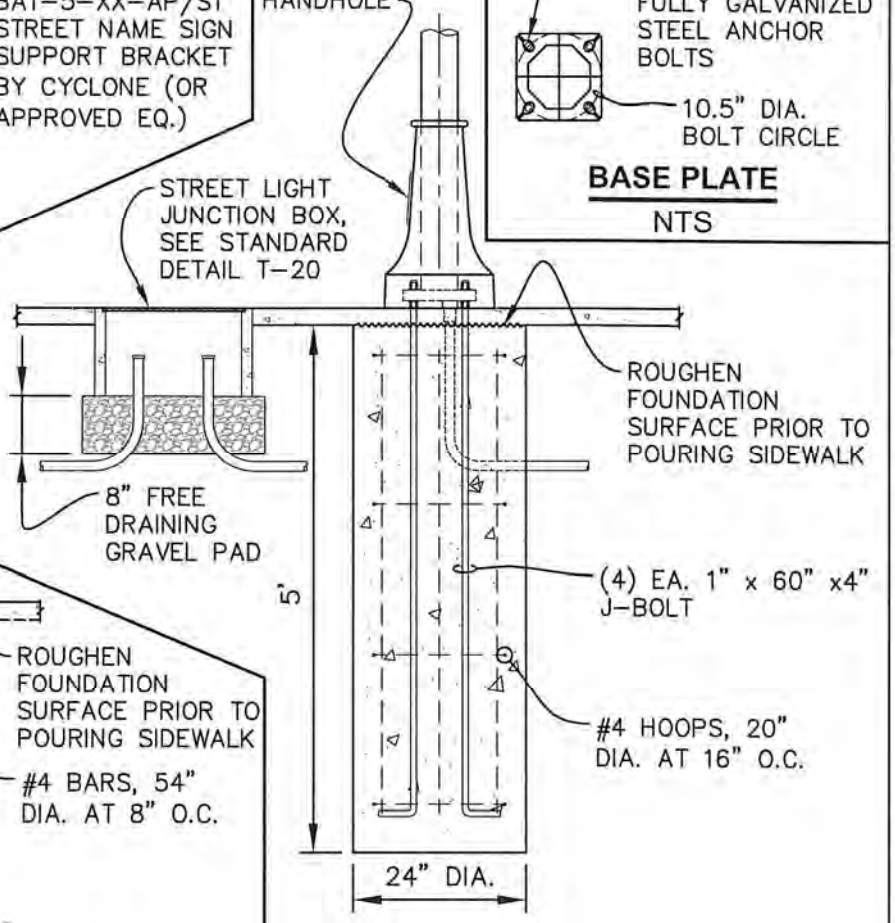
BASE PLATE

NTS



ALTERNATE BASE (SPREAD FOOTING)

NTS



SECTION B-B

NTS

APPROVED BY CITY ENGINEER: Chris Greening DATE: 12/31/18

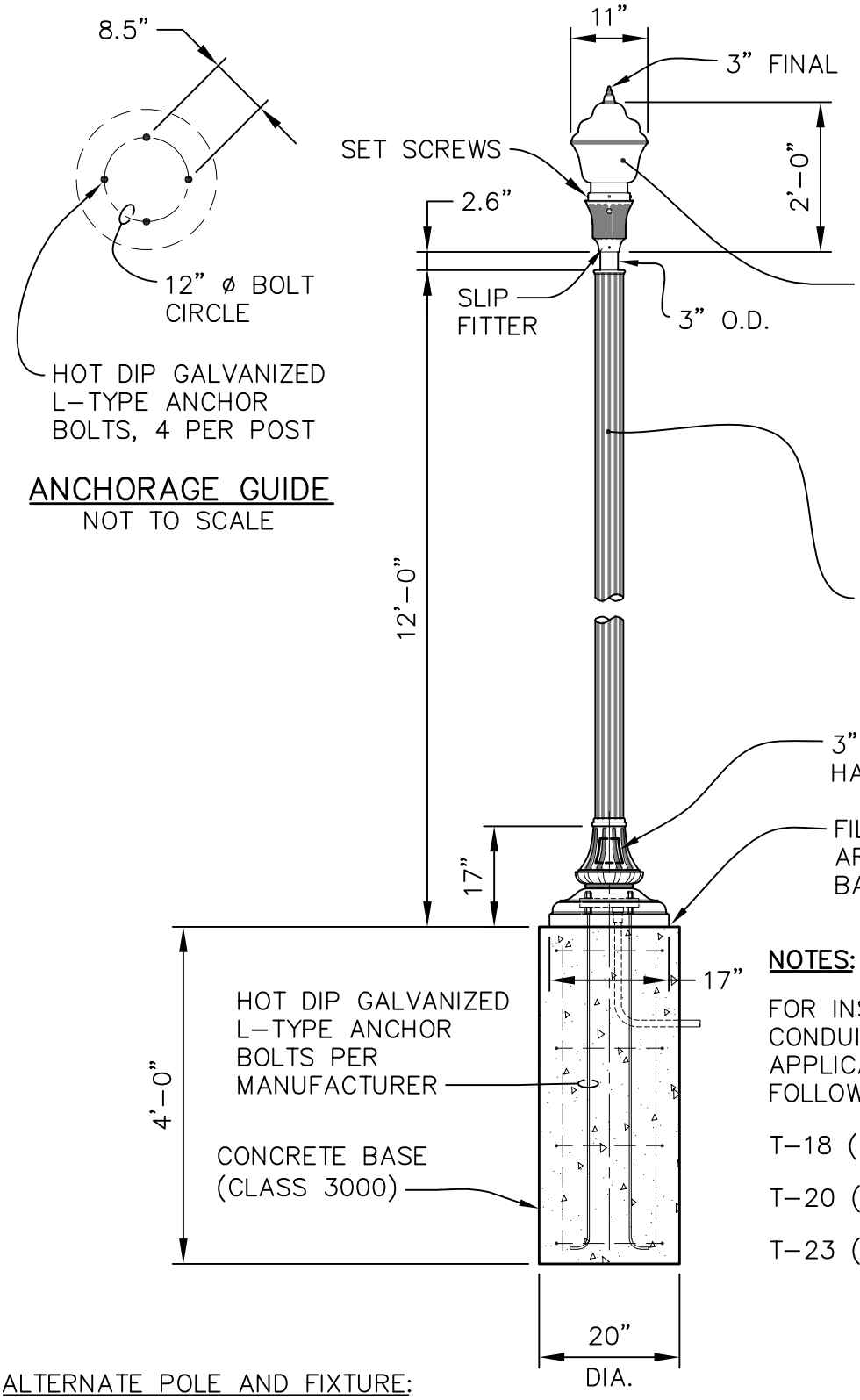
CITY OF AUBURN WASHINGTON

DOWNTOWN PEDESTRIAN POLE MOUNT LIGHTING STANDARD

PUBLIC WORKS DEPARTMENT

STANDARD DETAIL: T-28B.2

Plotted by: Craig Dobyns on 12/31/2018 File location: N:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-28B.2



ANCHORAGE GUIDE
NOT TO SCALE

ELEVATION
NOT TO SCALE

NOTES:

FOR INSTALLATION OF ELECTRICAL CONDUIT AND JUNCTION BOX, SEE APPLICABLE PORTIONS OF THE FOLLOWING STANDARD DETAILS:

T-18 (LUMINAIRE & CONDUIT LAYOUT)

T-20 (LUMINAIRE WIRING)

T-23 (ELECTRICAL TRENCH)

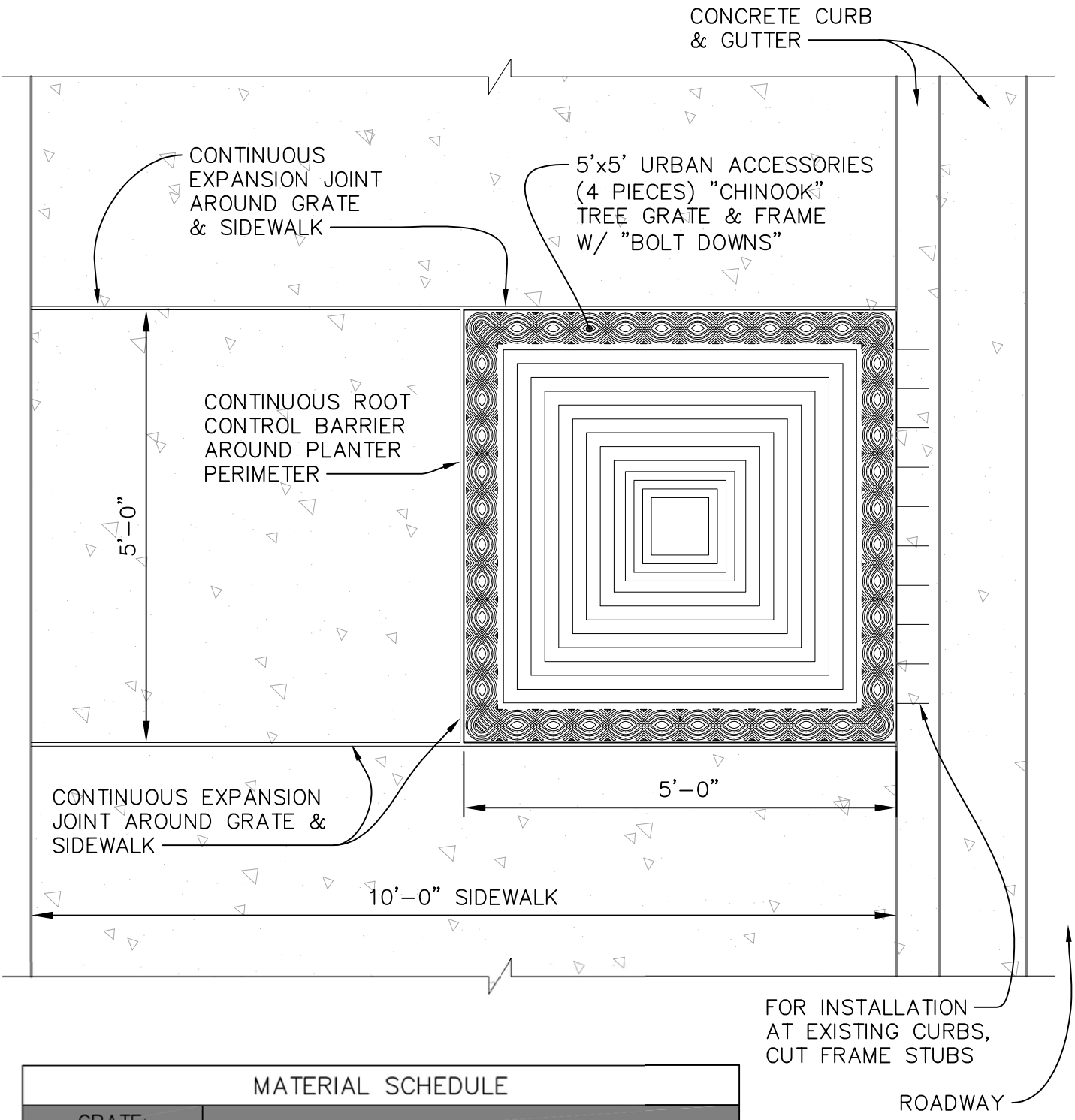
ALTERNATE POLE AND FIXTURE:

KING LUMINAIRE WITH FIELD SWITCHABLE DIMABLE DRIVER:
K445-T1GR-IV-60
(SSL)-4004-120:277V-K24-(MOD)PR7-3K

HAPCO ARLEN LIGHT POLE:
37936-012 (GREEN OR BLACK)

APPROVED BY CITY ENGINEER:	DATE:		
Jacob Sweeting	1/17/2022	CITY OF AUBURN WASHINGTON	LOCAL RESIDENTIAL ORNAMENTAL STREET LIGHTING STANDARD
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: T-29.5

Plotted by: Craig Dobyns on 1/6/2022 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-29.5



MATERIAL SCHEDULE	
GRATE:	
MATERIAL	GREY IRON ASTM A48 CLASS 358 OR BETTER
FINISH	NATURAL PATINA OF RAW IRON
FRAME:	
MATERIAL	MILD STEEL ASTM A36
FINISH	NATURAL PATINA OF RAW STEEL
LOAD RATING: PEDESTRIAN	

APPROVED BY CITY ENGINEER: Jacob Sweeting

DATE: 01/05/2021

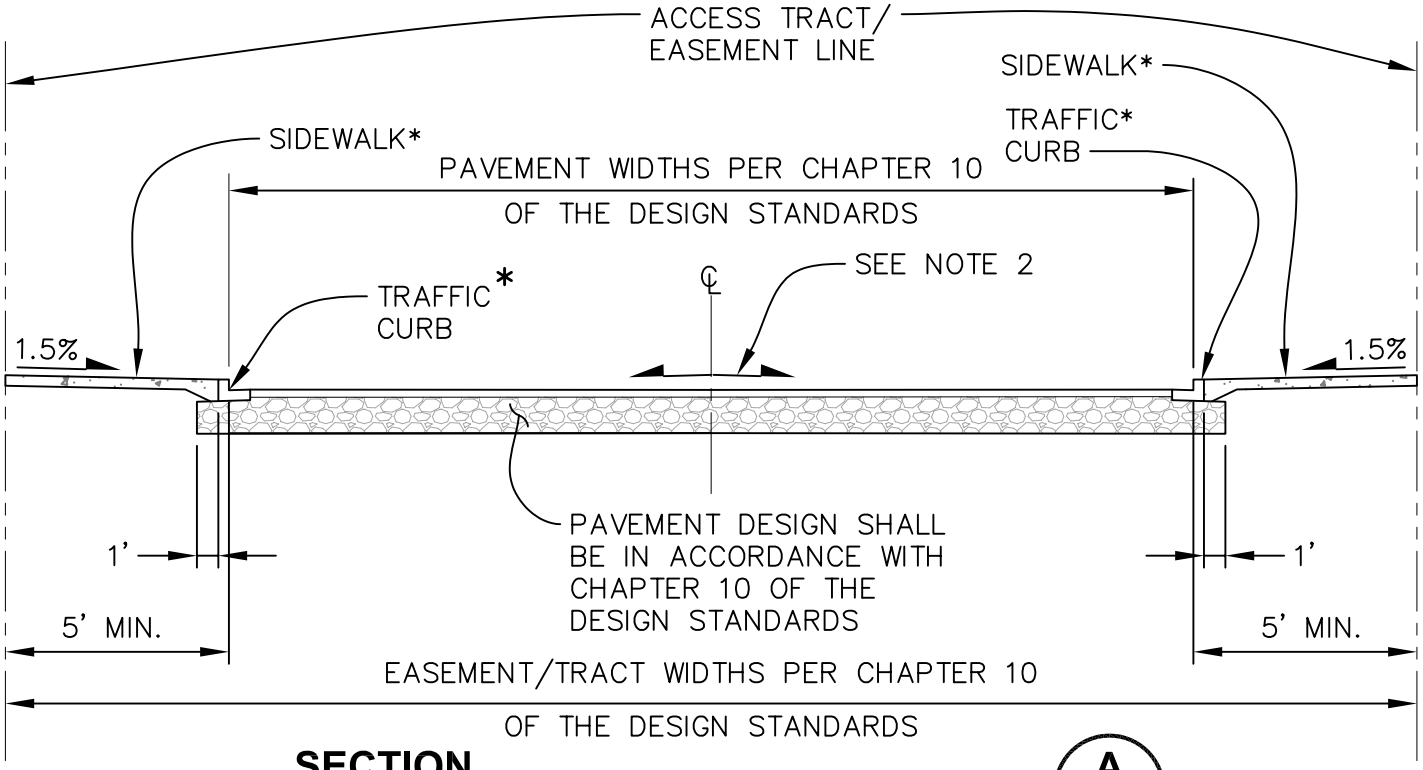
CITY OF AUBURN WASHINGTON

TYPICAL PLAN
FOR TREE GRATE

PUBLIC WORKS DEPARTMENT

STANDARD DETAIL: T-30.2

Plotted by: Craig Dobyns on 12/16/2020 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-30.2

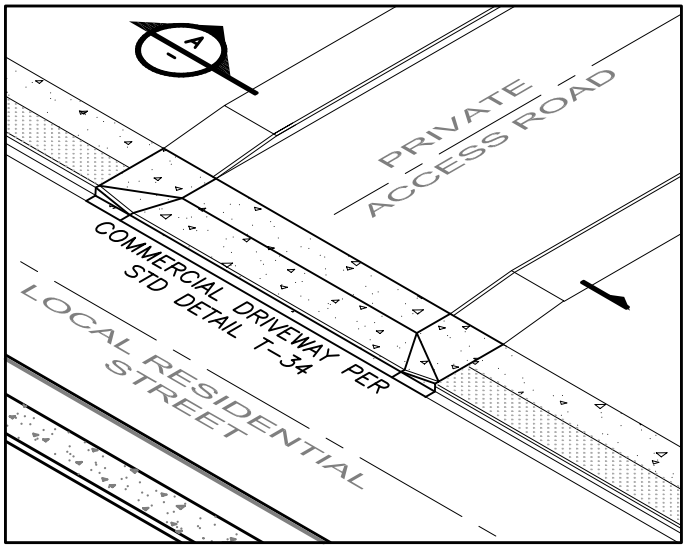


SECTION A-
NTS

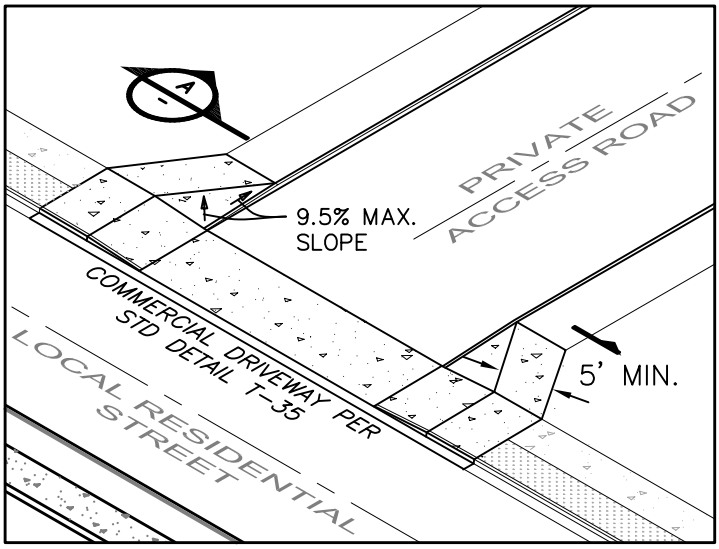
NOTES:

1. CEMENT CONCRETE TRAFFIC CURB & GUTTER SHALL BE IN ACCORDANCE W/ WSDOT STANDARD PLAN F-10.12
2. SIDEWALK SHALL BE PER STD. DETAIL T-13, T-14, OR T-15.

* CURB AND SIDEWALK REQUIRED ON BOTH SIDES OF ACCESS ROAD/DRIVEWAY FOR COMMERCIAL AND INDUSTRIAL USE. CURB AND SIDEWALK REQ'D ON ONE SIDE OF ACCESS ROAD/DRIVEWAY FOR RESIDENTIAL (3 OR MORE UNITS). CURB AND SIDEWALK MAY BE OMITTED WHERE ACCESS ROAD/DRIVEWAY SERVES 2 OR LESS RESIDENTIAL UNITS.



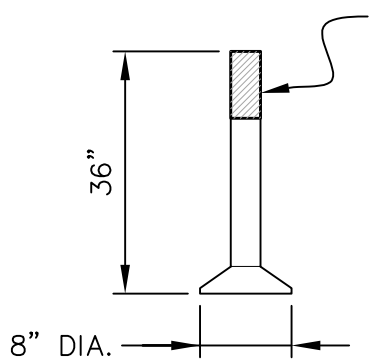
ISOMETRIC
NTS



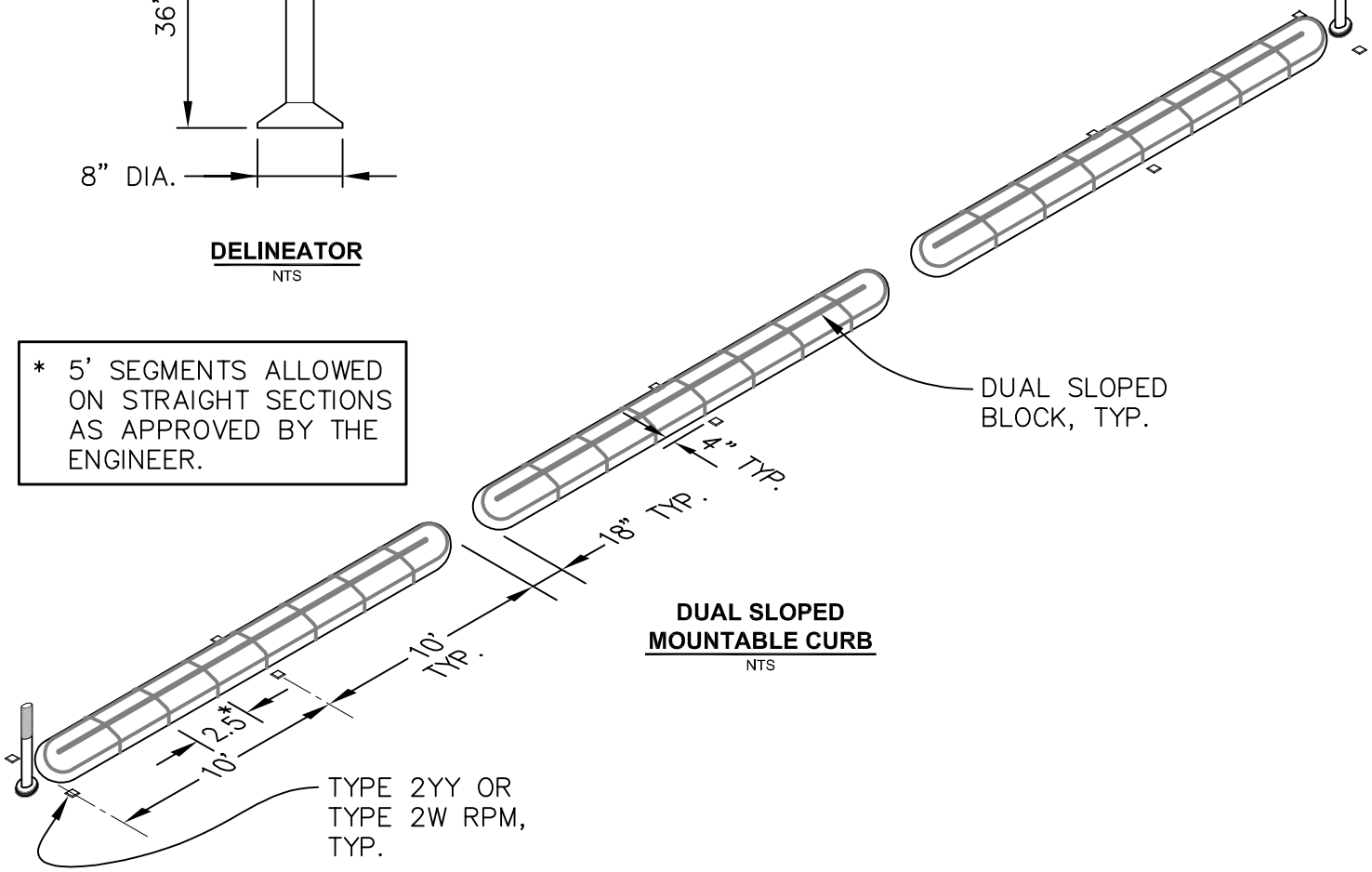
ISOMETRIC
NTS

APPROVED BY CITY ENGINEER:	DATE:	CITY OF AUBURN WASHINGTON	PRIVATE ACCESS ROAD / SHARED DRIVEWAY
Jacob Sweeting	02/09/2023		
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: T-31.5

Plotted by: Craig Dobyns on 2/9/2023 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-31.5



DELINEATOR
NTS



* 5' SEGMENTS ALLOWED ON STRAIGHT SECTIONS AS APPROVED BY THE ENGINEER.

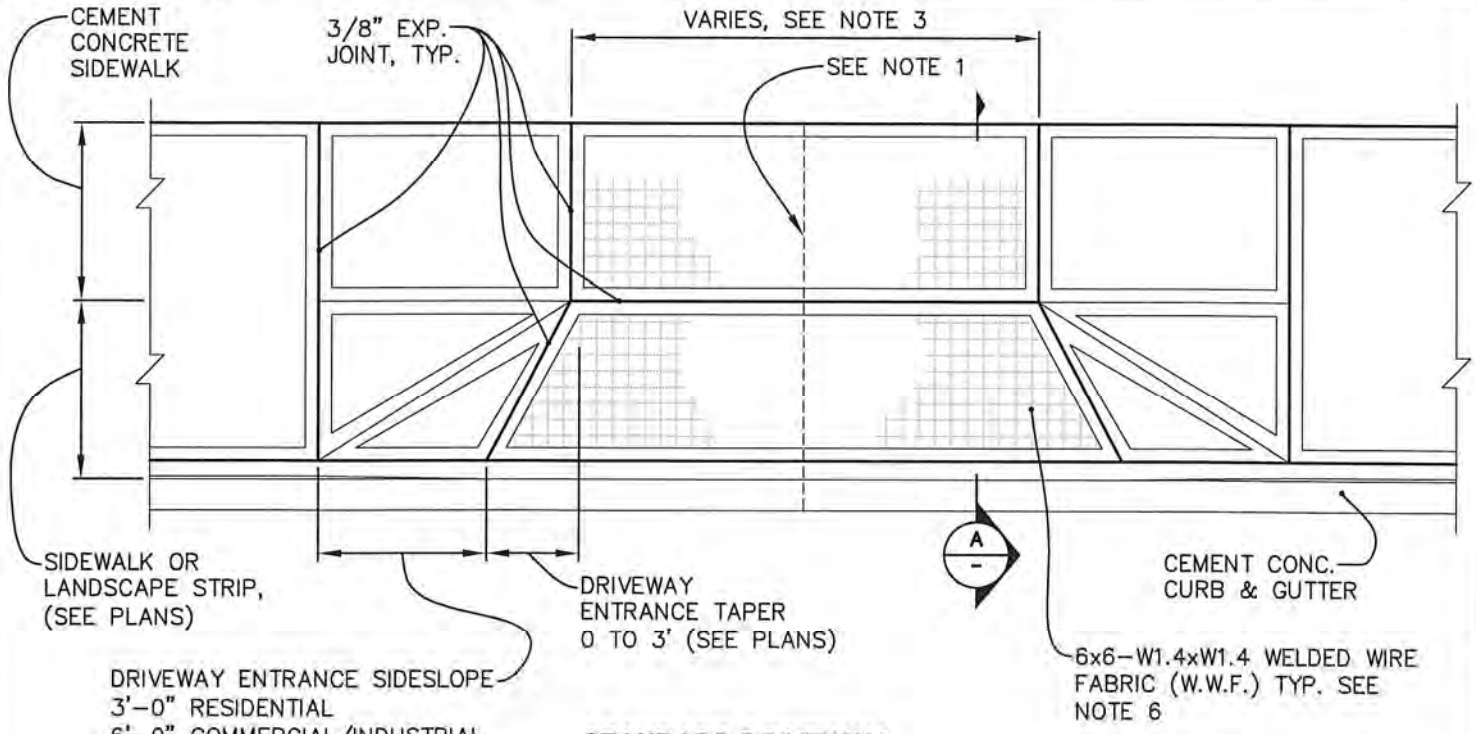
DUAL SLOPED MOUNTABLE CURB
NTS

NOTES:

1. PRECAST CONCRETE DUAL FACED, SLOPED MOUNTABLE CURB SHALL BE PER WSDOT STANDARD PLAN F-10.64, 12" WIDE.
2. CURB SHALL BE INSTALLED USING EPOXY ADHESIVE PER WSDOT STANDARD SPECIFICATION 9-26.2. EPOXY SHALL BE APPLIED AT A RATE OF ONE GALLON PER SEVEN FEET OF CURBING.
3. CURB SHALL BE INSTALLED IN 20' SEGMENTS, WITH 18" OPENING BETWEEN ENDS, OR MODIFIED TO FIT FIELD DIMENSIONS AS APPROVED BY THE ENGINEER.
4. CURB AND DELINEATOR SHALL BE THE SAME COLOR AS THE CHANNELIZATION STRIPE.
5. DELINEATOR BASE SHALL BE AFFIXED TO PAVEMENT WITH FLEXIBLE BITUMINOUS PAVEMENT MARKER ADHESIVE PER WSDOT STANDARD SPECIFICATION 9-02.1(8).
6. RPM'S SHALL BE PLACED AT EACH APPROACH END OF THE CURBING AND CENTERED ON EACH SECTION AS SHOWN. THEY SHALL BE THE SAME COLOR AS THE CHANNELIZATION STRIPE.
7. THIS DETAIL IS USED TO RETRO-FIT EXISTING STREETS. NEW CONSTRUCTION SHALL REQUIRE CAST-IN-PLACE CURBS.

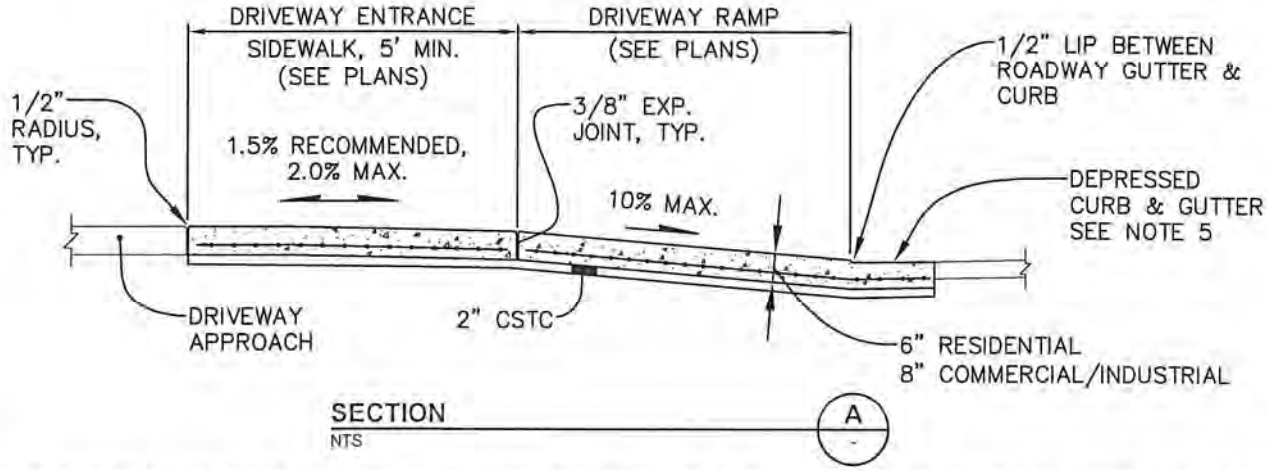
APPROVED BY CITY ENGINEER: Jacob Sweeting	DATE: 01/05/2021	CITY OF AUBURN WASHINGTON	PRECAST CONCRETE DUAL FACED SLOPED MOUNTABLE CURB RETROFIT
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: T-32.3

Plotted by: Craig Dobyns on 12/30/2020 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-32.3



STANDARD DRIVEWAY

NTS



SECTION A

NTS

NOTES:

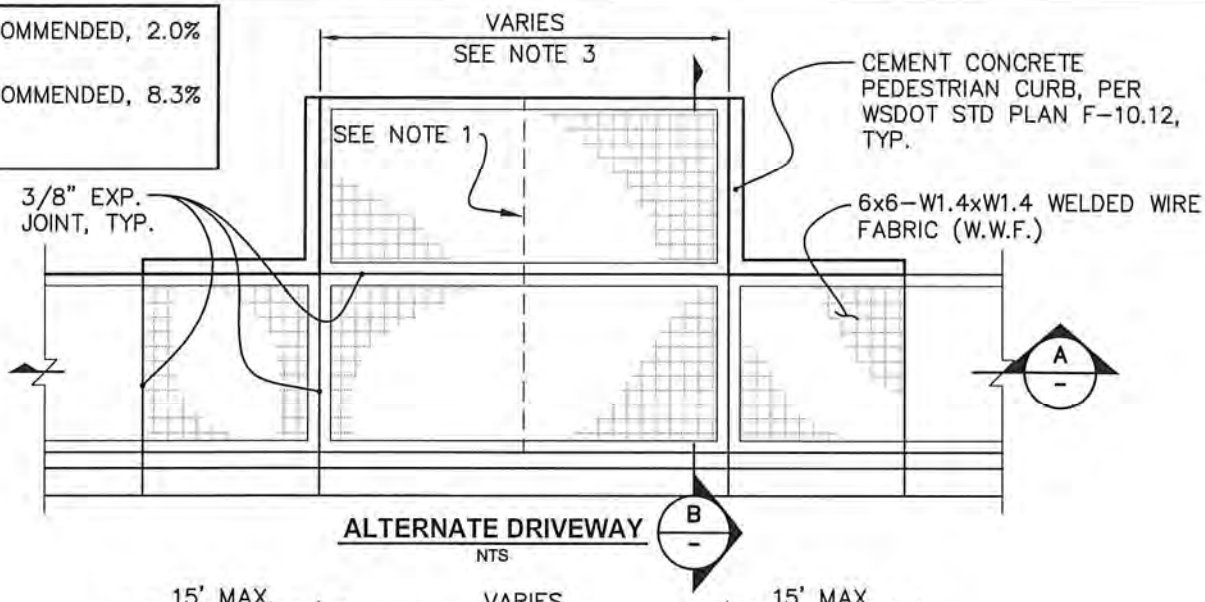
1. WHEN THE DRIVEWAY WIDTH EXCEEDS 15'(FT), CONSTRUCT A FULL DEPTH EXPANSION JOINT WITH 3/8" JOINT FILLER ALONG THE DRIVEWAY CENTERLINE. SEE WSDOT STANDARD PLAN F-30.10. CONSTRUCT EXPANSION JOINTS PARALLEL WITH THE CENTERLINE AS REQUIRED AT 15'(FT) MAXIMUM SPACING WHEN DRIVEWAY WIDTHS EXCEED 30'(FT).
2. RESIDENTIAL DRIVEWAY SERVING 2 OR MORE LIVING UNITS AND/OR THAT CONNECT TO AN ACCESS ROAD SHALL BE CONSTRUCTED AS A COMMERCIAL/INDUSTRIAL DRIVEWAY.
3. SEE STANDARD DETAIL T-04 FOR DRIVEWAY WIDTHS AND LOCATIONS.
4. CONCRETE SHALL BE CLASS 4000 WITH 5% AIR ENTRAINMENT WITH A BROOM FINISH PARALLEL TO CURB LINE.
5. DEPRESSED CURB FOR HEAVY COMMERCIAL/INDUSTRIAL DRIVEWAYS SHALL BE POURED INTEGRAL/MONOLITHIC TO DRIVEWAY.
6. WELDED WIRE FABRIC (W.W.F.) SHALL BE PLACED 3" FROM BOTTOM, AND 2" FROM ALL OTHER LIMITS. WELDED WIRE FABRIC (W.W.F.) NOT REQUIRED FOR RESIDENTIAL DRIVEWAYS.
7. WHEN DRIVEWAY OPENING IS TO BE CONSTRUCTED WHERE CURB EXISTS, THE ENTIRE CURB AND GUTTER SECTION SHALL BE REMOVED TO THE NEAREST EXPANSION JOINT ON EACH SIDE OF THE OPENING AND REPLACED.

APPROVED BY CITY ENGINEER:	DATE:	CITY OF AUBURN WASHINGTON	STANDARD DRIVEWAY – OFFSET APRON
	2/23/2018		
COMMUNITY DEVELOPMENT & PUBLIC WORKS DEPT.			STANDARD DETAIL: T-34.1

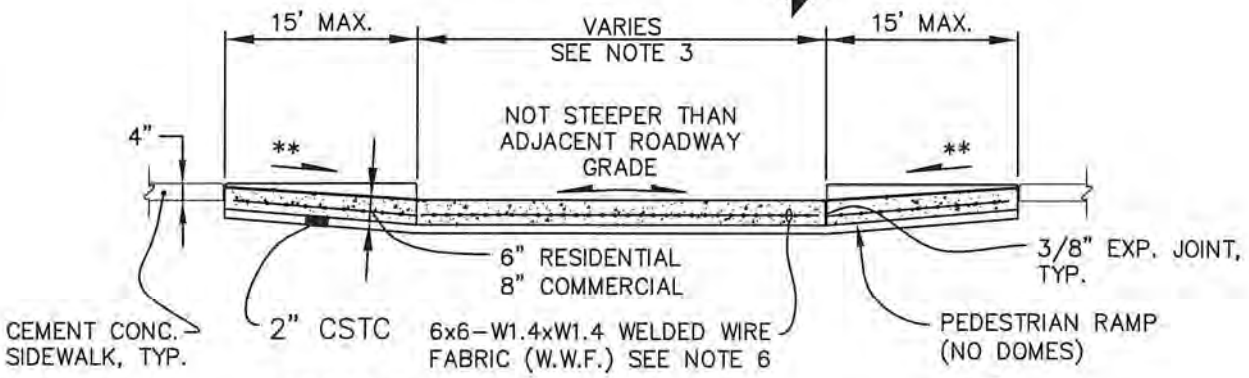
Plotted by: Craig Dobyns on 2/22/2018 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-34.1

* 1.5% RECOMMENDED, 2.0% MAX.

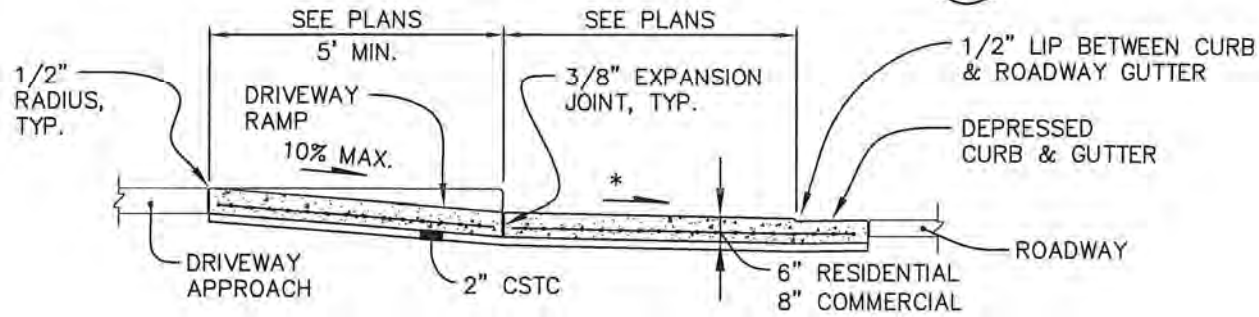
** 7.5% RECOMMENDED, 8.3% MAX.



ALTERNATE DRIVEWAY
NTS



SECTION — A
NTS



SECTION — B
NTS

NOTES:

1. WHEN THE DRIVEWAY WIDTH EXCEEDS 15'(FT), CONSTRUCT A FULL DEPTH EXPANSION JOINT WITH 3/8" JOINT FILLER ALONG THE DRIVEWAY CENTERLINE. SEE WSDOT STANDARD PLAN F-30.10. CONSTRUCT EXPANSION JOINTS PARALLEL WITH THE CENTERLINE AS REQUIRED AT 15'(FT) MAXIMUM SPACING WHEN DRIVEWAY WIDTHS EXCEED 30'(FT).
2. RESIDENTIAL DRIVEWAY SERVING 2 OR MORE LIVING UNITS AND/OR THAT CONNECT TO AN ACCESS ROAD SHALL BE CONSTRUCTED AS A COMMERCIAL/INDUSTRIAL DRIVEWAY.
3. SEE STANDARD DETAIL T-04 FOR DRIVEWAY WIDTHS AND LOCATIONS.
4. CONCRETE SHALL BE CLASS 4000 WITH 5% AIR ENTRAINMENT WITH A BROOM FINISH PARALLEL TO CURB LINE.
5. DEPRESSED CURB FOR HEAVY COMMERCIAL/INDUSTRIAL DRIVEWAYS SHALL BE POURED INTEGRAL/MONOLITHIC TO DRIVEWAY.
6. WELDED WIRE FABRIC (W.W.F.) SHALL BE PLACED 3" FROM BOTTOM, AND 2" FROM ALL OTHER LIMITS. WELDED WIRE FABRIC (W.W.F.) NOT REQUIRED FOR RESIDENTIAL DRIVEWAYS.
7. WHEN DRIVEWAY OPENING IS TO BE CONSTRUCTED WHERE CURB EXISTS, THE ENTIRE CURB AND GUTTER SECTION SHALL BE REMOVED TO THE NEAREST EXPANSION JOINT ON EACH SIDE OF THE OPENING AND REPLACED.

APPROVED BY CITY ENGINEER:	DATE: 2/23/2018	CITY OF AUBURN WASHINGTON	ALTERNATE DRIVEWAY – INLINE (DROP) APRON
COMMUNITY DEVELOPMENT & PUBLIC WORKS DEPT.			STANDARD DETAIL: T-35.1

Plotted by: Craig Dobyns on 2/23/2018 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-35.1

STREET LIGHTING LAMP SCHEDULE					
STREET CLASSIFICATION	LAMP TYPE	UPDATED SPEC. LEOTEK PART #	WATTAGE	ALTERNATE SPEC. AEL PART #	WATTAGE
PRINCIPAL ARTERIAL	TYPE A	GCL2-80J-MV-40K-3R-GY-295-PCR7-WL	206	ATB2 P601 MVOLT R3 MP NL P7	175
MINOR ARTERIAL	TYPE B	GCM3-60J-MV-40K-2R-GY-185-PCR7-WL	123	ATBO P303 MVOLT R2 MP NL P7	106
MINOR ARTERIAL W/ CENTER TURN LANE OR MEDIAN	TYPE B	GCM3-60J-MV-40K-2R-GY-185-PCR7-WL	123	ATBO P303 MVOLT R2 MP NL P7	106
NON-RESIDENTIAL COLLECTOR	TYPE B	GCM3-60J-MV-40K-2R-GY-185-PCR7-WL	123	ATBO P303 MVOLT R2 MP NL P7	106
RESIDENTIAL COLLECTOR	TYPE D	GCJ3-30J-MV-40K-2R-GY-090-PCR7-WL	64	ATBO P203 MVOLT R2 MP NL P7	70
RESIDENTIAL COLLECTOR WITH CENTER TURN LANE OR MEDIAN	TYPE D	GCJ3-30J-MV-40K-2R-GY-090-PCR7-WL	64	ATBO P203 MVOLT R2 MP NL P7	70
LOCAL NON-RESIDENTIAL	TYPE D	GCJ3-30J-MV-40K-2R-GY-090-PCR7-WL	64	ATBO P203 MVOLT R2 MP NL P7	70
LOCAL RESIDENTIAL AND LOCAL RESIDENTIAL ALTERNATIVE *	TYPE F	GCJ1-30J-MV-40K-2R-GY-055-PCR7-WL	34	ATBMic P104 MVOLT R2 MP NL P7	37

* SEE STD DETAIL T-29 FOR LOCAL RESIDENTIAL ORNAMENTAL OPTION.

NOTE:
SEE SECTION 9-29.10 OF THE SPECIAL PROVISIONS FOR REQUIREMENTS OF BRANDS NOT LISTED IN THIS SCHEDULE

APPROVED BY CITY ENGINEER: Jason Gruening
DATE: 2/7/24

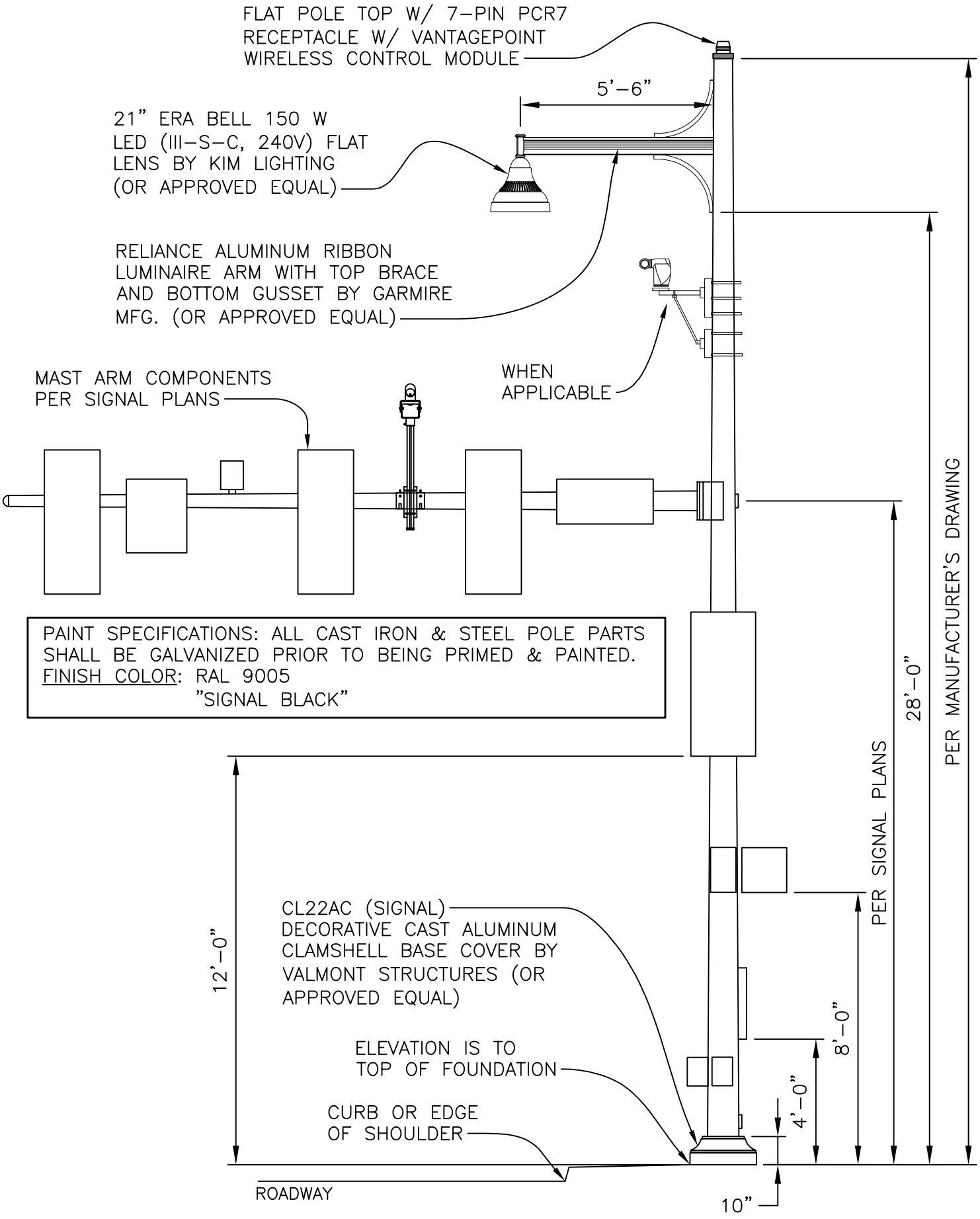
CITY OF AUBURN WASHINGTON

STREET LIGHTING LAMP SCHEDULE

PUBLIC WORKS DEPARTMENT

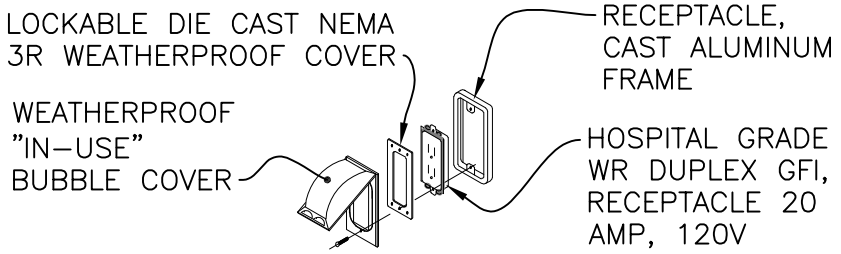
STANDARD DETAIL: T-37.6

Plotted by: Craig Dobyns on 1/10/2024 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-37.6



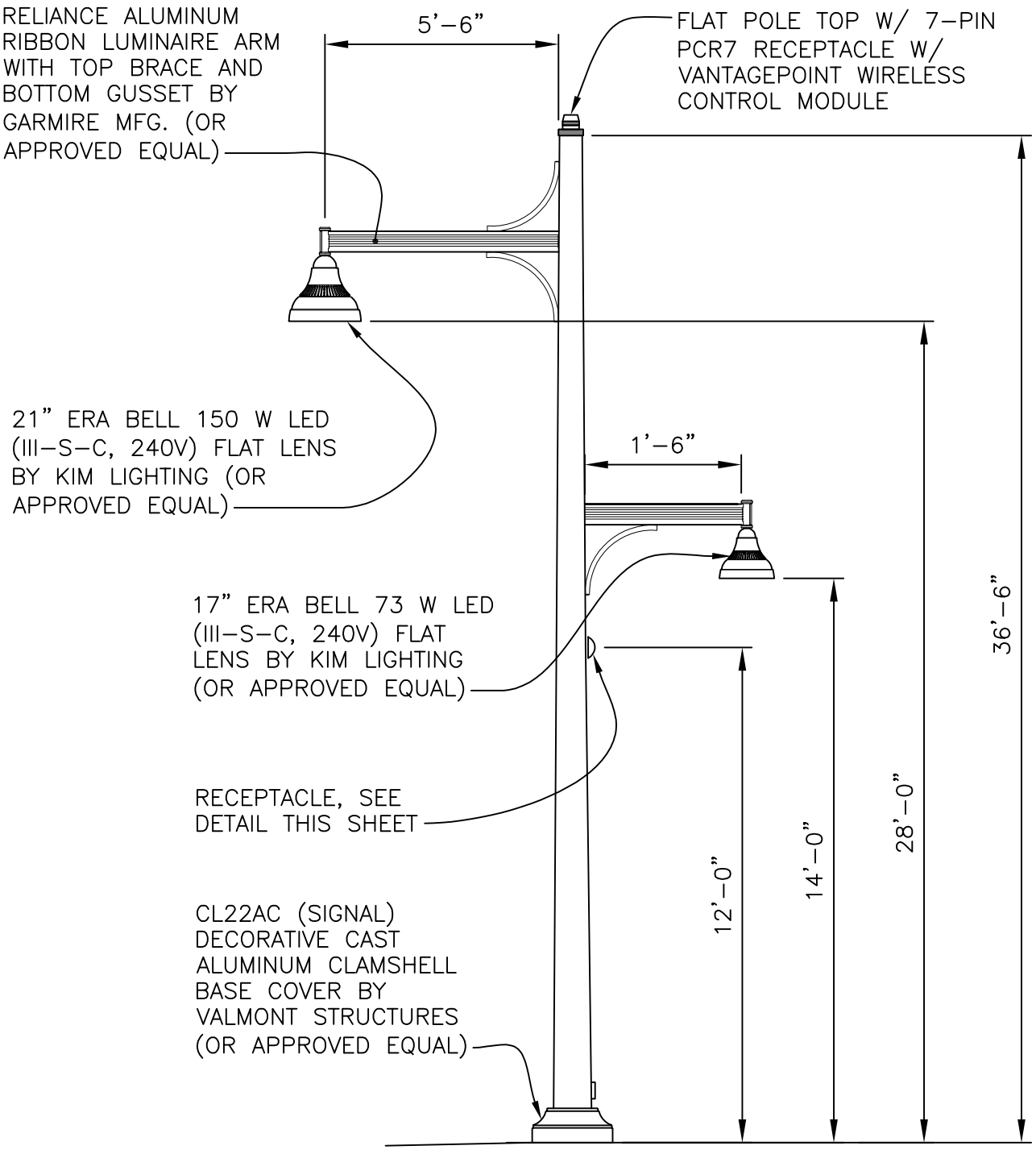
APPROVED BY CITY ENGINEER: Jacob Sweeting	DATE: 1/17/2022	CITY OF AUBURN WASHINGTON	DOWNTOWN DECORATIVE TYPE III COMBO LIGHTING & MAST ARM SIGNAL
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: T-38.3

Plotted by: Craig Dobyns on 1/6/2022 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-38.3



POLE RECEPTACLE
NOT TO SCALE

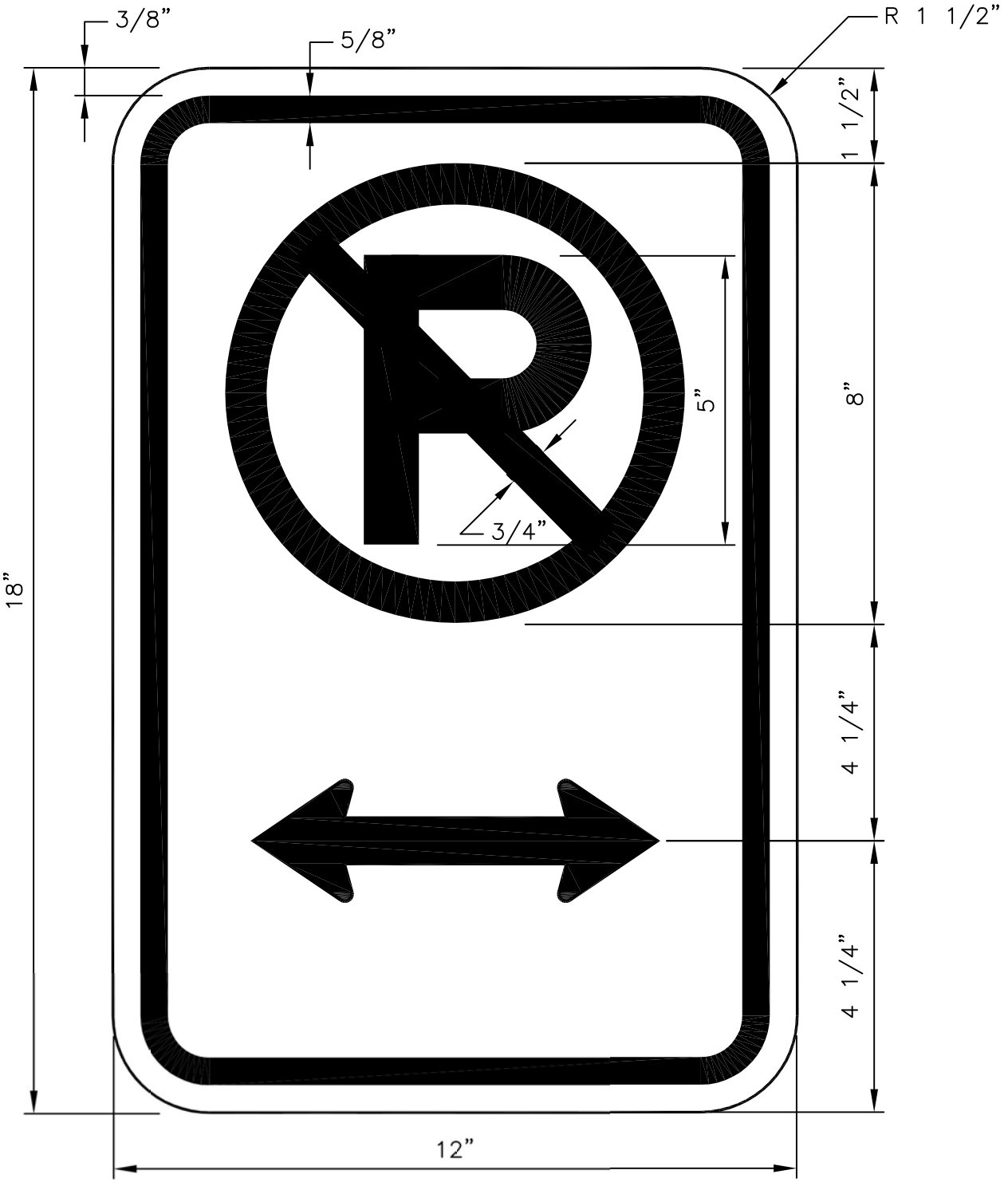
PAINT SPECIFICATIONS: ALL CAST IRON AND STEEL POLE PARTS SHALL BE GALVANIZED PRIOR TO BEING PRIMED AND PAINTED.
FINISH COLOR: RAL 9005 "SIGNAL BLACK"



TALL DECORATIVE POLE
NOT TO SCALE

APPROVED BY CITY ENGINEER: Jacob Sweeting	DATE: 1/17/2022	CITY OF AUBURN WASHINGTON	DOWNTOWN DECORATIVE LIGHT POLE
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: T-39.3

Plotted by: Craig Dobyns on 1/6/2022 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-39.3

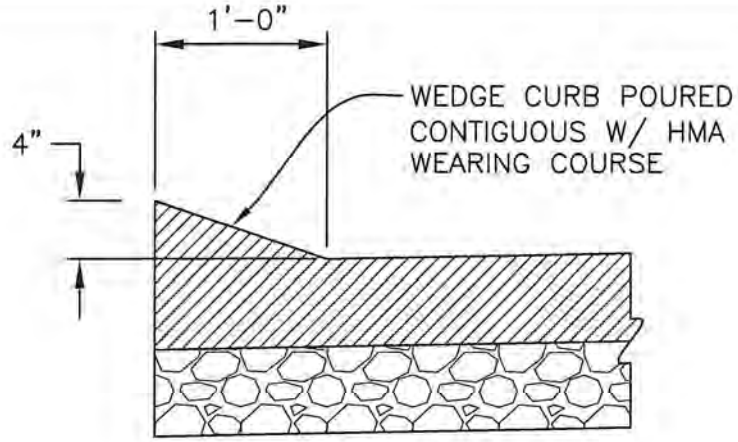


COLORS:		
LEGEND, CIRCLE, DIAGONAL, BORDER, & ARROW*	–	RED (RETROREFLECTIVE)
SYMBOL	–	BLACK
BACKGROUND	–	WHITE (RETROREFLECTIVE)

* USE SINGLE ARROW LEFT OR RIGHT AS APPROPRIATE

APPROVED BY CITY ENGINEER:	DATE:		"NO PARKING" SIGN
Jacob Sweeting	01/05/2021	CITY OF AUBURN WASHINGTON	
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: T–40.2

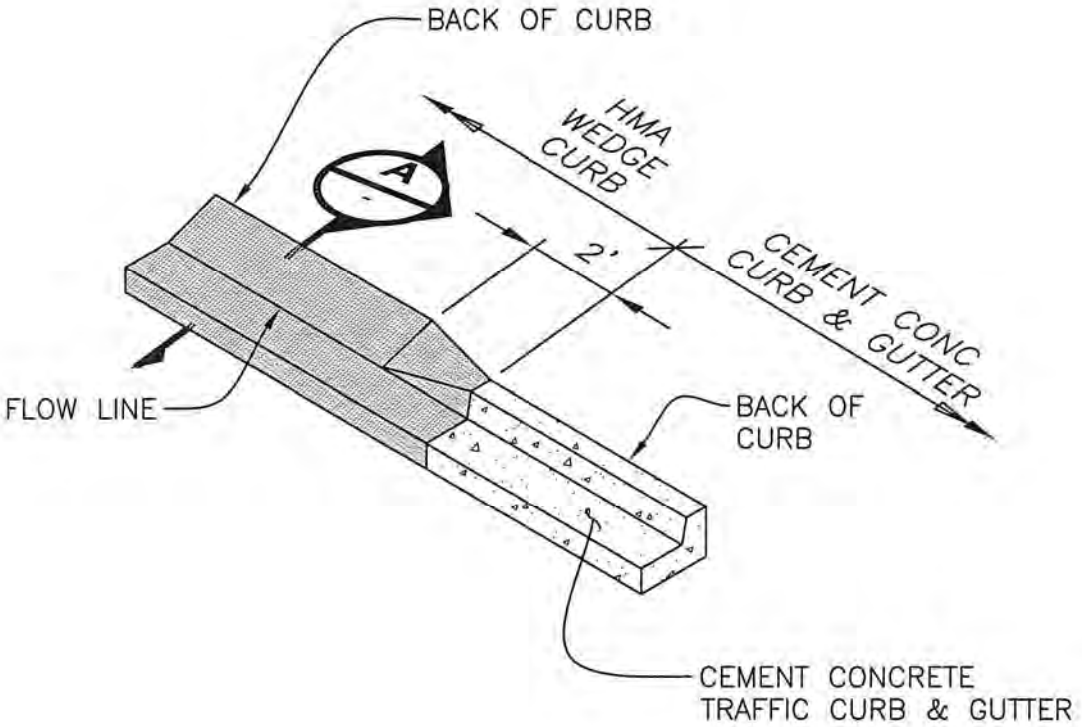
Plotted by: Craig Dobyns on 12/31/2020 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-40.2



ASPHALT WEDGE CURB

NTS

A
-



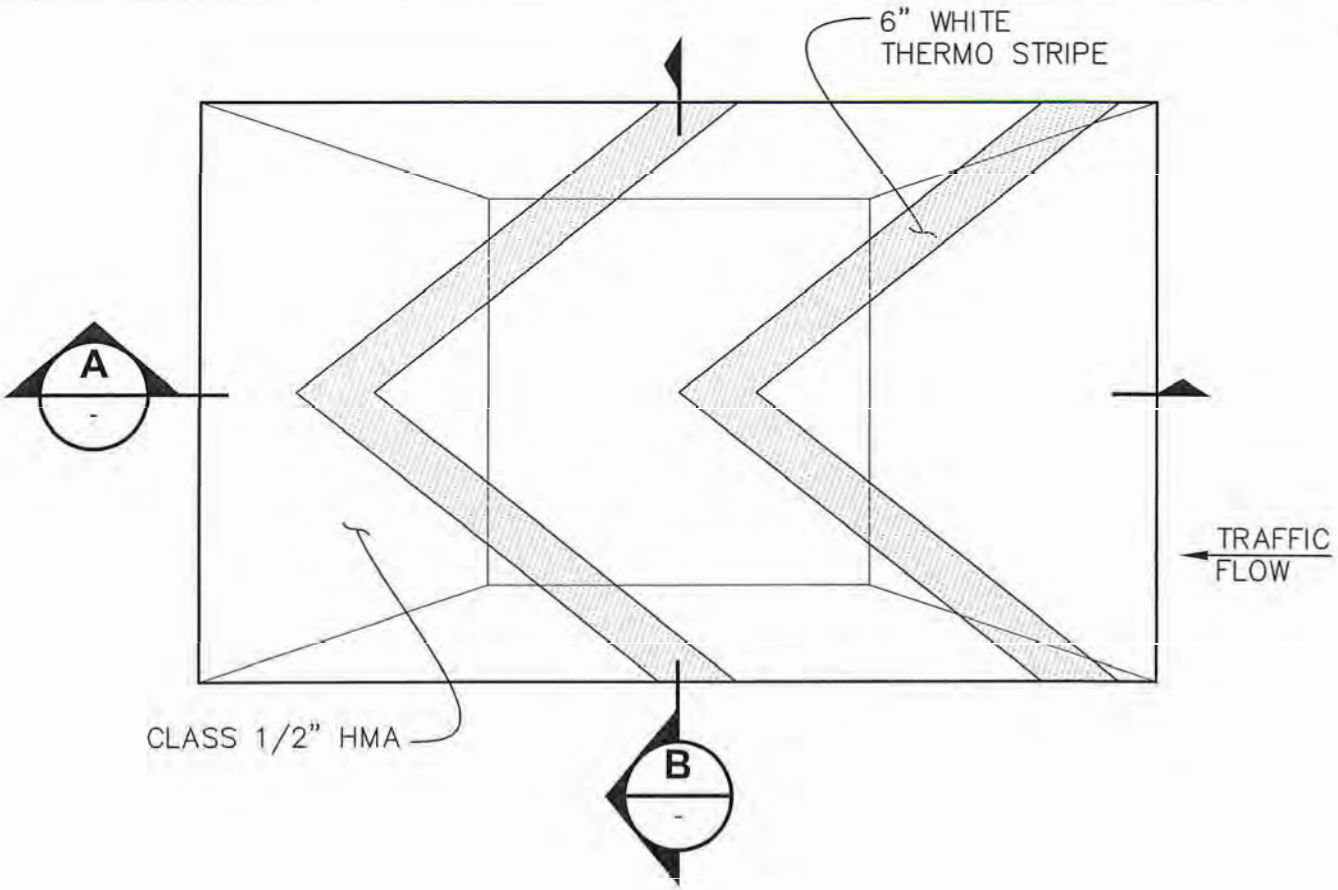
CONCRETE TRAFFIC CURB & GUTTER TO HMA WEDGE CURB TRANSITION

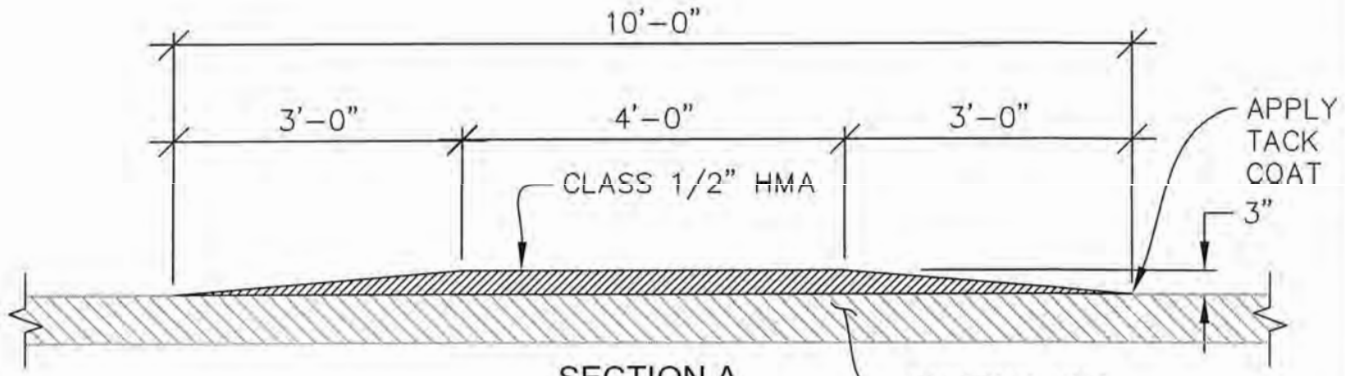
NTS

B
-

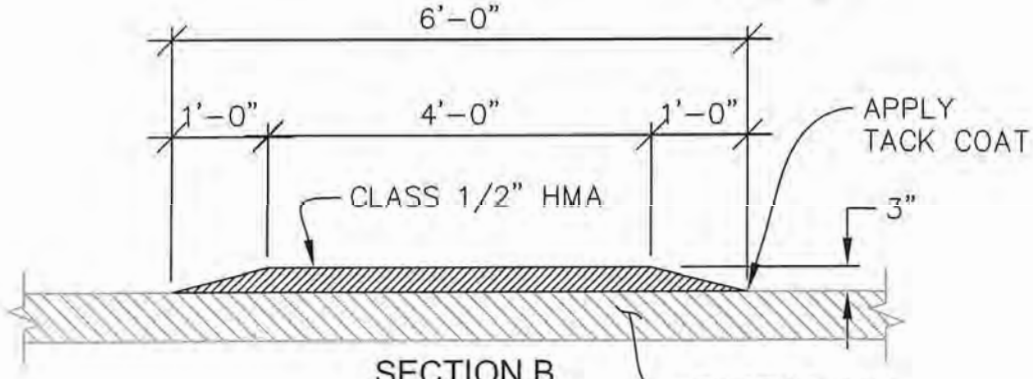
APPROVED BY CITY ENGINEER: Jacob Sweeting DATE: 12/21/18		CITY OF AUBURN WASHINGTON	CONCRETE TRAFFIC CURB & GUTTER TO HMA WEDGE CURB TRANSITION
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: T-41.1

Plotted by: Craig Dobyns on 12/31/2018 File location: W:\Construction Standard Details\Current Working (DWG Tmpl files)\STDETL-T-41.1



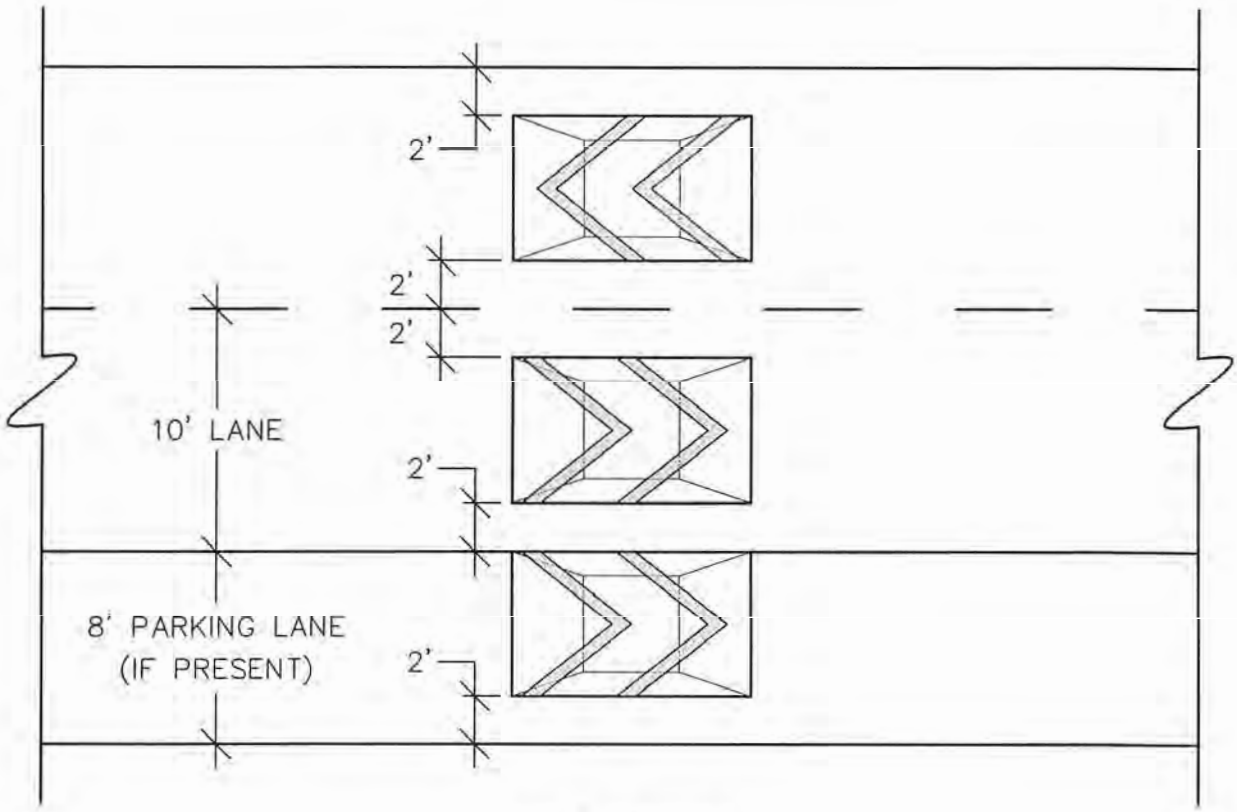


SECTION A
SCALE: 6" = 1'-0"



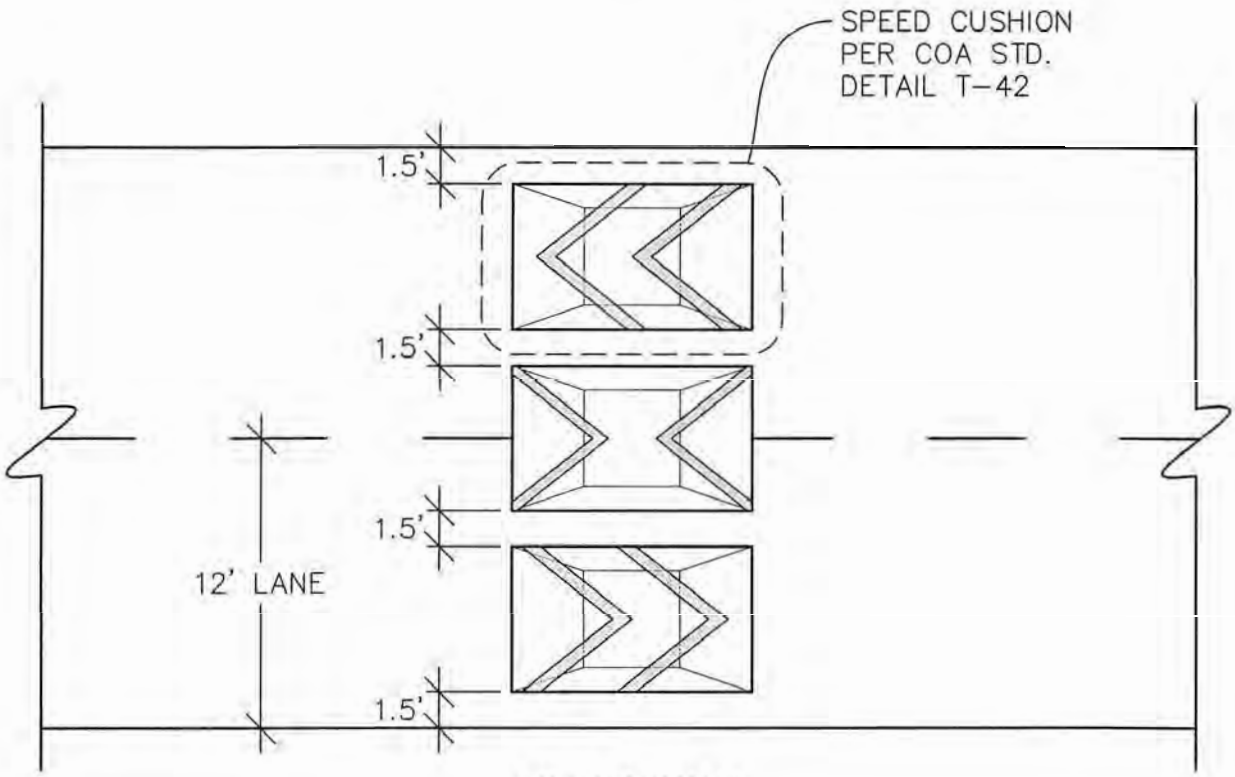
SECTION B
SCALE: 6" = 1'-0"

APPROVED BY CITY ENGINEER: Jacob Sheeley	DATE: 12/11/19	CITY OF AUBURN WASHINGTON	SPEED CUSHION DETAIL
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: T-42.1



28' ROADWAY

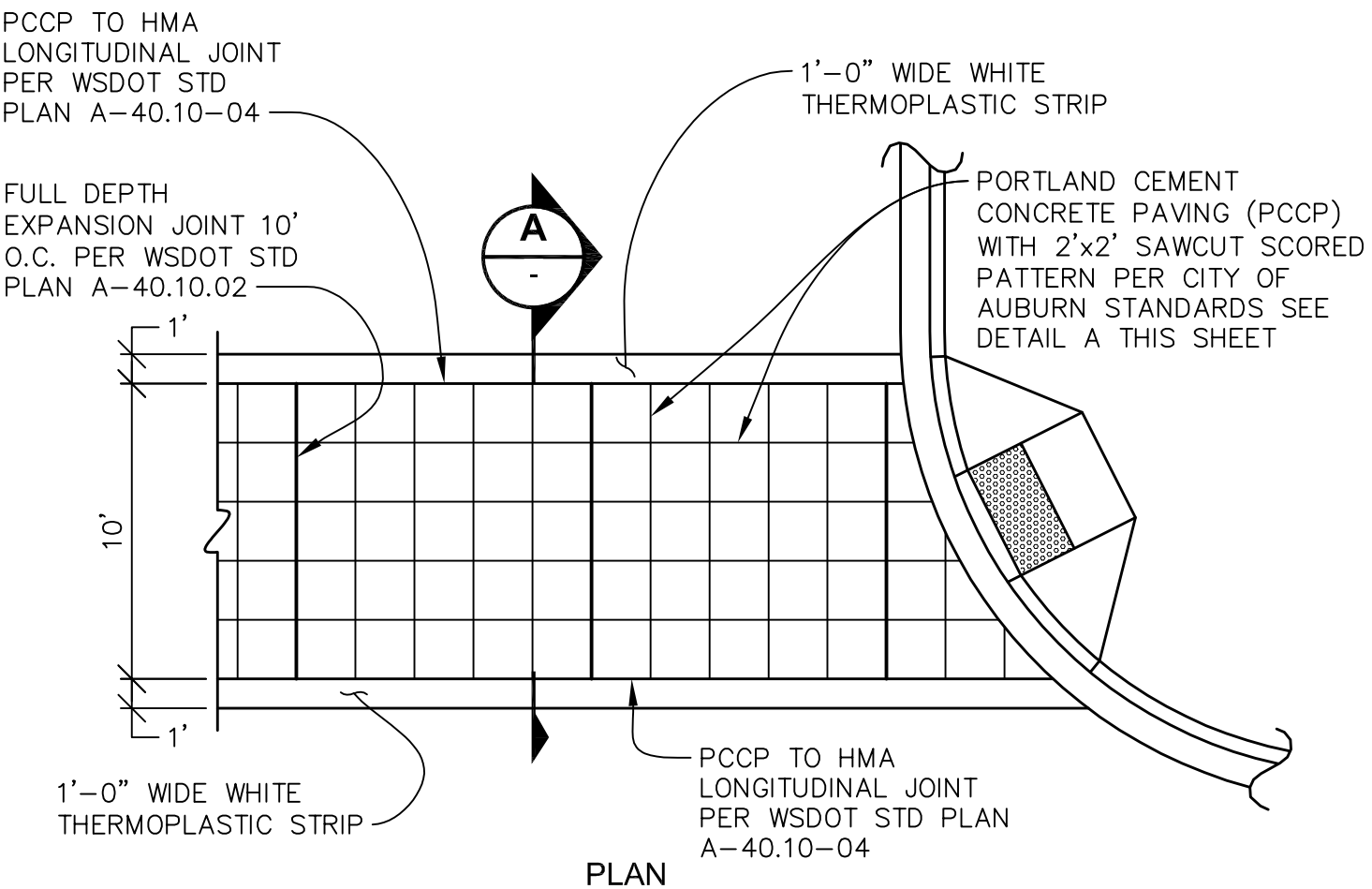
SCALE: 6" = 1'-0"



24' ROADWAY

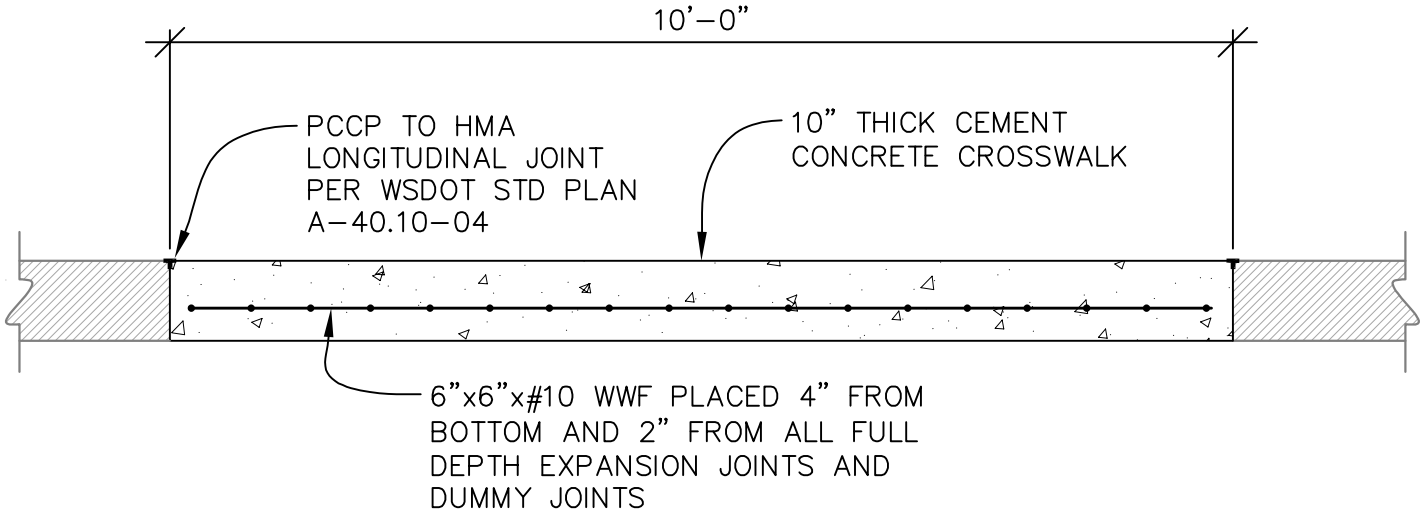
SCALE: 6" = 1'-0"

APPROVED BY CITY ENGINEER: Jacob Fleeting DATE: 12/26/19	CITY OF AUBURN WASHINGTON	SPEED CUSHION PLAN
PUBLIC WORKS DEPARTMENT		STANDARD DETAIL: T-42A.1



PLAN

SCALE: 6" = 1'-0"

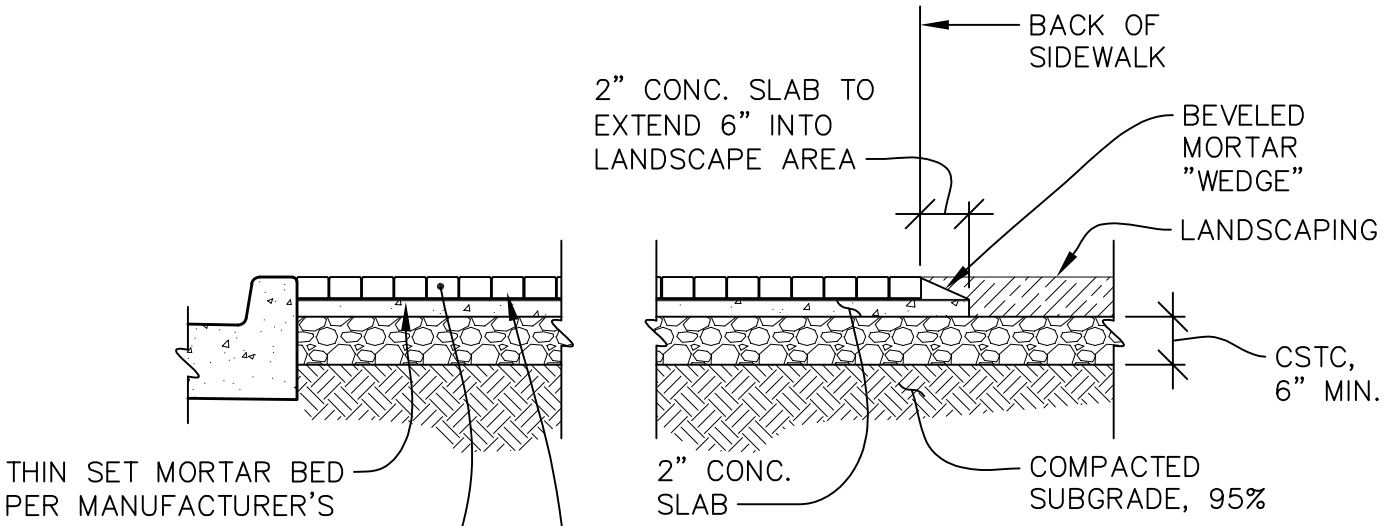


SECTION A

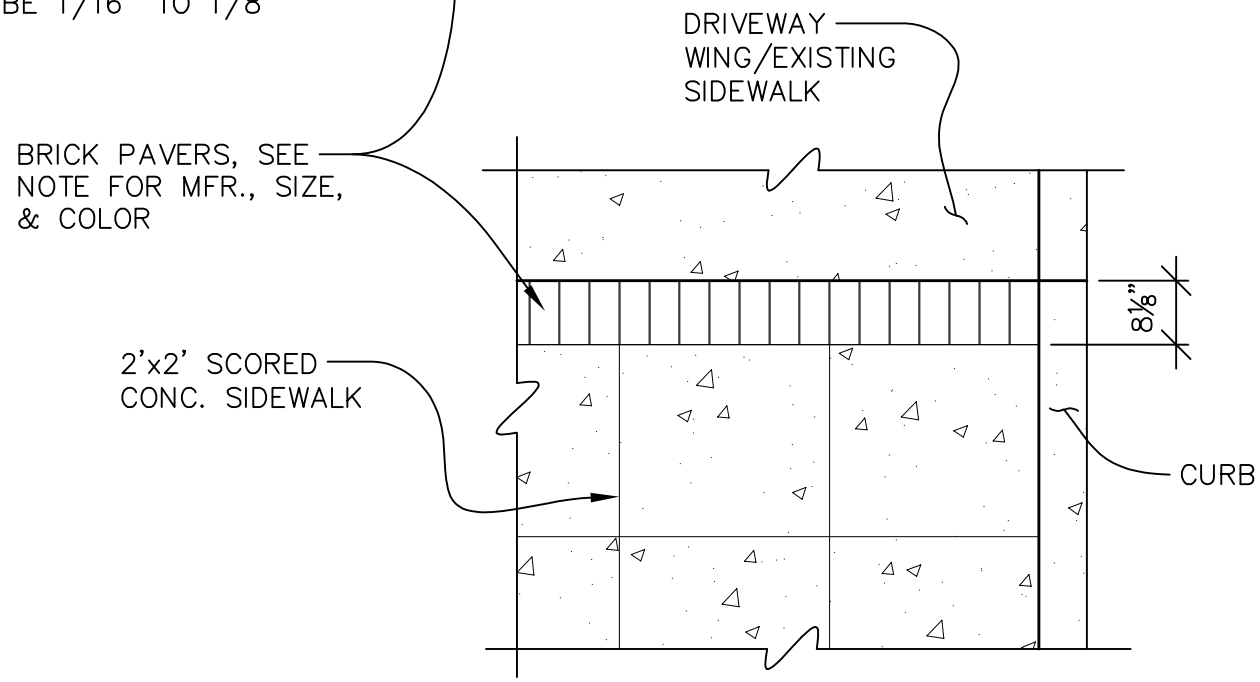
SCALE: 6" = 1'-0"

APPROVED BY CITY ENGINEER: Jacob Sweeting	DATE: 1/17/2022	CITY OF AUBURN WASHINGTON	DOWNTOWN PEDESTRIAN CROSSWALK
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: T-43.2

Plotted by: Craig Dobyns on 1/6/2022 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-43.2



SECTION
NTS

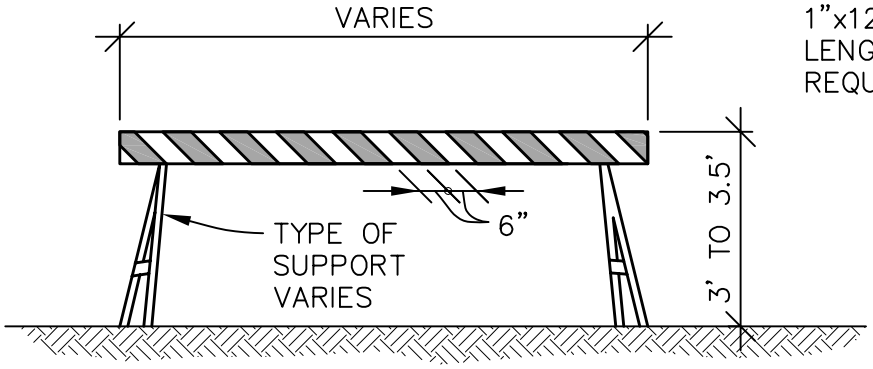


PLAN
NTS

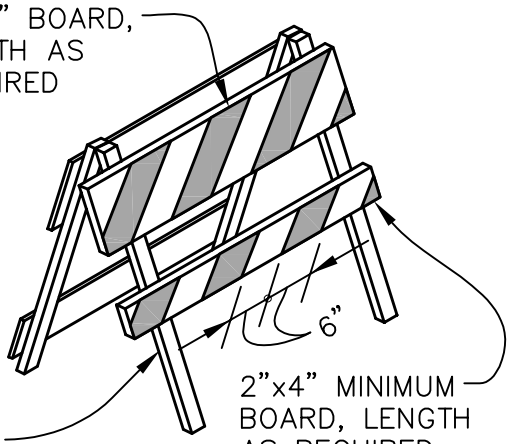
NOTE:
BRICKS TO BE MORTAR SET, ONE ROW STACK PATTERN, HOLLAND 6CM PAVERS BY MUTUAL MATERIALS.
COLOR: RED RUSTIC BLEND
SIZE: 2⅜"x7⅞"x3$^{15}/_{16}$" (60x200x100 mm)

APPROVED BY CITY ENGINEER:	DATE:	CITY OF AUBURN WASHINGTON	DOWNTOWN BRICK PAVER BAND
Jacob Sweeting	02/09/2023		
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: T-44.3

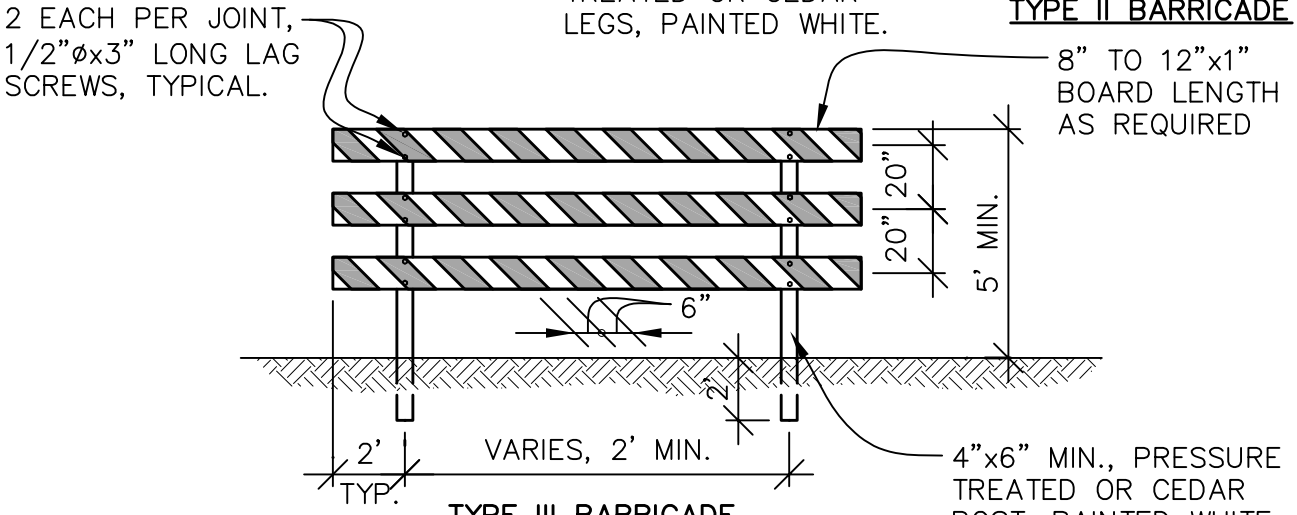
Plotted by: Craig Dobyns on 2/6/2023 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-44.3



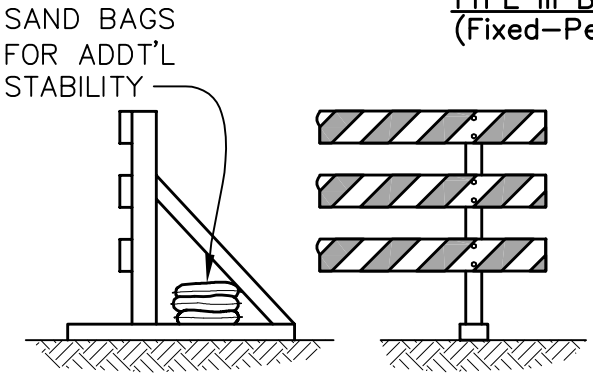
TYPE I BARRICADE



TYPE II BARRICADE



TYPE III BARRICADE
(Fixed–Permanent)



TYPE III BARRICADE
(Movable–Temporary)

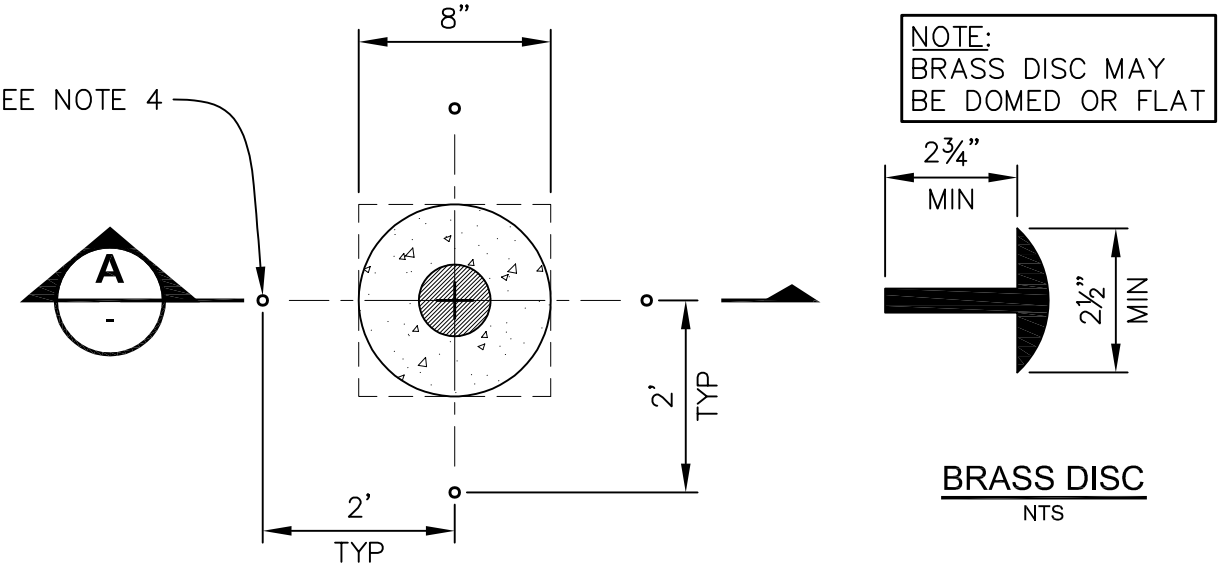
BARRICADE DIMENSIONS			
TYPE	I	II	III
RAIL WIDTH	8" MIN. 12" MAX.	8" MIN. 12" MAX.	8" MIN. 12" MAX.
RAIL LENGTH	2' MIN.	2' MIN.	4' MIN.
RAIL HEIGHT	3' MIN.	3' MIN.	5' MIN.
FRAME TYPE	DEMOUNTABLE OR HEAVY "A"	LIGHT "A" FRAME	POST OR SKIDS
APPLICATION	MOVEABLE	PORTABLE	MOVEABLE OR PERMANENT

NOTES:

1. TEMPORARY BARRICADE SHALL HAVE ORANGE AND WHITE STRIPE, PERMANENT BARRICADE SHALL HAVE RED AND WHITE REFLECTORIZED PAINT.
2. STRIPES SHALL BE SLANTED DOWNWARD AT 45° ANGLE AND IN THE DIRECTION OF THE SIDE TO PASS. THEY WILL BE SLANTED IN BOTH DIRECTIONS FROM THE MIDDLE IF TRAFFIC PASSES AROUND BOTH ENDS.
3. STRIPE WIDTH SHALL BE 6", 4" IF RAILS ARE LESS THAN 3' LONG.
4. SEE TABLE FOR BARRICADE DIMENSIONS.
5. FABRICATION PER MUTCD SECTION 6C.

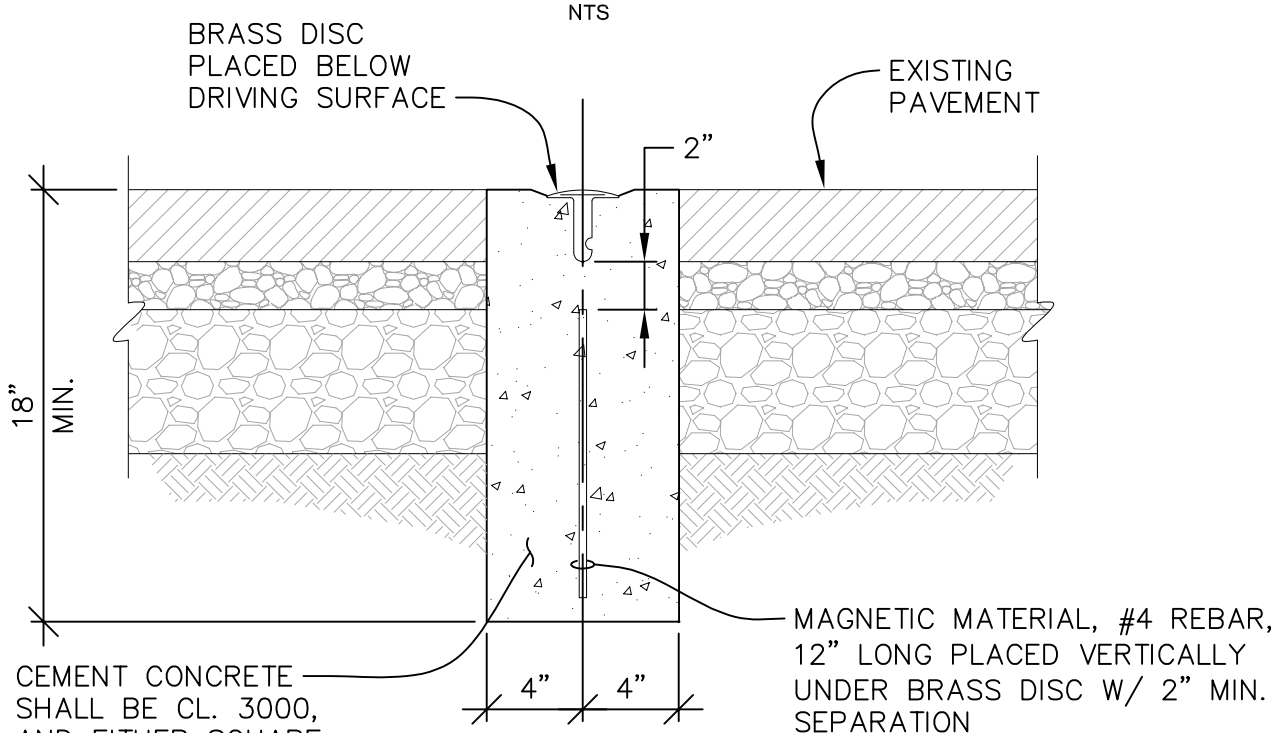
APPROVED BY CITY ENGINEER: Jacob Sweeting	DATE: 1/17/2022	CITY OF AUBURN WASHINGTON	TYPICAL TRAFFIC BARRICADES
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: T–45.2

Plotted by: Craig Dobyns on 1/6/2022 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-45.2



PLAN
NTS

BRASS DISC
NTS



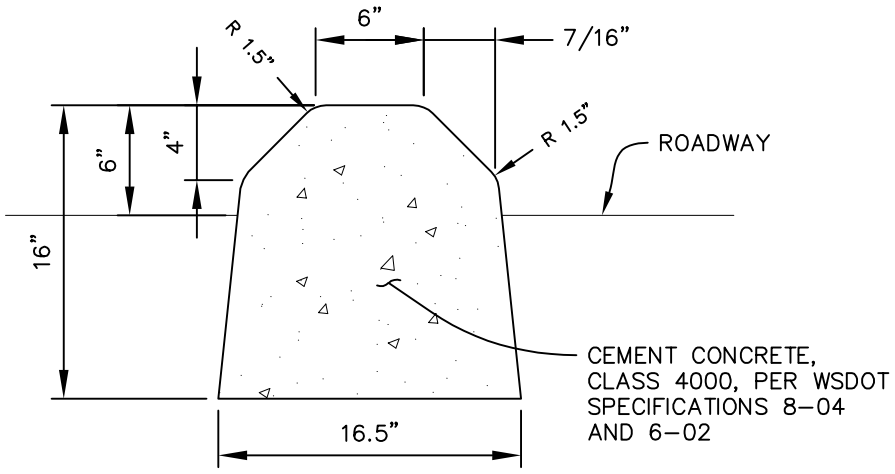
SECTION A
NTS

NOTES:

1. THIS TYPE MAY BE USED ON ALL CITY STREETS EXCEPT FOR SR–164 WHERE MONUMENT SHALL BE INSTALLED PER WSDOT STANDARD PLAN A–10.30–00.
2. BRASS DISC SHALL BE MARKED BY AN "X" AT THE INTERSECT LOCATION AND MARKED PER RCW 58.09.120.
3. THE REQUIREMENTS OF WAC 332–120 SHALL BE MET PRIOR TO AND FOR THE REMOVAL OR DESTRUCTION OF A SURVEY MONUMENT.
4. PK NAIL STRADDLES WHICH ARE A STRAIGHT LINE INTERSECTION OF MONUMENT INTERSECT LOCATION.

APPROVED BY CITY ENGINEER: Jacob Sweeting	DATE: 02/09/2023	CITY OF AUBURN WASHINGTON	POURED IN PLACE MONUMENT TYPE A MODIFIED
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: T–46.3

Plotted by: Craig Dobyns on 2/8/2023 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL–T–46.3

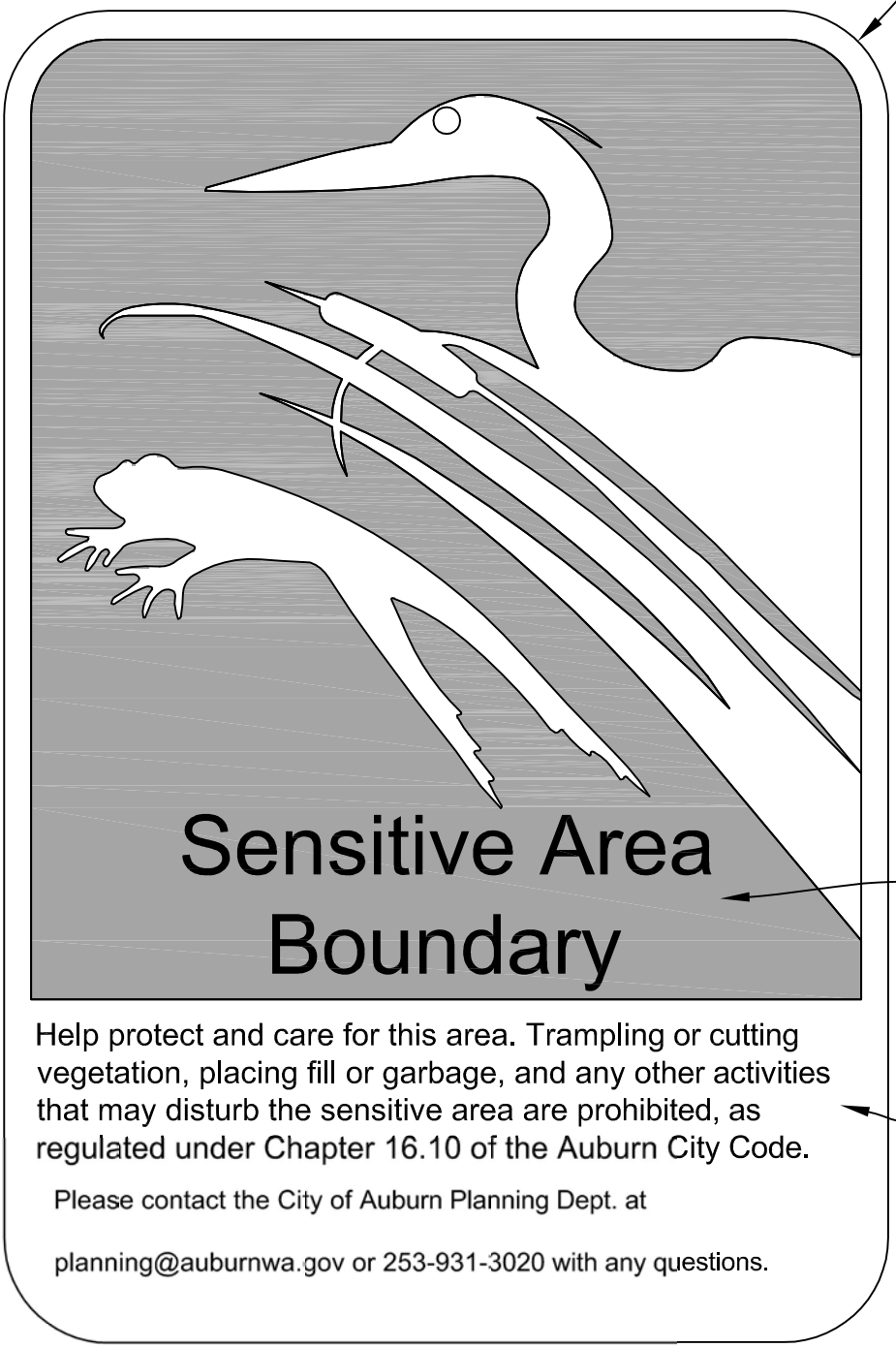


CAST-IN-PLACE DUAL-FACED MOUNTABLE CEMENT CONCRETE TRAFFIC CURB

NTS

APPROVED BY CITY ENGINEER: Jacob Sweeting	DATE: 01/05/2021	CITY OF AUBURN WASHINGTON	CAST-IN-PLACE DUAL MOUNTABLE CEMENT CONCRETE TRAFFIC CURB
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: T-47.1

Plotted by: Craig Dobyns on 12/10/2020 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-47.1



SIGN FACE IS DIGITALLY PRINTED TEAL C:100 M:0 Y:30 K:6 AND BLACK C:100 M:100 Y:100 K:100 ON 3 MIL. CALANDERED WHITE VINYL THEN LAMINATED WITH A 2.5 MIL. LAMINATE. THIS SIGN FACE IS THEN MOUNTED TO .080" THICK 5052 H38 ANODIZED ALUMINUM.

CITY OF AUBURN
SENSITIVE AREA SIGN
COMMERCIAL AQUATIC

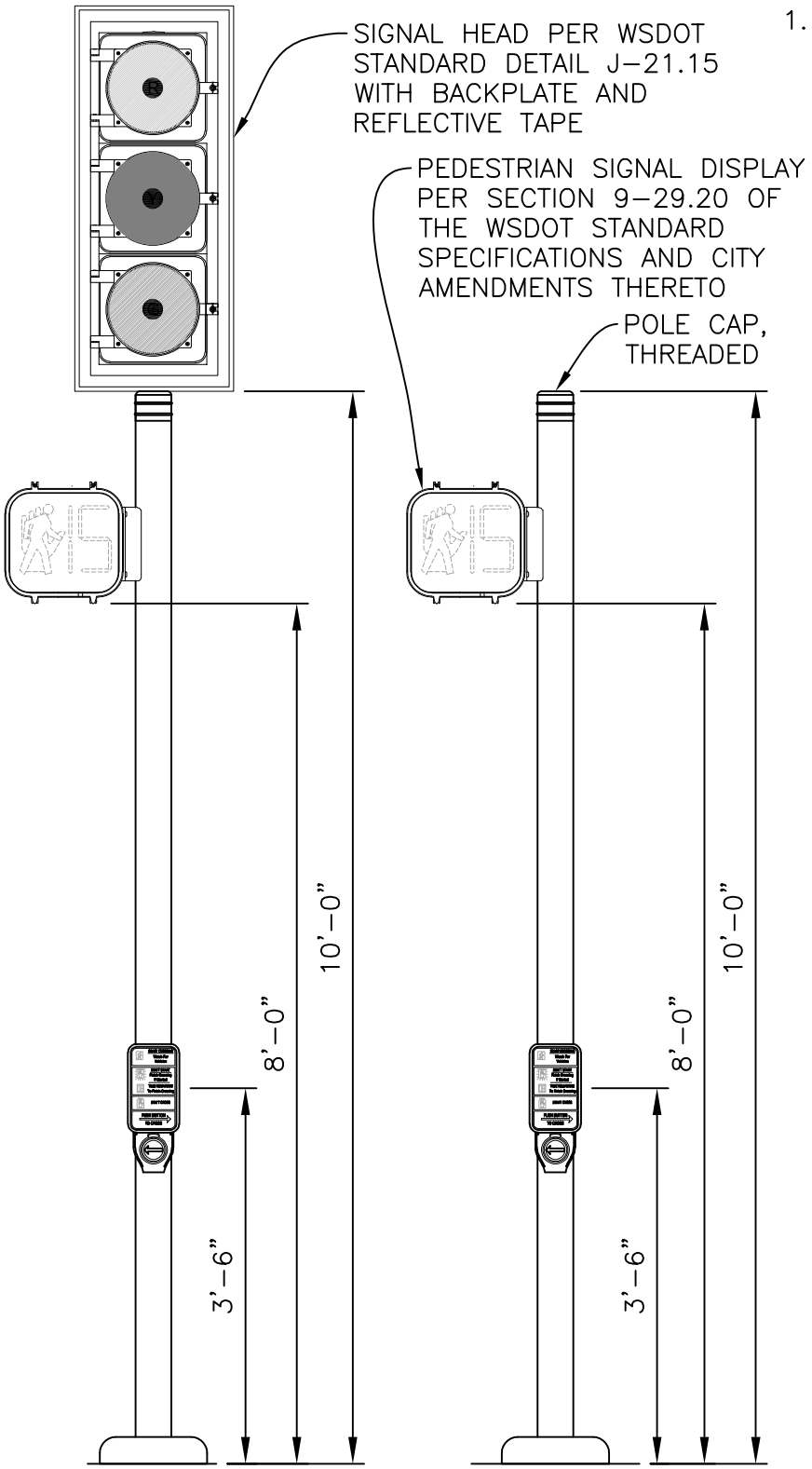
NTS

APPROVED BY CITY ENGINEER: Jacob Sweeting	DATE: 01/05/2021	CITY OF AUBURN WASHINGTON	SENSITIVE AREA SIGN COMMERCIAL AQUATIC
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: T-48.1

Plotted by: Craig Dobyns on 12/16/2020 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-48.1

NOTES:

1. ALL CAST IRON AND STEEL POLE PARTS SHALL BE GALVANIZED PRIOR TO BEING PRIMED AND PAINTED. FINISH COLOR: RAL 9005 "SIGNAL BLACK".



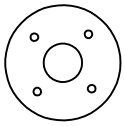
DECORATIVE TYPE 1 PPB ASSEMBLY (WITH SIGNAL HEAD)
NOT TO SCALE

DECORATIVE TYPE 1 ASSEMBLY
NOT TO SCALE

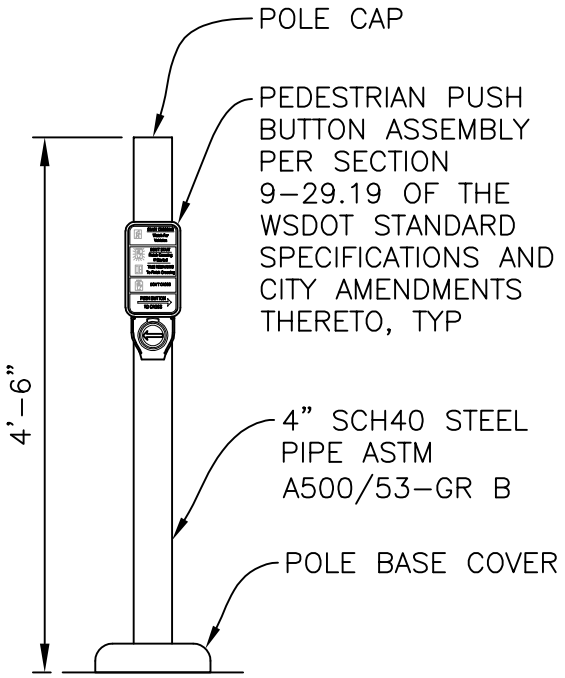
KIM PARTS:
POLE CAP: 17095-1-BL-P OR APPROVED EQUIVALENT

BASE COVER: BC4RABL OR APPROVED EQUIVALENT

PLATE SIZE: 1/2" ASTM A-36
BASE PLATE: 11-1/4" O.D ROUND
BOLT CIRCLE: 7"
BOLT HOLES: 3/4"



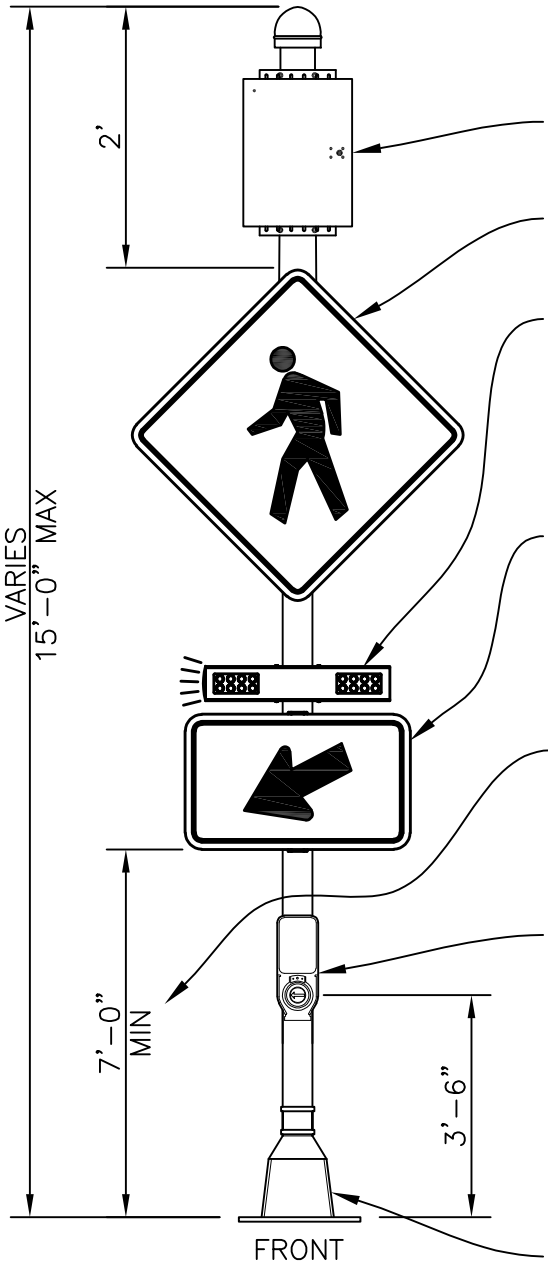
BASE PLATE
NOT TO SCALE



DECORATIVE TYPE 1 PPB POST
NOT TO SCALE

APPROVED BY CITY ENGINEER: Jacob Sweeting	DATE: 1/17/2022	CITY OF AUBURN WASHINGTON	DOWNTOWN PEDESTRIAN PUSH BUTTON STANDARDS
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: T-49.1

Plotted by: Craig Dobyns on 1/6/2022 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-49.1



RRFB CONTROL BOX (WHEN SHOWN ON PLANS)

TWO SIGNS MOUNTED BACK TO BACK

TWO RRFB LIGHT BARS W/ PEDESTRIAN CONFIRMATION LIGHT MOUNTED BACK TO BACK (SEE STD DTL T-50b, NOTE 3)

W16-7PL AND W16-7PR 12"x24" TWO SIGNS MOUNTED BACK TO BACK, (ARROW SHALL POINT TO CROSSWALK)

HEIGHT SHALL BE SUCH THAT BEACON VISIBILITY TO VEHICLES IS NOT BLOCKED BY SIGNAGE OR OTHER ROADSIDE FEATURES

APS PUSHBUTTON ASSEMBLY TACTILE ARROW ON BUTTON SHALL POINT TO CROSSWALK, LOCATION TO BE COORDINATED IN THE FIELD WITH ENGINEER

PELCO OR EQUIV. BREAKAWAY BASE (SEE STD DTL T-50b, NOTE 4)

RRFB ASSEMBLY

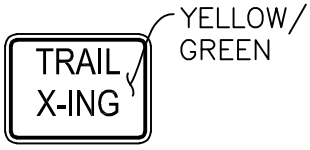
N.T.S.

R1-5B
(ONLY AT MULTI-LANE CROSSINGS WHERE STOP BARS ARE INSTALLED)

NOTE:
CROSSINGS AT MID-BLOCK/NON-INTERSECTION LOCATIONS SHALL INCLUDE THERMOPLASTIC STOP BARS.

W11-15 (30"x30")
or
(36"x36")

(TRAIL CROSSINGS)



W11-15P (24"x18")

(WHERE CONNECTING TRAIL IS NOT ALIGNED ALONG ROADWAY)

S1-1
(30"x30")
or
(36"x36")

(SCHOOL CROSSINGS)

W11-2
(30"x30")
or
(36"x36")

(STANDARD CROSSINGS)

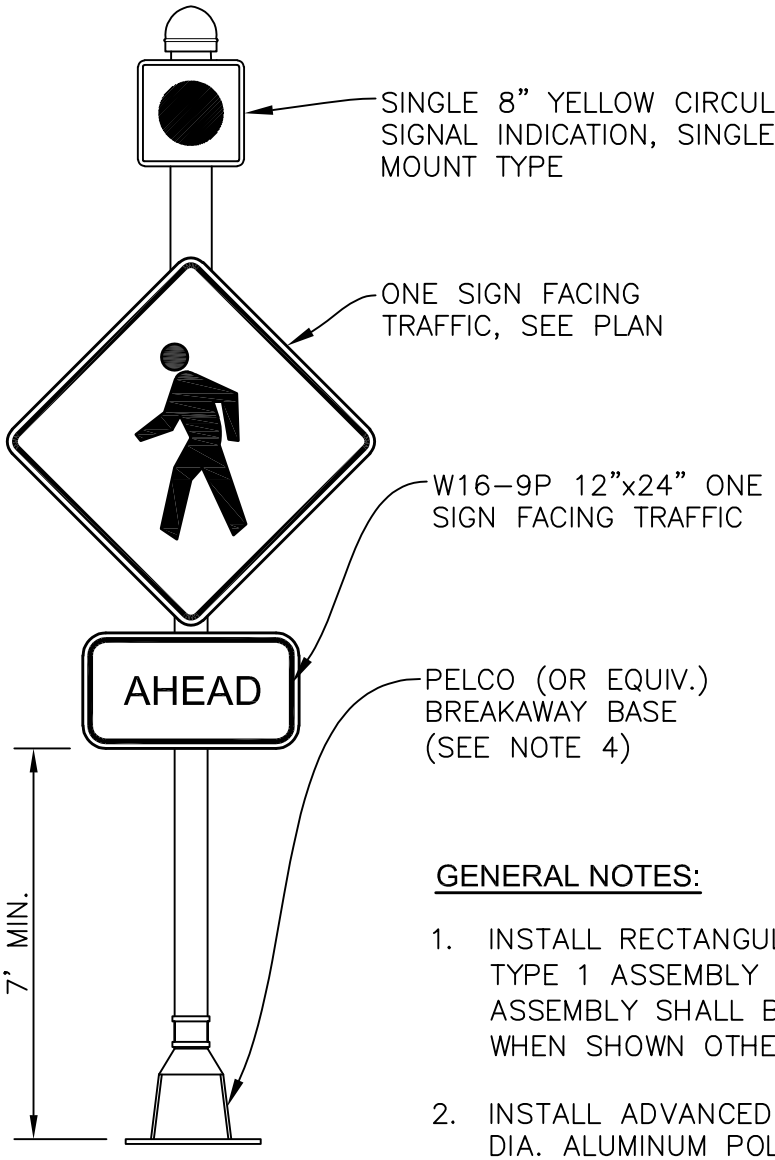
SIGN TYPE AND SIZE AS NOTED IN THE PLANS

SIGNING OPTIONS

N.T.S.

APPROVED BY CITY ENGINEER: Jacob Sweeting	DATE: 02/09/2023	CITY OF AUBURN WASHINGTON	RRFB AND ADVANCED WARNING ASSEMBLY DETAILS
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: T-50a.1

Plotted by: Craig Dobyns on 2/8/2023 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-50a.1



FRONT

ADVANCE WARNING BEACON ASSEMBLY

N.T.S.

GENERAL NOTES:

1. INSTALL RECTANGULAR RAPID FLASHING BEACON (RRFB) TYPE 1 ASSEMBLY ON 4" DIA. ALUMINUM POLE. RRFB ASSEMBLY SHALL BE INSTALLED ON EACH SIDE (EXCEPT WHEN SHOWN OTHERWISE ON THE PLANS).

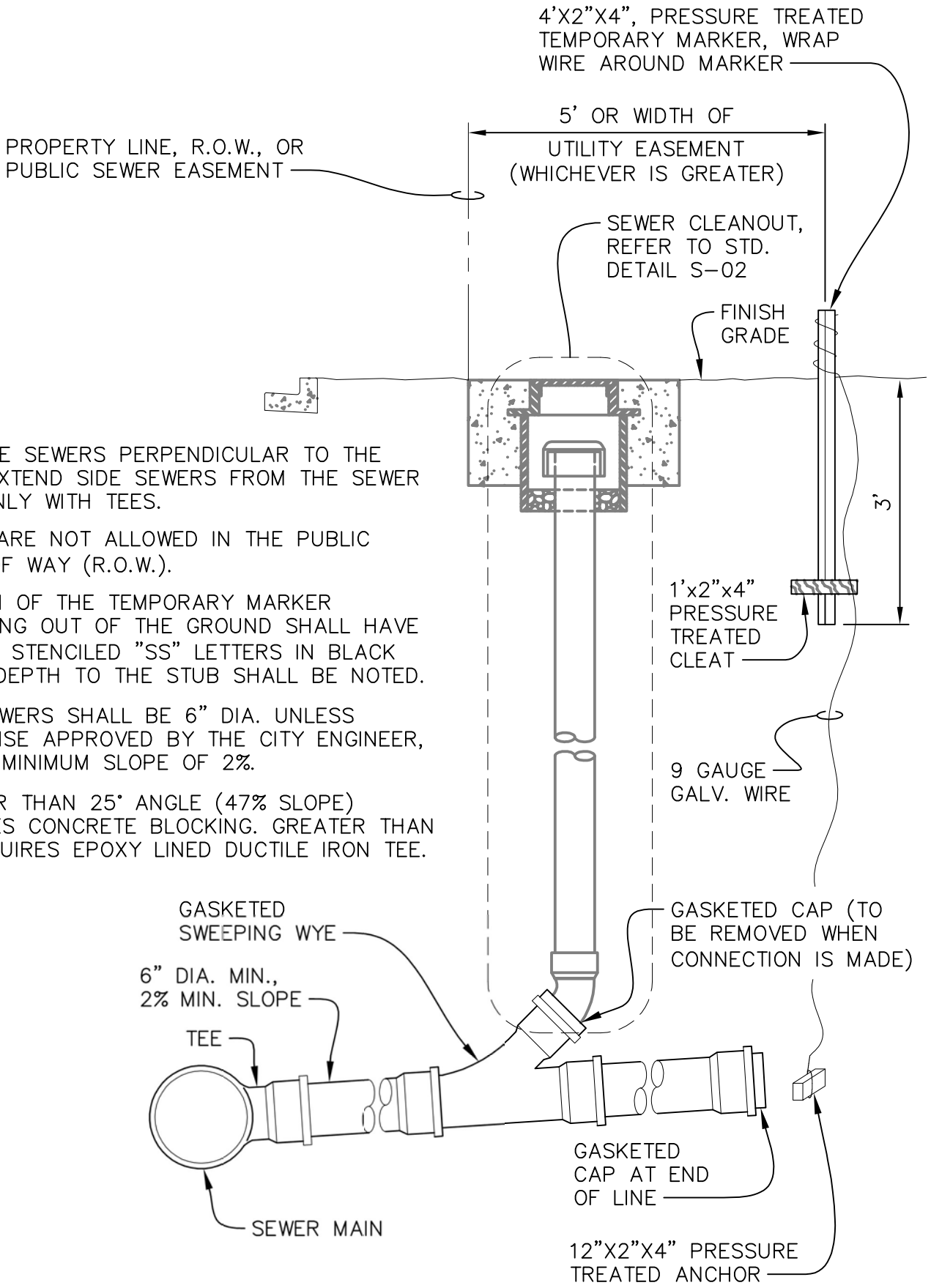
2. INSTALL ADVANCED WARNING BEACON ASSEMBLY ON 4" DIA. ALUMINUM POLE ONE PER EACH SIDE OF THE STREET, INCLUDING ALL NECESSARY HARDWARE WHEN SHOWN ON THE PLANS.

3. RRFB WILL BE APPROXIMATELY 5 INCHES WIDE BY 2 INCHES HIGH, WITH A MINIMUM OF 7 INCHES BETWEEN EACH RRFB INDICATOR BOTH SIDES, INCLUDING A PEDESTRIAN CONFIRMATION LIGHT PER EACH SIDE OF THE STREET, INCLUDING ALL NECESSARY HARDWARE.

4. INSTALL CONC. TYPE 1 FOUNDATION PER WSDOT STD PLAN J-21.10-04 WITH PELCO (OR APPROVED EQUIVALENT) BREAKAWAY BASE AND ANCHOR BOLTS. CONTRACTOR TO VERIFY BOLT PATTERN PRIOR TO PLACING CONCRETE.

APPROVED BY CITY ENGINEER:	DATE:	CITY OF AUBURN WASHINGTON	ADVANCED WARNING BEACON & RRFB NOTES
Jacob Sweeting	02/09/2023		
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: T-50b.1

Plotted by: Craig Dobyns on 2/8/2023 File location: M:\Construction Standard Details\Current Working DWG\Traffic\STDETL-T-50b.1



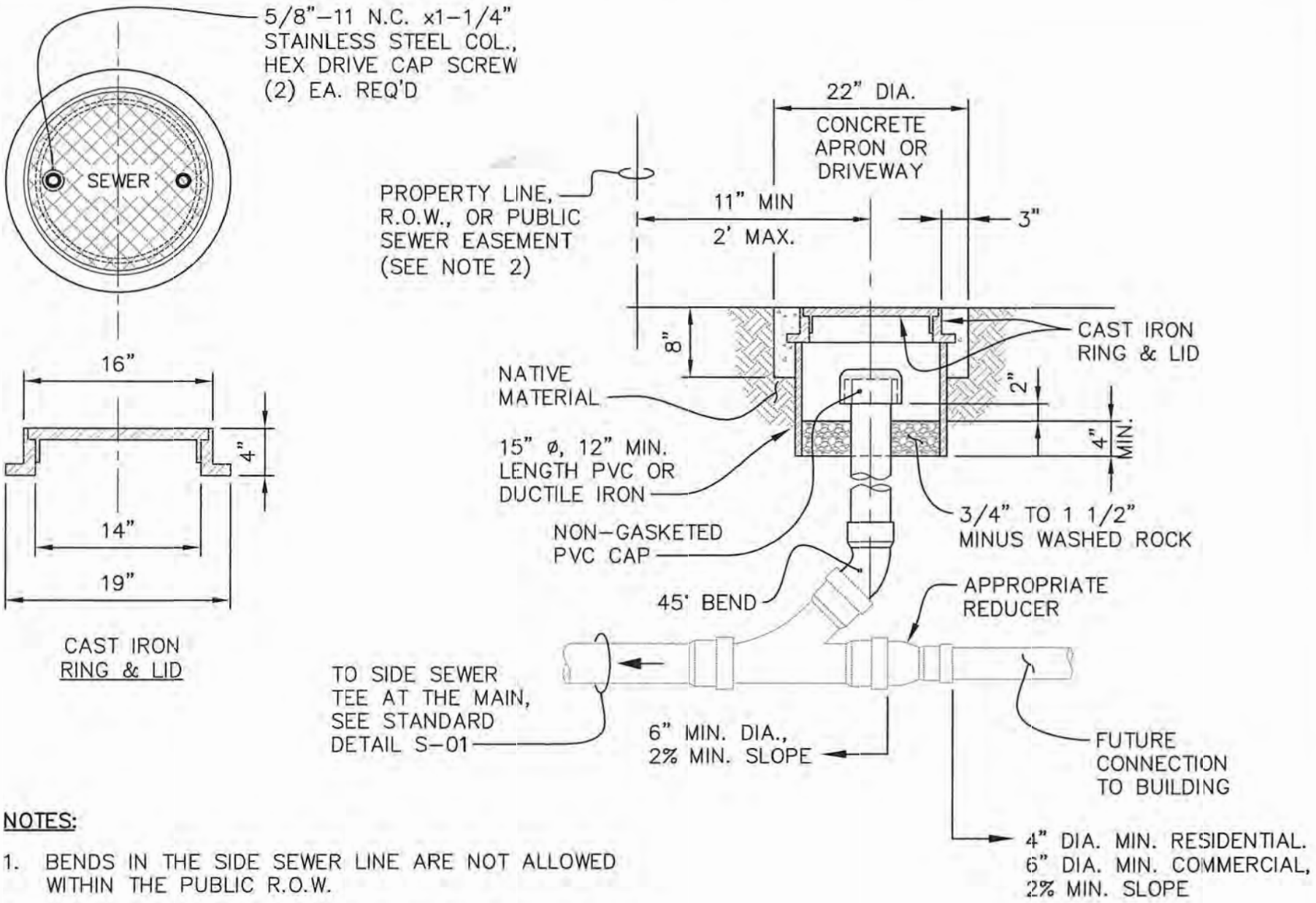
NOTES:

1. LAY SIDE SEWERS PERPENDICULAR TO THE MAIN. EXTEND SIDE SEWERS FROM THE SEWER MAIN ONLY WITH TEES.
2. BENDS ARE NOT ALLOWED IN THE PUBLIC RIGHT OF WAY (R.O.W.).
3. PORTION OF THE TEMPORARY MARKER EXTENDING OUT OF THE GROUND SHALL HAVE 2" HIGH STENCILED "SS" LETTERS IN BLACK PAINT, DEPTH TO THE STUB SHALL BE NOTED.
4. SIDE SEWERS SHALL BE 6" DIA. UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER, WITH A MINIMUM SLOPE OF 2%.
5. GREATER THAN 25° ANGLE (47% SLOPE) REQUIRES CONCRETE BLOCKING. GREATER THAN 45° REQUIRES EPOXY LINED DUCTILE IRON TEE.

APPROVED BY CITY ENGINEER:	DATE:		SIDE SEWER STUB
Jacob Sweeting	01/05/2021	CITY OF AUBURN WASHINGTON	
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: S-01.2

Plotted by: Craig Dobyns on 12/16/2020 File location: M:\Construction Standard Details\Current Working DWG\Sewer and Storm\STDETL-S-01.2

Plotted by: Craig Dobyns on 1/31/2017 File location: M:\Construction Standard Details\Approved Drawing Files (dwg)\Sewer and Storm\STDETL-S-02.2



NOTES:

1. BENDS IN THE SIDE SEWER LINE ARE NOT ALLOWED WITHIN THE PUBLIC R.O.W.
2. CLEAN OUTS MAY BE ESTABLISHED ON BACKSIDE OF UTILITY EASEMENTS IF APPROVED BY CITY ENGINEER.
3. ADDITIONAL CLEAN OUTS ARE REQUIRED ON SIDE SEWER LINE WITHIN PRIVATE PROPERTY WHEN CUMULATIVE BENDS ON SIDE SEWER LINE EQUALS OR EXCEEDS 135°

APPROVED BY CITY ENGINEER: [signature] DATE: 1/31/2017

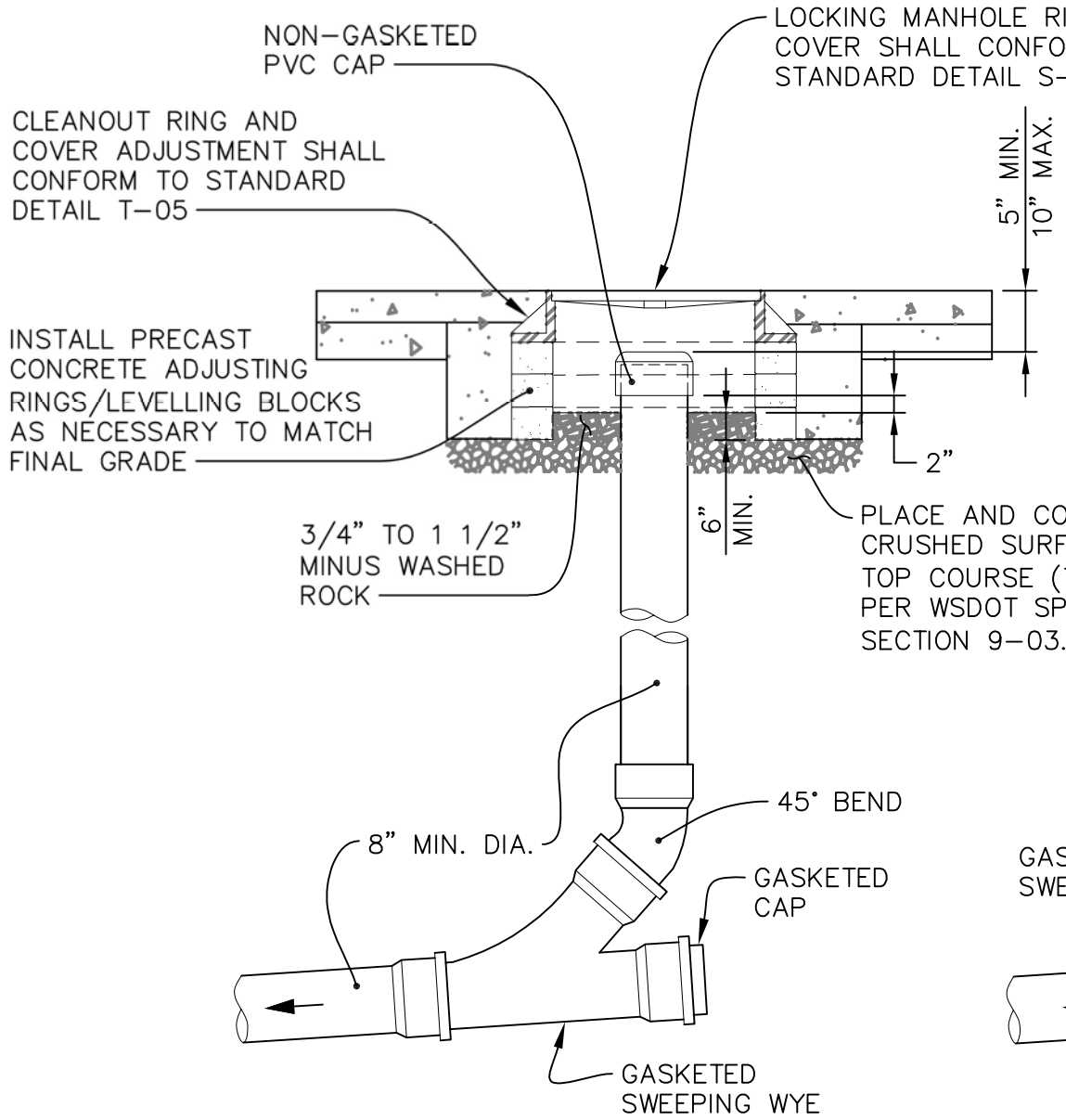
CITY OF AUBURN WASHINGTON

COMMUNITY DEVELOPMENT & PUBLIC WORKS DEPT.

PRIVATE SANITARY SIDE SEWER CLEAN OUT

STANDARD DETAIL: S-02.2

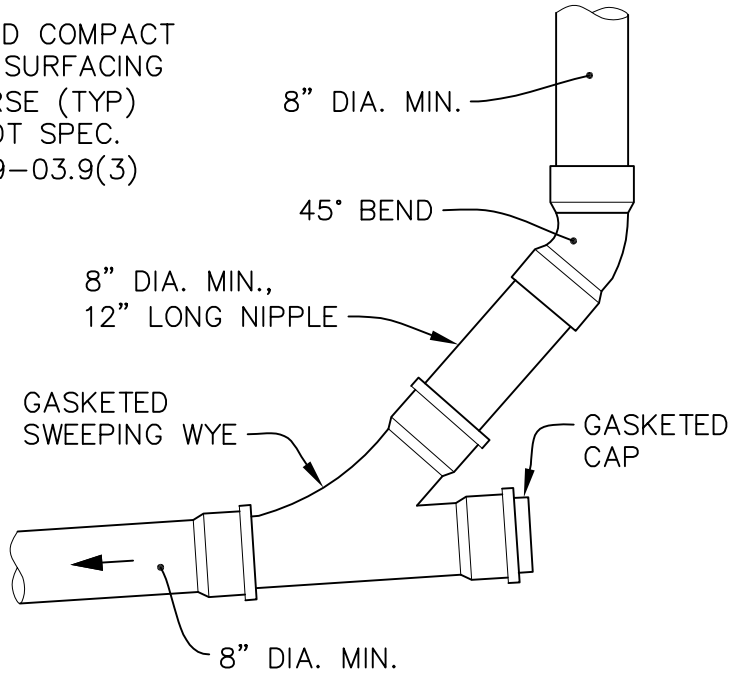
Plotted by: Craig Dobyns on 12/16/2020 File location: M:\Construction Standard Details\Current Working DWG\Sewer and Storm\STDETL-S-03.2



STANDARD INSTALLATION

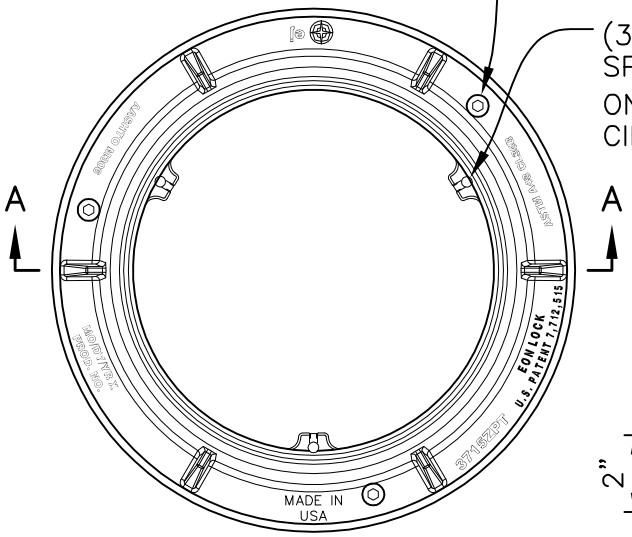
NTS

NOTE:
MANHOLES ARE REQUIRED AT UPSTREAM END OF ALL SEWER MAINS.

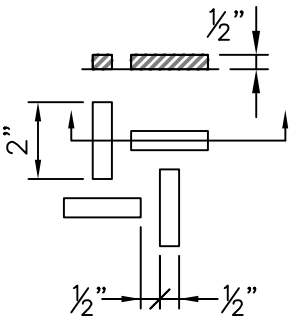


ALTERNATE INSTALLATION

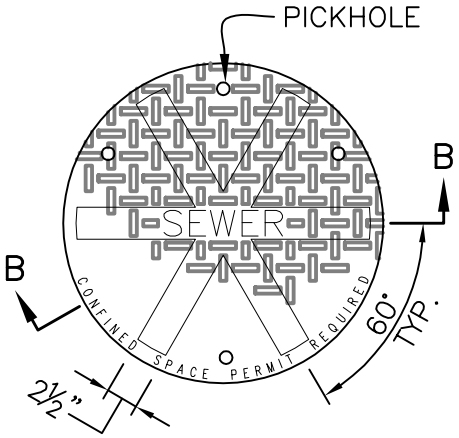
NTS



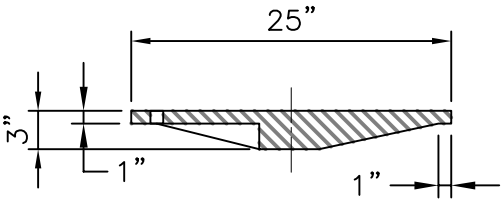
FRAME - PLAN
NTS



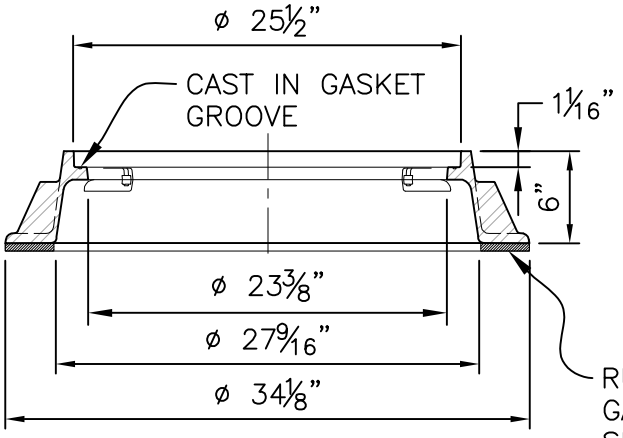
NONSKID PATTERN



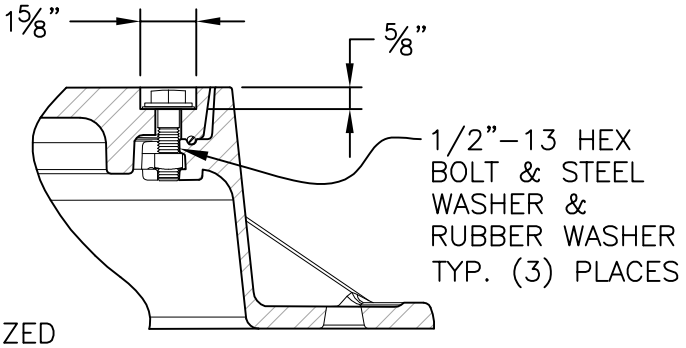
COVER - PLAN
NTS



SECTION B-B
NTS



SECTION A-A
NTS



BOLT DETAIL
NTS

NOTES:

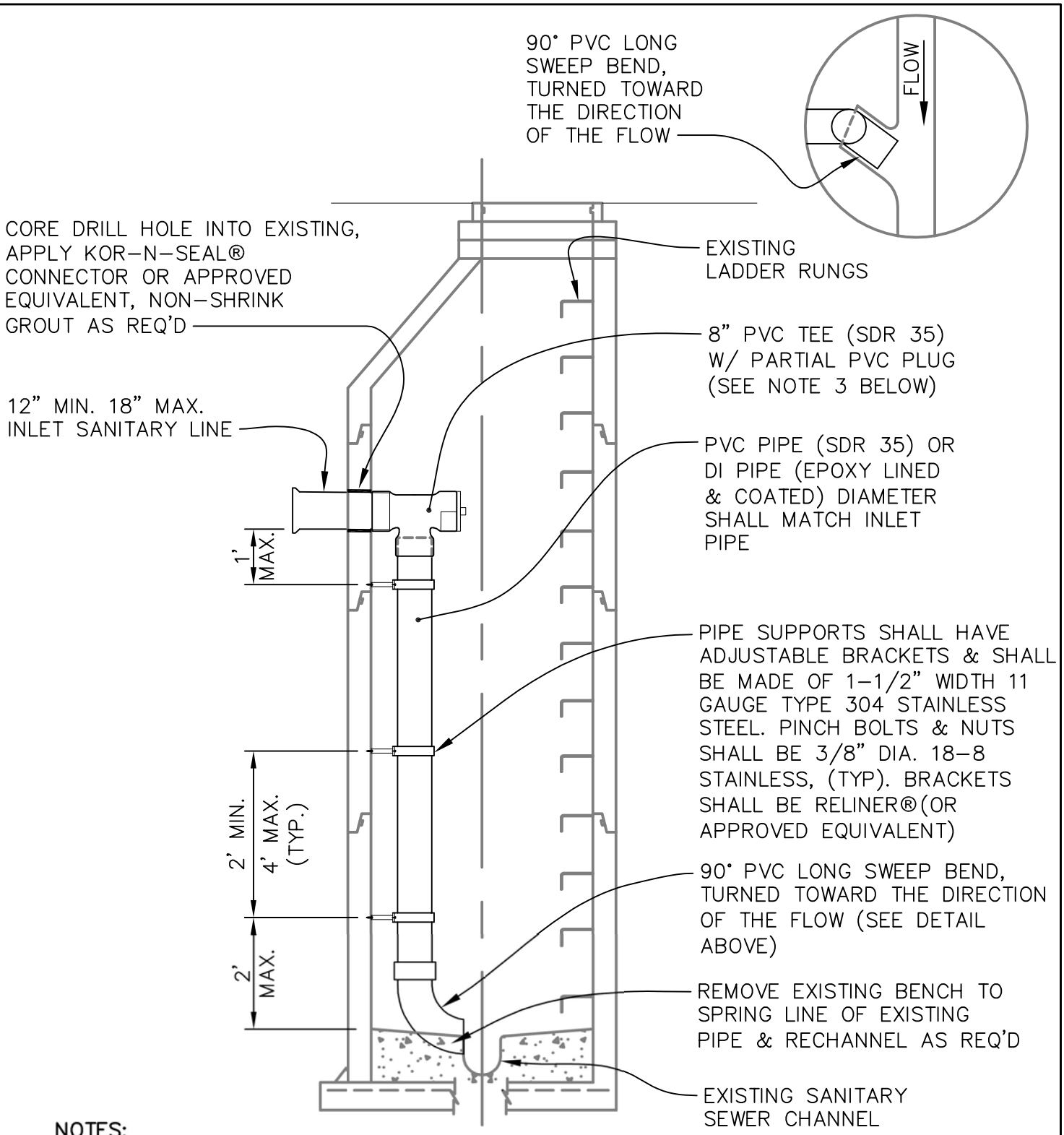
1. COVERS SHALL HAVE THEIR USE CAST IN 2" RAISED LETTERS: 'SEWER' FOR SANITARY SEWERS, 'DRAIN' FOR STORM SEWERS AND 'WATER' FOR WATER CONVEYANCE. THE WORDS 'CONFINED SPACE PERMIT REQUIRED' SHALL BE CAST IN 1" LETTERS AS SHOWN.
2. GRAY OR DUCTILE IRON FRAME AND DUCTILE IRON COVER WITH MINIMUM WEIGHTS AS FOLLOWS:

   FRAME = 210 LBS.

   COVER = 150 LBS.
3. PROVIDE SLIP RESISTANT COATING IN PAVED AREAS.
4. WHEN CALLED FOR IN THE CONTRACT DOCUMENTS, INSTALL INFRA–RISER PRODUCT NUMBER IC2431F0050F BY EJCO PER MANUFACTURER RECOMMENDATIONS (OR APPROVED EQUAL).

APPROVED BY CITY ENGINEER:	DATE:		
Jacob Sweeting	01/05/2021	CITY OF AUBURN WASHINGTON	24" DIA. MANHOLE FRAME AND COVER
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: S–04.4

Plotted by: Craig Dobyns on 12/16/2020 File location: M:\Construction Standard Details\Current Working DWG\Sewer and Storm\STDETL–S–04.4



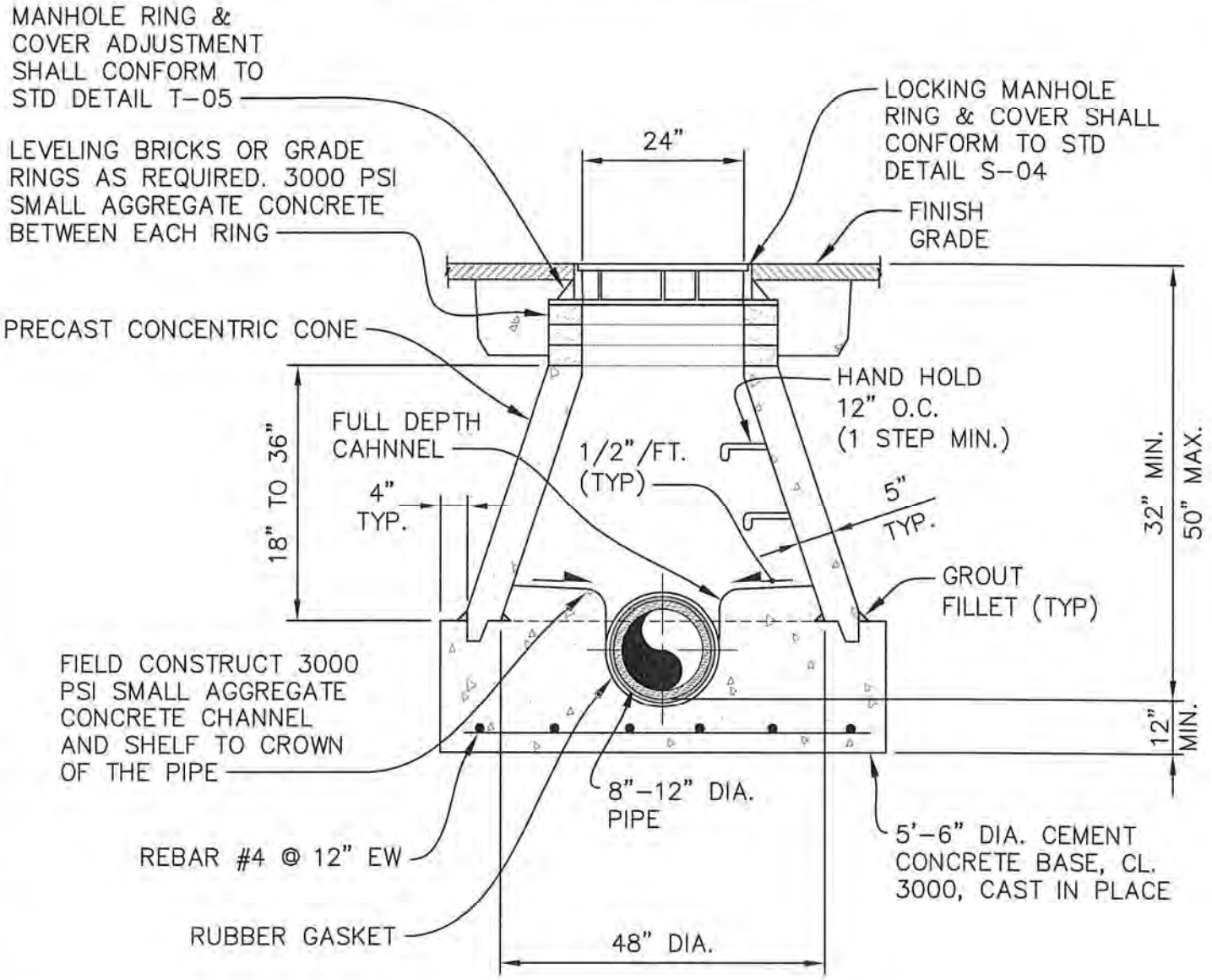
NOTES:

1. TYPE 1 MANHOLE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. DETAIL MAY ALSO BE APPLIED TO TYPE 2 & 3 MANHOLES.
2. DROP CONNECTIONS TO EXISTING 48" OR LARGER MANHOLES ONLY WITH ENGINEER APPROVAL.
3. PLUG TO BE CUT TO LEAVE 60% OF PIPE DIAMETER OPEN FOR MAINTENANCE ACCESS.

APPROVED BY CITY ENGINEER:	DATE:	CITY OF AUBURN WASHINGTON	RETROFIT EXISTING MANHOLE WITH INSIDE DROP
Jacob Sweeting	01/05/2021		
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: S-05.2

Plotted by: Craig Dobyns on 12/10/2020 File location: M:\Construction Standard Details\Current Working DWG\Sewer and Storm\STDETL-S-05.2

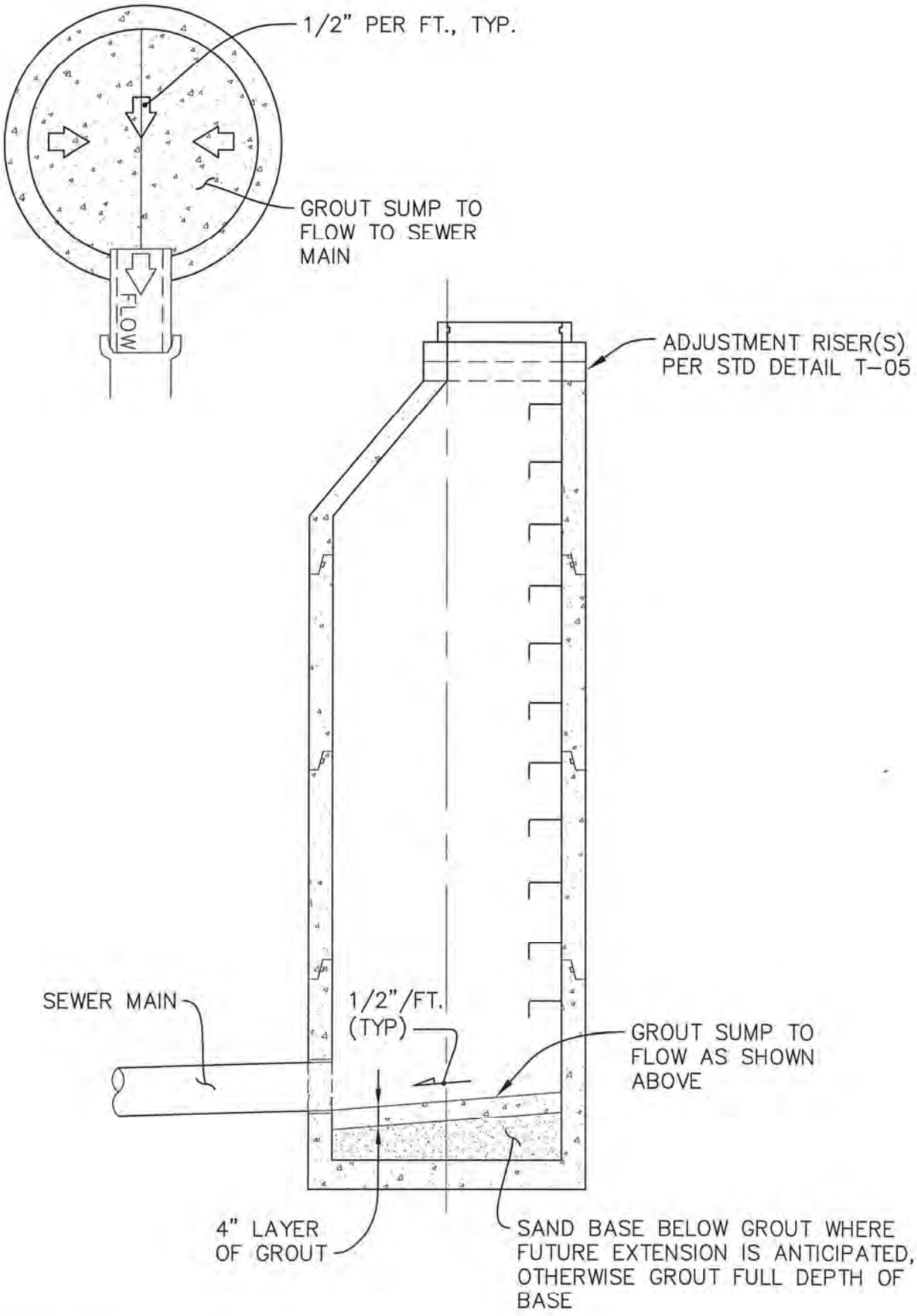
NOTE:
CITY ENGINEER APPROVAL IS REQUIRED BEFORE USING THIS DETAIL



ALTERNATE:
MANUFACTURED BASE WITH FLAT TOP, FRAME AND COVER IS ACCEPTABLE

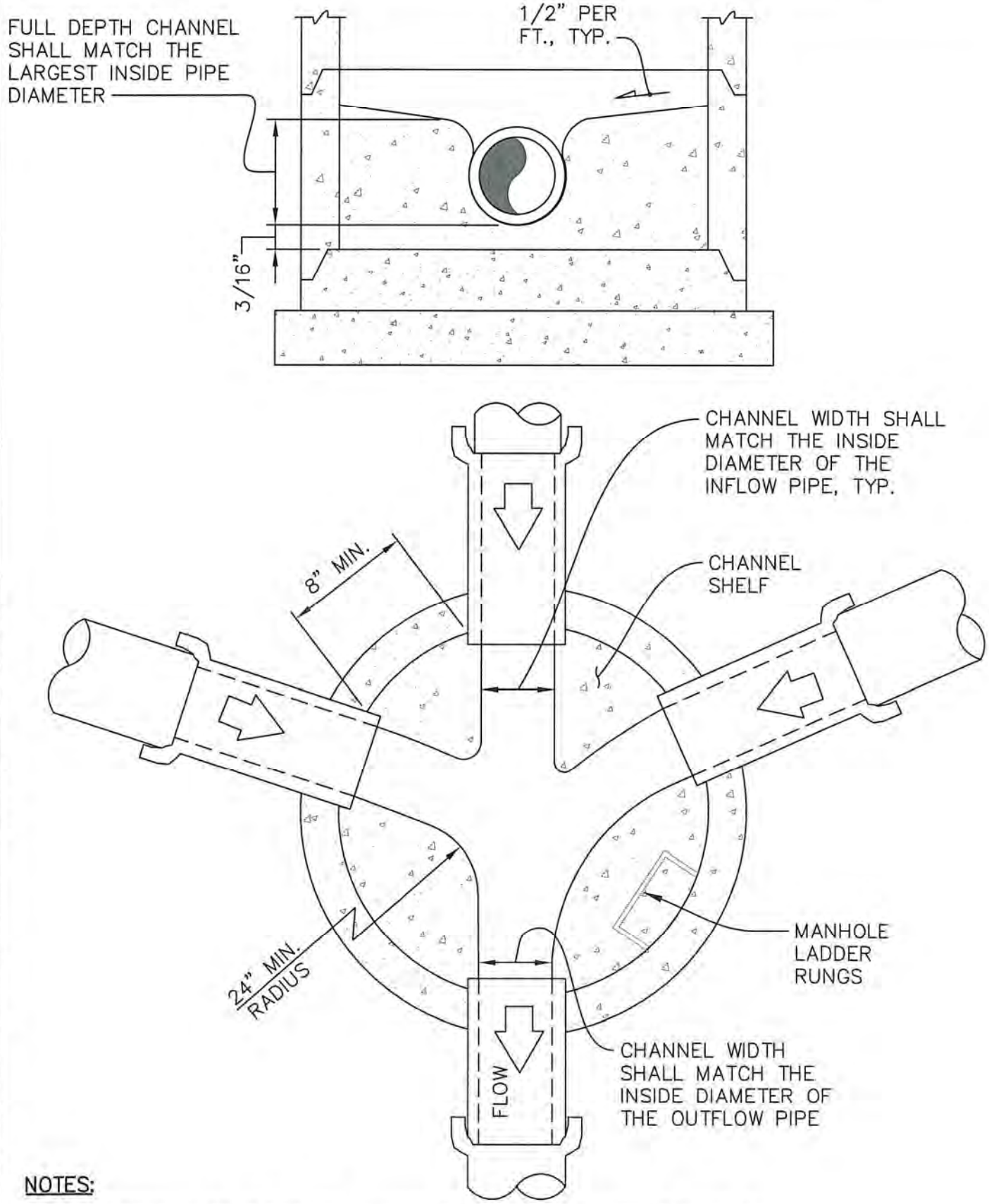
APPROVED BY CITY ENGINEER:	DATE:	CITY OF AUBURN WASHINGTON	EXTRA SHALLOW MANHOLE DETAIL
	8/5/2016		
COMMUNITY DEVELOPMENT & PUBLIC WORKS DEPT.			STANDARD DETAIL: S-06.1

Plotted by: Craig Dobyns on 7/13/2016 File location: W:\Construction Standard Details\Approved Drawing Files (dwg)\Sewer and Storm\STDETL-S-06.1



APPROVED BY CITY ENGINEER:	DATE:	CITY OF AUBURN WASHINGTON	MANHOLE AT END OF SANITARY SEWER LINE
	2/20/2018		
COMMUNITY DEVELOPMENT & PUBLIC WORKS DEPT.			STANDARD DETAIL: S-07.2

Plotted by: Vlad Rubashka on 1/17/2018 File location: M:\Construction Standard Details\Current Working DWG\Sewer and Storm\STDETL-S-07.2



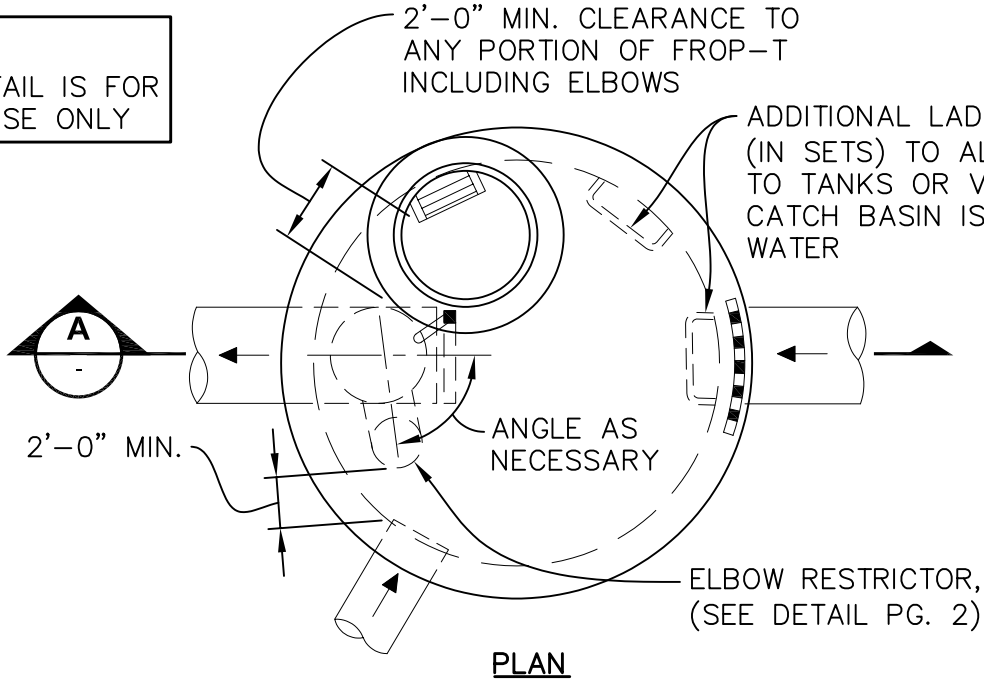
NOTES:

1. NO STEPS OVER PIPES OR MANHOLE CHANNELS. WHEN POSSIBLE, STEPS SHALL BE POSITIONED OVER THE LARGEST BENCH AREA.
2. FAST SETTING CONCRETE SHALL NOT BE USED.

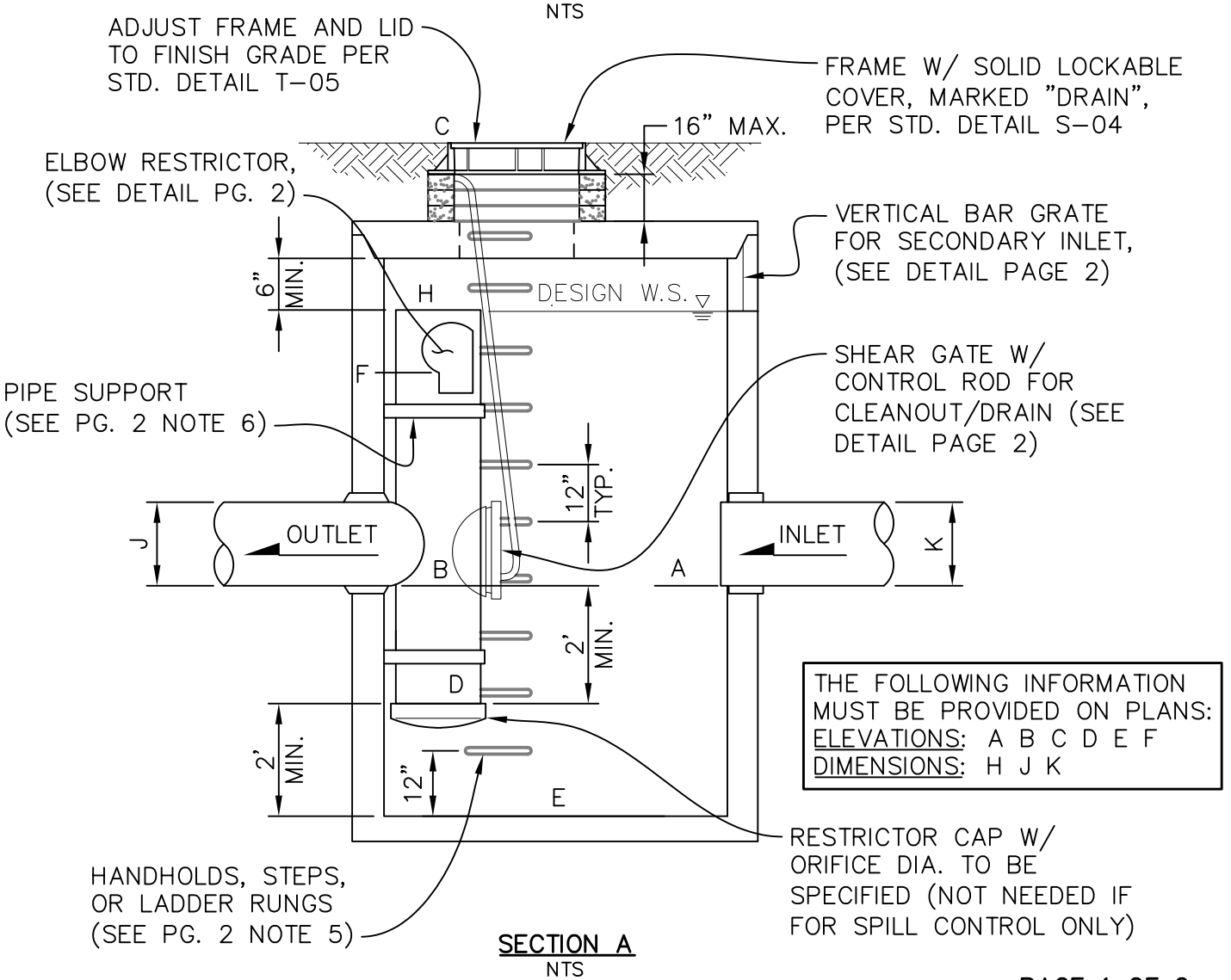
APPROVED BY CITY ENGINEER:	DATE:	CITY OF AUBURN WASHINGTON	MANHOLE CHANNEL CONSTRUCTION
	8/5/2016		
COMMUNITY DEVELOPMENT & PUBLIC WORKS DEPT.		STANDARD DETAIL:	S-08.1

Plotted by: Craig Dobyns on 7/13/2016 File location: W:\Construction Standard Details\Approved Drawing Files (dwg)\Sewer and Storm\STDETL-S-08.1

NOTE:
THIS DETAIL IS FOR STORM USE ONLY



PLAN
NTS

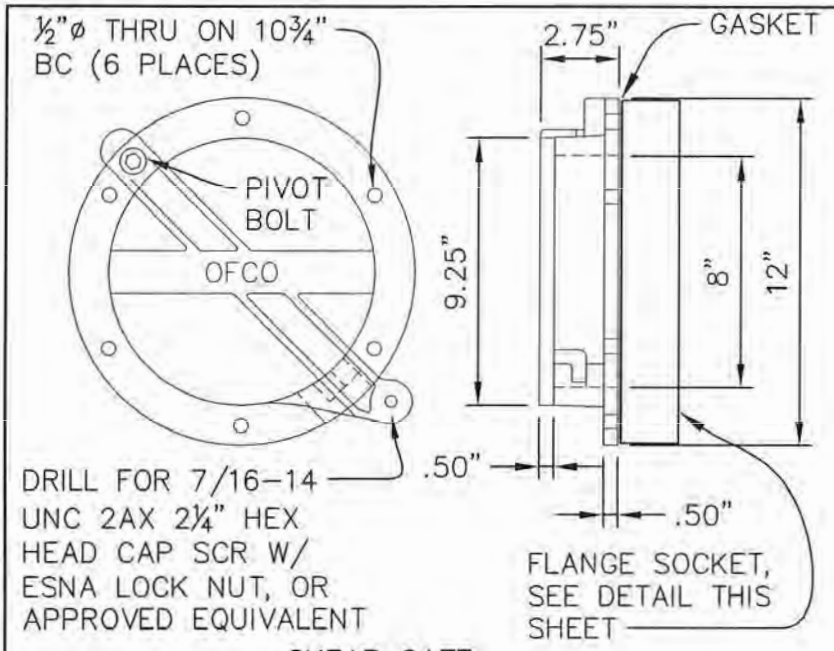


THE FOLLOWING INFORMATION MUST BE PROVIDED ON PLANS:
ELEVATIONS: A B C D E F
DIMENSIONS: H J K

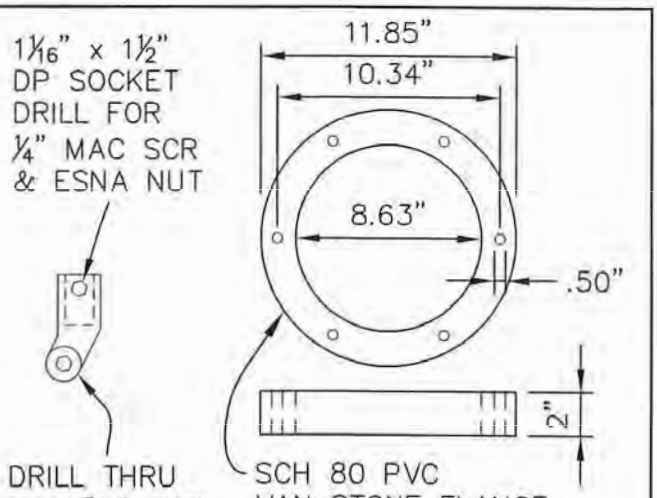
SECTION A
NTS

APPROVED BY CITY ENGINEER: Jacob Sweeting	DATE: 02/09/2023	CITY OF AUBURN WASHINGTON	FLOW RESTRICTOR
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: S-09.3

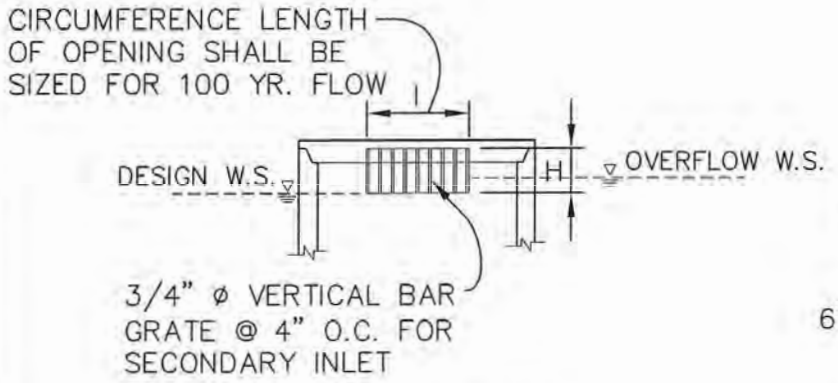
Plotted by: Craig Dobyns on 1/23/2023 File location: M:\Construction Standard Details\Current Working DWG\Sewer and Storm\STDETL-S-09.3



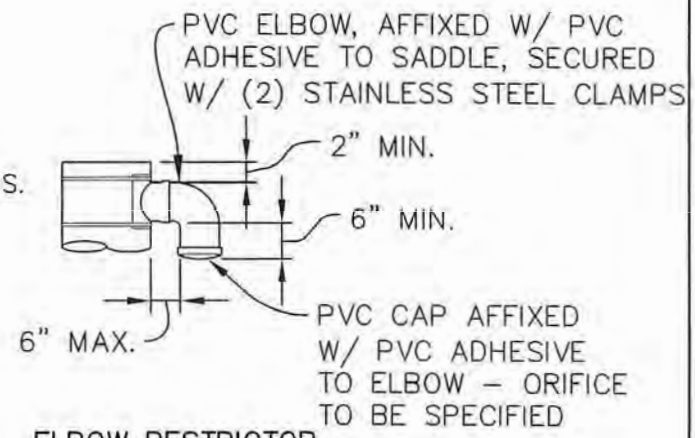
SHEAR GATE
NTS



FLANGE SOCKET
NTS



VERTICAL BAR GRATE
NTS



ELBOW RESTRICTOR
NTS

NOTE:
THIS DETAIL IS FOR STORM USE ONLY

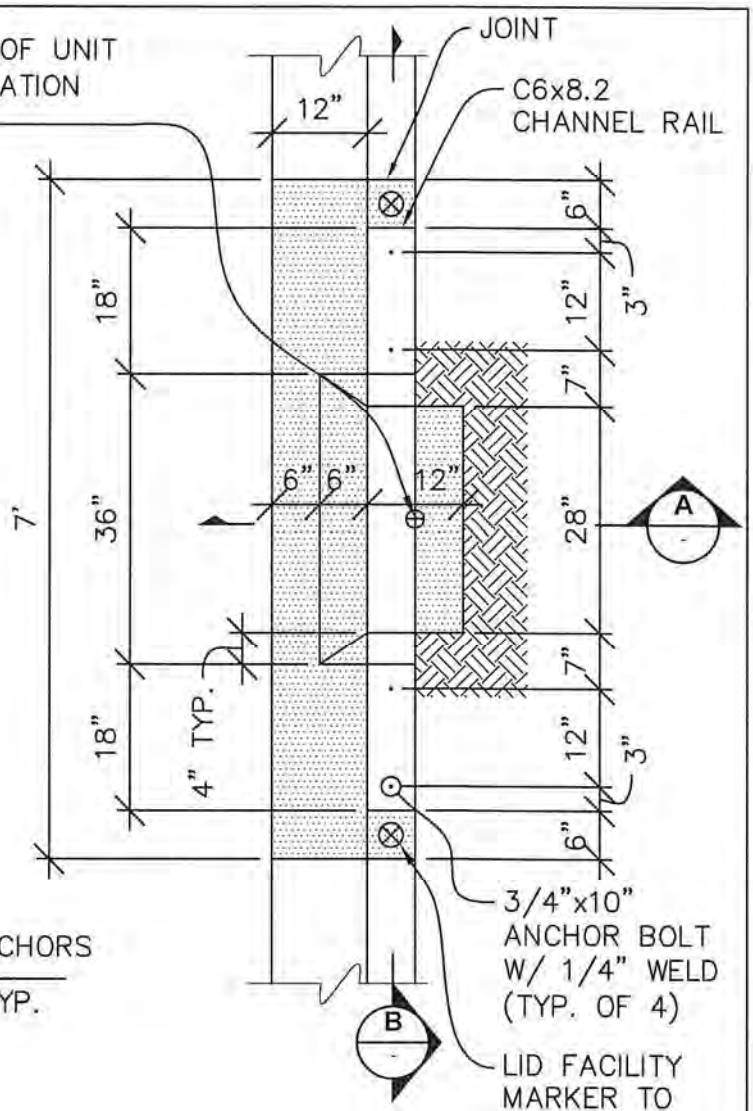
NOTES:

1. USE A MINIMUM OF 54" DIA. TYPE 2 CATCH BASIN.
2. OUTLET CAPACITY SHALL BE 100–YR. DEVELOPED PEAK FLOW.
3. RESTRICTOR TO BE MADE WITH NON–GASKETED PVC, SDR–35.
4. FLOW RESTRICTOR TO BE CONNECTED TO OUTLET PIPE WITH GASKETED CONNECTION OR ROMAC COUPLER.
5. BASIN LID FRAME AND LADDER RUNGS OR STEPS ARE OFFSET SO THAT:
   A. RESTRICTOR IS VISIBLE FROM TOP.
   B. ACCESS SPACE IS CLEAR OF RISER AND RESTRICTOR.
   C. COVER FRAME IS CLEAR OF CURB.
6. PROVIDE AT LEAST TWO 3"x0.090 GAUGE TYPE 304 STAINLESS STEEL SUPPORT BRACKET EPOXY ANCHORED 2" INTO CONCRETE WALL WITH MAX. 3' VERTICAL SPACING.
7. LOCATE ELBOW RESTRICTOR AS NECESSARY TO PROVIDE MINIMUM CLEARANCE AS SHOWN. PIPE SIZES AND SLOPE PER PLAN. SHOW ALLOWABLE DISCHARGE "Q"

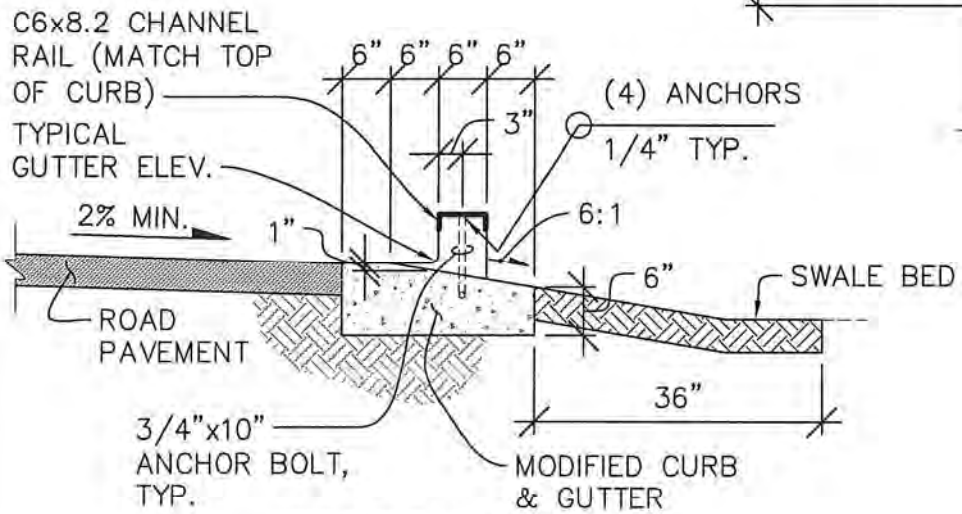
APPROVED BY CITY ENGINEER: Jacob Sunding	DATE: 12/20/19	CITY OF AUBURN WASHINGTON	FLOW RESTRICTOR
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: S–09a.2

CURB OPENING INLET NOTES:

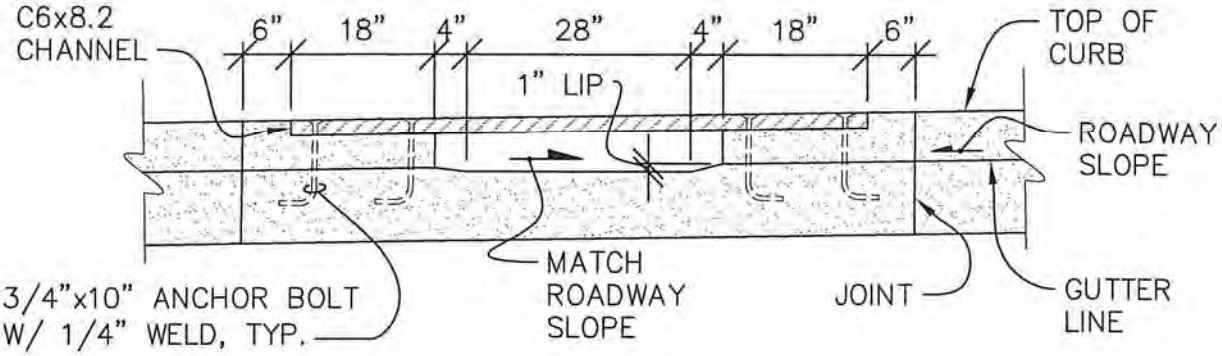
1. STRUCTURE SHALL BE MONOLITHIC AIR-ENTRAINED CLASS 3000 CONCRETE.
2. HOT DIP GALVANIZE C6x8.2 CHANNEL & ANCHOR BOLTS AFTER FABRICATION.



PLAN
NTS



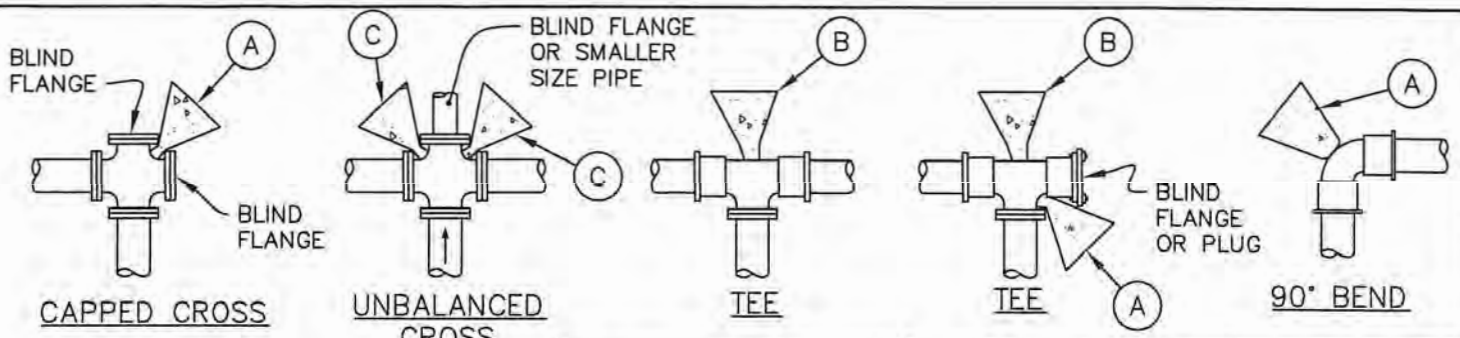
SECTION A
NTS

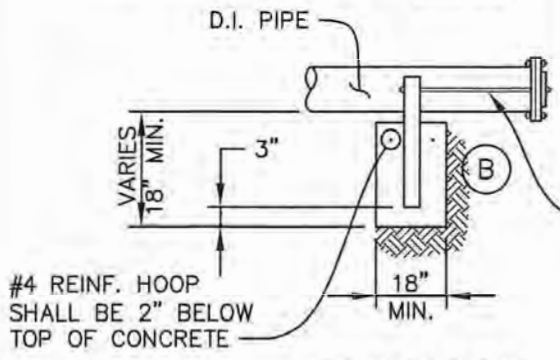


SECTION B
NTS

APPROVED BY CITY ENGINEER:	DATE:	CITY OF AUBURN WASHINGTON	COVERED CURB OPENING INLET
	2/20/2018		
COMMUNITY DEVELOPMENT & PUBLIC WORKS DEPT.			STANDARD DETAIL: S-10.1

Plotted by: Vlad Rubashka on 1/10/2018 File location: M:\Construction Standard Details\Current Working DWG\Sewer and Storm\STDETL-S-10.1



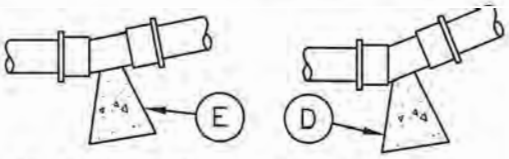


TIE BACK BLOCK DETAIL

NOTE:
SEE STD. DETAIL W-03 FOR TYPICAL BLOW OFF ASSEMBLY. MAINTAIN 2" CLEARANCE BETWEEN CONCRETE AND PIPE

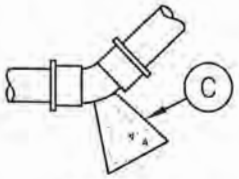
FOR PIPE SIZES UNDER 12" USE 2 3/4" ø HOT DIPPED GALV. THREADED RODS FOR 12" & 14" USE 4 3/4" ø HOT DIPPED GALV. RODS

HORIZ OR UPWARD VERT. BENDS

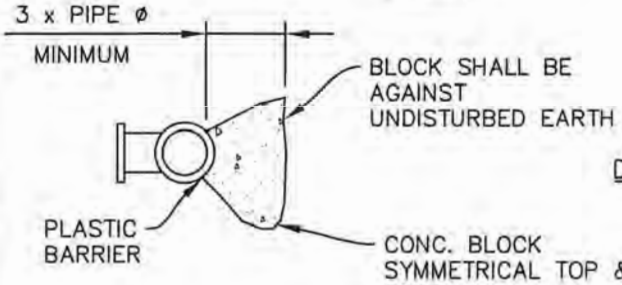


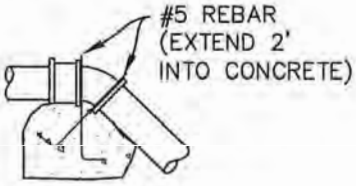
11 1/4° BEND

22 1/2° BEND



45° BEND





DOWNWARD VERTICAL BEND

NOTES:

1. BEARING AREA OF CONC. THRUST BLOCK IS BASED ON 200 PSI PRESSURE AND SAFE SOIL BEARING LOAD OF 2000 PSF.
2. AREAS MUST BE ADJUSTED FOR OTHER PIPE SIZES, PRESSURES, AND SOIL CONDITIONS.
3. CONCRETE BLOCKING SHALL BE CAST IN PLACE AND HAVE A MINIMUM OF 1/4 SQUARE FOOT BEARING AGAINST THE FITTING.
4. THE BLOCK SHALL BEAR AGAINST THE FITTINGS ONLY AND SHALL BE CLEAR OF JOINTS TO PERMIT TAKING UP AND DISMANTLING OF JOINT.
5. THE CONTRACTOR SHALL INSTALL BLOCKING ADEQUATE TO WITHSTAND FULL TEST PRESSURE AS WELL AS TO CONTINUOUSLY WITHSTAND OPERATING PRESSURE UNDER ALL CONDITIONS OF SERVICE.
6. USE 2" THICK STYROFOAM TO FORM THE CONCRETE BLOCKING. PLASTIC SHALL BE INSTALLED BETWEEN ALL CONCRETE BLOCKING AND FITTINGS.
7. RESTRAINED JOINTS ARE REQUIRED WHERE BEARING SOILS OR FILL MATERIAL ARE DETERMINED BY THE ENGINEER TO BE UNSUITABLE TO PROVIDE ADEQUATE BEARING LOAD, OR THIS SOIL HAS BEEN DISTURBED.

THRUST BLOCK TABLE
MIN. BEARING AGAINST UNDISTURBED SOIL

PIPE SIZE	(A) SQ. FT.	(B) SQ. FT.	(C) SQ. FT.	(D) SQ. FT.	(E) SQ. FT.
4"	3	3	2	2	2
6"	4	3	2	2	2
8"	7	5	4	2	2
10"	11	8	6	3	2
12"	16	11	9	5	3
14"	22	15	12	6	3
16"	29	20	16	8	4
18"	36	25	20	10	5
20"	45	32	24	13	6
22"	54	38	29	15	8
24"	64	45	35	18	9
28"	87	62	48	24	12
30"	101	71	55	28	14
36"	145	102	78	40	20
42"	197	139	107	55	27
48"	257	181	140	71	36

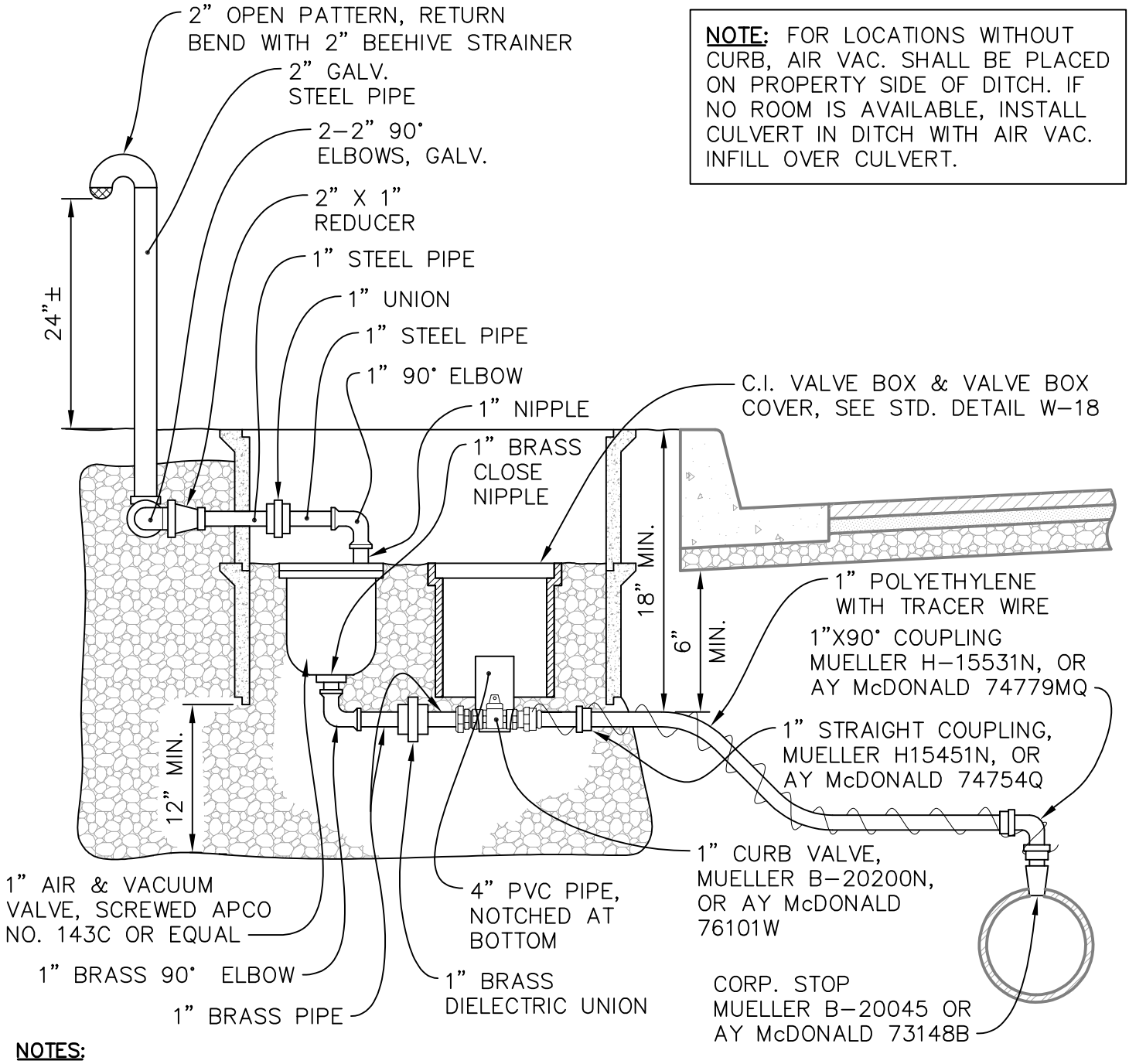
APPROVED BY CITY ENGINEER: DATE: 9/8/2016

CITY OF AUBURN WASHINGTON

WATER MAIN BLOCKING

COMMUNITY DEVELOPMENT & PUBLIC WORKS DEPT. STANDARD DETAIL: W-01.1

Plotted by: Craig Dobyns on 9/10/2016 File location: M:\Construction Standard Details\Approved Drawing Files (dwg)\Water\STDETL-W-01.1



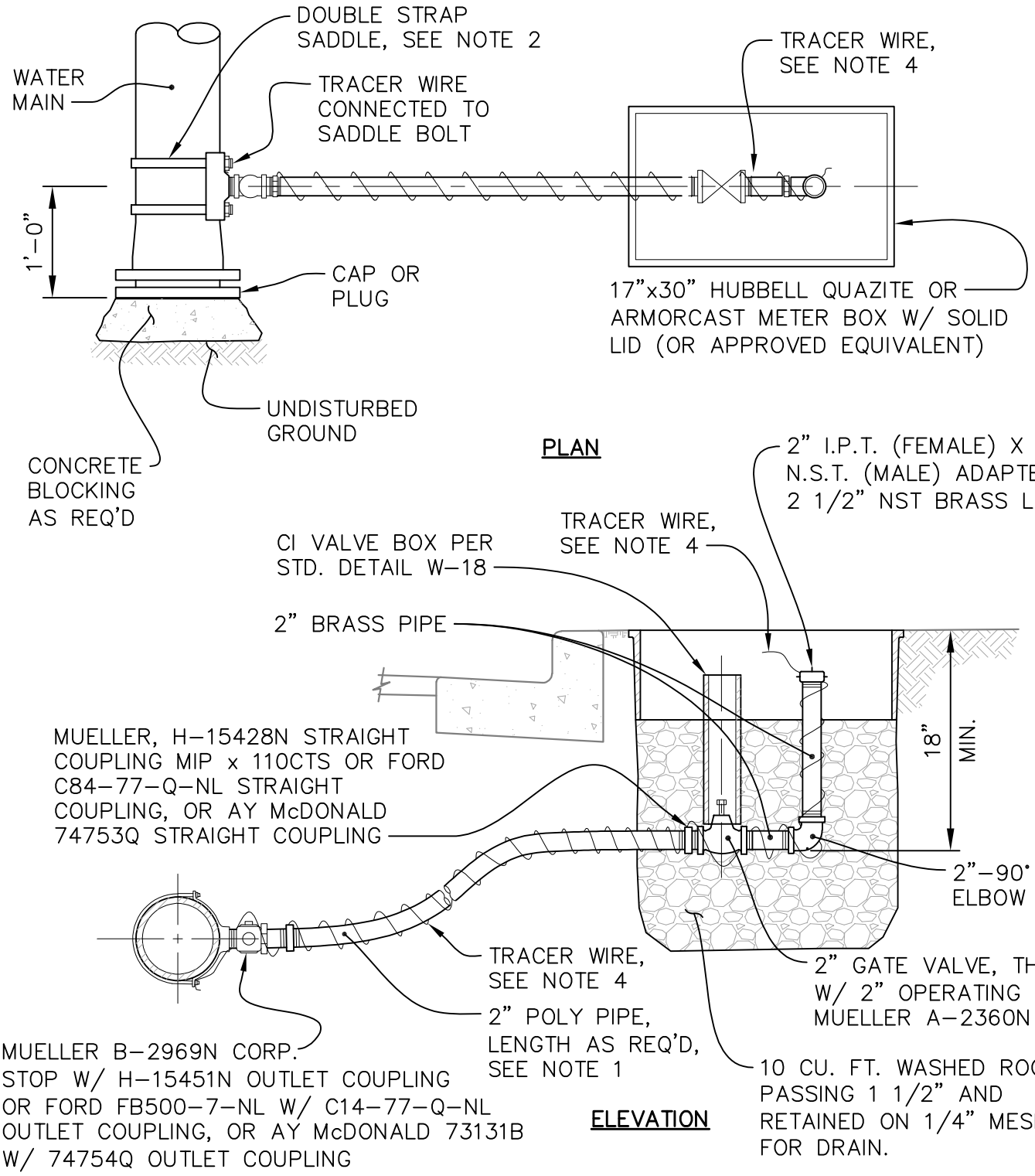
NOTE: FOR LOCATIONS WITHOUT CURB, AIR VAC. SHALL BE PLACED ON PROPERTY SIDE OF DITCH. IF NO ROOM IS AVAILABLE, INSTALL CULVERT IN DITCH WITH AIR VAC. INFILL OVER CULVERT.

NOTES:

1. AIR VALVE TO BE INSTALLED IN 17" X 30" HUBBELL QUAZITE OR ARMORCAST METER BOX W/ SOLID DUCTILE COVER, EAST JORDAN IRON WORKS (OR APPROVED EQUIVALENT).
2. BED WITH 3/4" WASHED ROCK, PASSING 1 1/2" AND RETAINED ON 1/4" MESH FOR DRAIN.
3. POLYETHYLENE PIPE SHALL BE AS SPECIFIED IN SECTION 9–30.6(3) OF THE CONSTRUCTION STANDARDS AND THE CONTRACT PROVISIONS.
4. DIELECTRIC UNIONS ARE REQUIRED FOR JOINING DISSIMILAR MATERIAL TYPES.
5. MAINTAIN POSITIVE GRADE FROM MAIN TO VALVE.
6. IN LIEU OF 2" BEEHIVE STRAINER, CONTACT CITY WATER DEPT. FOR LIST OF DOH APPROVED STRAINERS.
7. WHEN INSTALLED IN CONJUNCTION WITH A FIRE HYDRANT ON A DEAD END MAIN, THE AIR VAC SHALL BE INSTALLED AFTER THE FIRE HYDRANT.

APPROVED BY CITY ENGINEER:	DATE:	CITY OF AUBURN WASHINGTON	TYPICAL AIR AND VACUUM RELIEF VALVE DETAIL
Jacob Sweeting	2/7/24		
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: W–02.6

Plotted by: Craig Dobyns on 1/24/2024 File location: M:\Construction Standard Details\Current Working DWG\Water\STDETL–W–02.6

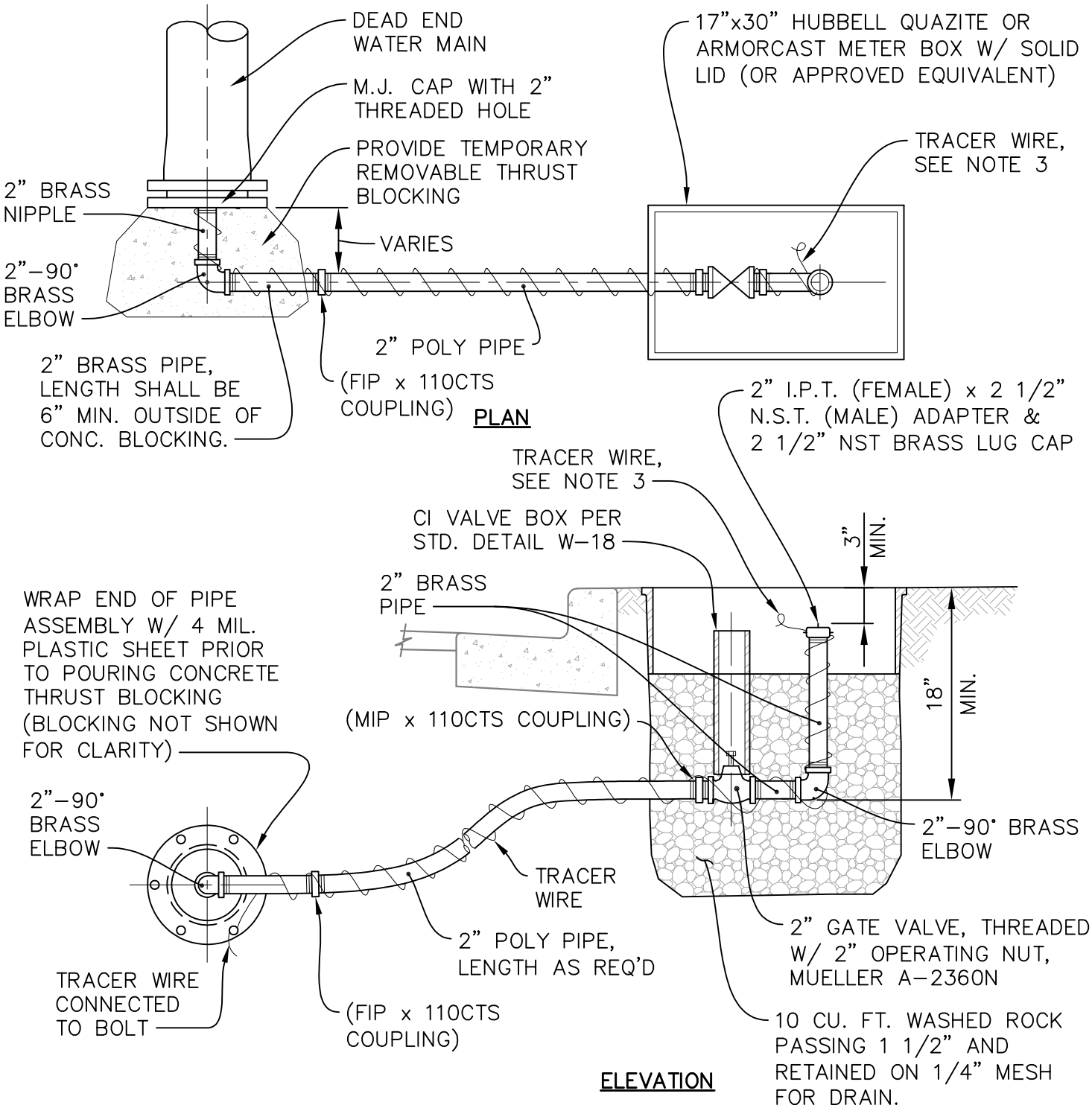


NOTES:

1. 2" POLY PIPE SHALL BE AS SPECIFIED IN SECTION 9-30.6(3) OF THE CONSTRUCTION STANDARDS AND THE CONTRACT PROVISIONS.
2. SADDLE SHALL BE AS SPECIFIED IN SECTION 9-30.6(1) OF THE CONSTRUCTION STANDARDS AND THE CONTRACT PROVISIONS.
3. FOR LOCATIONS WITHOUT CURB, BLOWOFF SHALL BE PLACED ON PROPERTY SIDE OF THE DITCH. IF NO ROOM IS AVAILABLE, INSTALL CULVERT IN DITCH W/ BLOWOFF IN FILL OVER CULVERT.
4. TRACER WIRE SHALL BE INSULATED #10 COPPER WIRE, BARED AT ENDS.

APPROVED BY CITY ENGINEER: Jacob Sweeting	DATE: 2/7/24	CITY OF AUBURN WASHINGTON	2" PERMANENT BLOW OFF ASSEMBLY
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: W-03.5

Plotted by: Craig Dobyns on 1/24/2024 File location: M:\Construction Standard Details\Current Working DWG\Water\STDETL-W-03.5

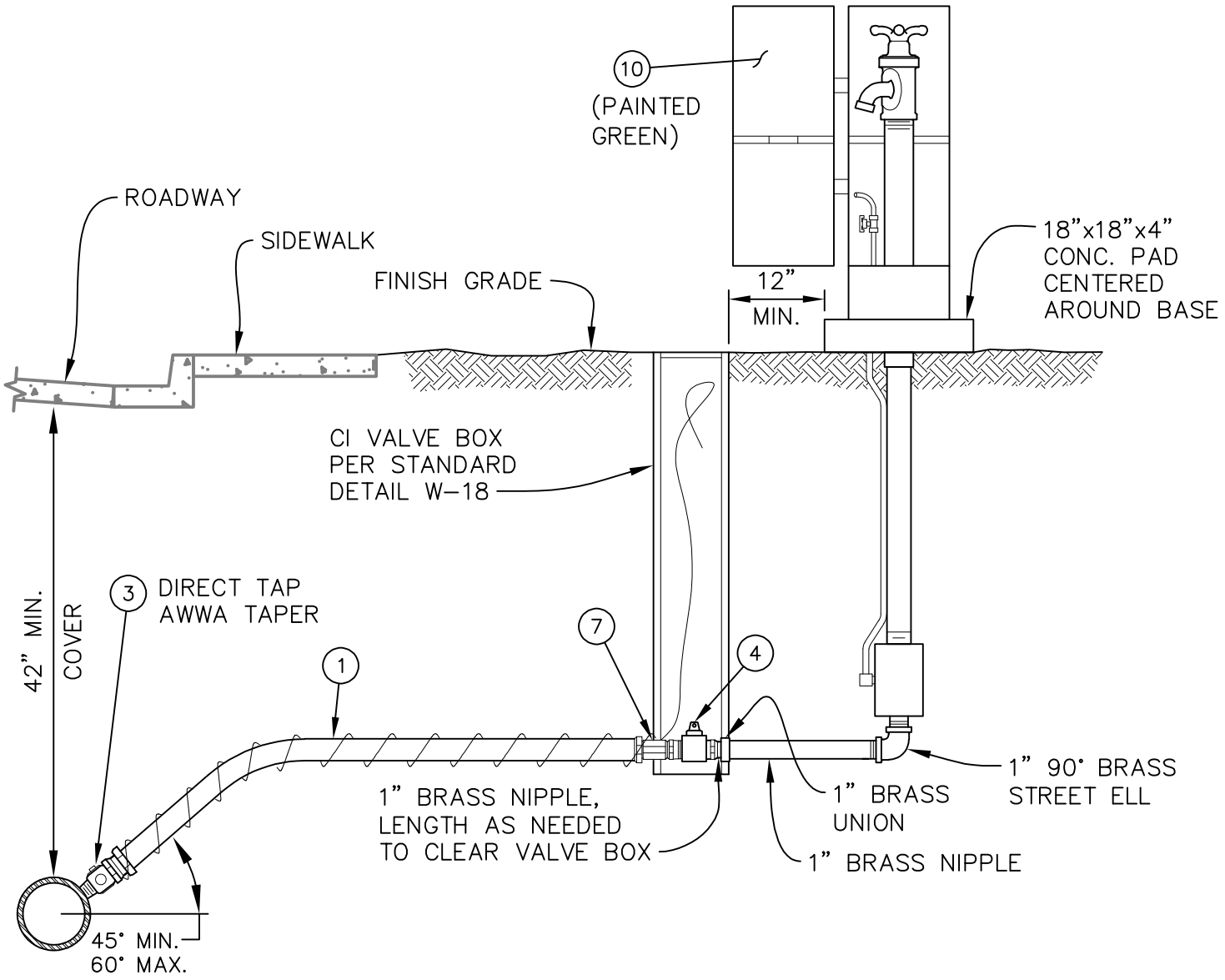


NOTES:

1. 2" POLY PIPE SHALL BE AS SPECIFIED IN SECTION 9-30.6(3) OF THE CONSTRUCTION STANDARDS AND THE CONTRACT PROVISIONS.
2. TEMPORARY BLOWOFFS SHALL BE USED ON ALL DEAD END WATERLINES WITH LOCATION OF BLOWOFF BOX AS SHOWN ON THE PLAN OR WHERE DIRECTED BY THE ENGINEER.
3. TRACER WIRE SHALL BE INSULATED #10 COPPER WIRE, BARED AT ENDS.
4. GATE VALVE SHALL BE AS SPECIFIED IN SECTION 9-30.3(1) OF THE CONSTRUCTION STANDARDS AND THE CONTRACT PROVISIONS.

APPROVED BY CITY ENGINEER: Jacob Sweeting	DATE: 1/17/2022	CITY OF AUBURN WASHINGTON	TEMPORARY BLOW OFF DETAIL
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: W-04.4

Plotted by: Craig Dobyns on 1/6/2022 File location: M:\Construction Standard Details\Current Working DWG\Water\STDETL-W-04.4



MATERIAL LIST				
ITEM NO.	DESCRIPTION	FORD PART #	MUELLER PART #	AY McDONALD PART #
1	1" TYPE K COPPER OR CTS POLY PIPE	PER TABLE ON STD DTL W-15	PER TABLE ON STD DTL W-15	PER TABLE ON STD DTL W-15
3	1" CORP STOP	PER TABLE ON STD DTL W-15	PER TABLE ON STD DTL W-15	PER TABLE ON STD DTL W-15
4	CURB VALVE	PER TABLE ON STD DTL W-15	PER TABLE ON STD DTL W-15	PER TABLE ON STD DTL W-15
7	1" COUPLING	PER TABLE ON STD DTL W-15	PER TABLE ON STD DTL W-15	PER TABLE ON STD DTL W-15

NOTES:

1. ALL PIPE AND FITTINGS TO BE ASSEMBLED W/ TEFLON AND PIPE DOPE UNLESS OTHERWISE NOTED.
2. SERVICE LINES SHALL BE INSTALLED PERPENDICULAR TO THE WATER MAIN.
3. THE SERVICE LINE SHALL BE INSTALLED TO ALLOW FOR THE FAR SIDE OF THE SAMPLE STATION TO BE INSTALLED IN THE ROW OR EASEMENT LINE, UNLESS OTHERWISE DIRECTED BY THE CITY.

APPROVED BY CITY ENGINEER: Jacob Sweeting DATE: 2/7/24

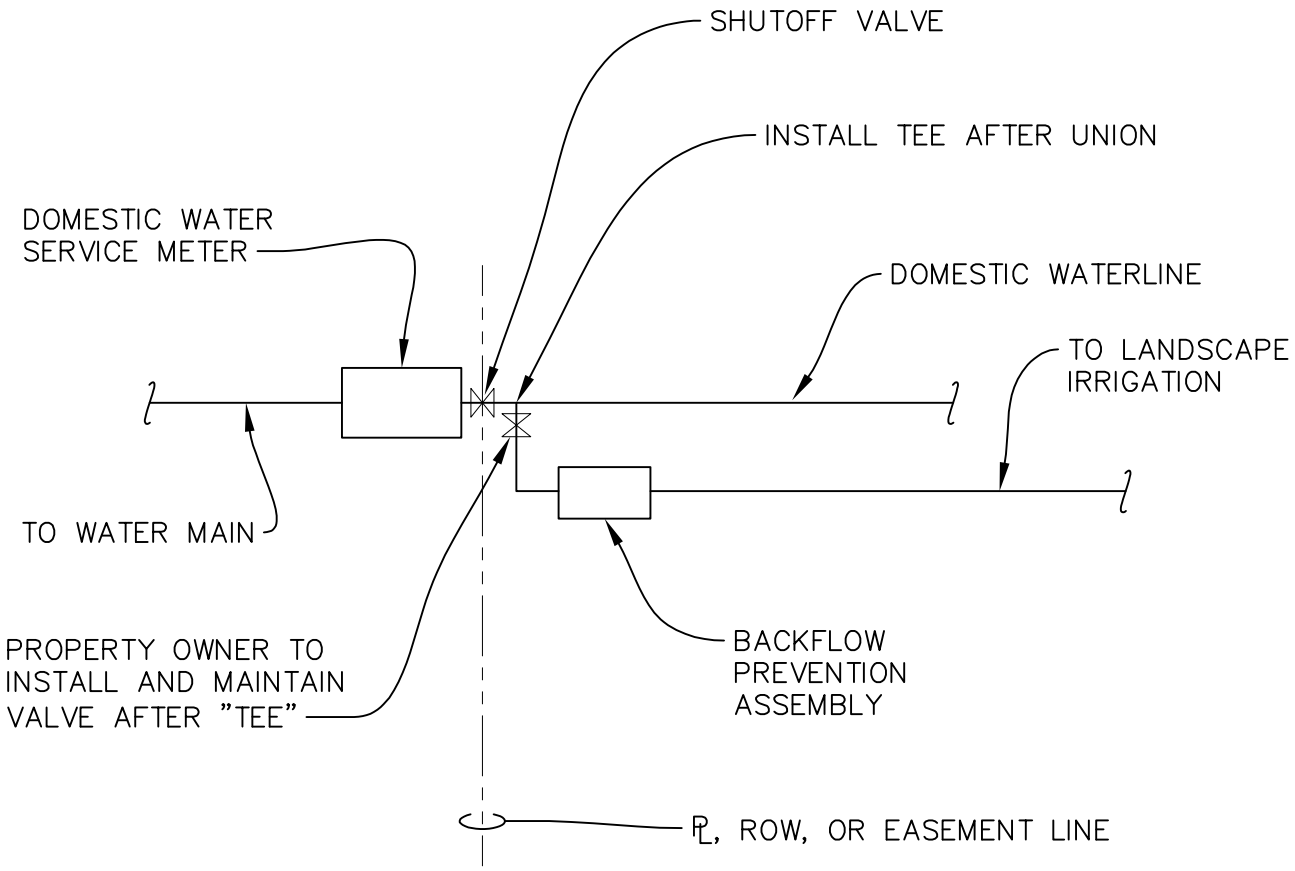
CITY OF AUBURN WASHINGTON

WATER SAMPLING STATIONING DETAIL

PUBLIC WORKS DEPARTMENT

STANDARD DETAIL: W-05.4

Plotted by: Craig Dobyns on 1/24/2024 File location: M:\Construction Standard Details\Current Working DWG\Water\STDETL-W-05.4



PLAN
NTS

NOTES:

1. BACKFLOW ASSEMBLY SHALL BE PER DESIGN STANDARDS.
2. THIS DETAIL IS APPLICABLE TO SINGLE FAMILY RESIDENCE ONLY.

APPROVED BY CITY ENGINEER:	DATE:		3/4" TO 2" IRRIGATION FROM DOMESTIC SERVICE LINE (SINGLE FAMILY)
Jacob Sweeting	01/05/2021	CITY OF AUBURN WASHINGTON	
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: W-06.3

Plotted by: Craig Dobyns on 12/30/2020 File location: M:\Construction Standard Details\Current Working DWG\Water\STDETL-W-06.3

Plotted by: Craig Dobyns on 12/28/2022 File location: M:\Construction Standard Details\Current Working DWG\Water\STDETL-W-07.3

PUBLIC WORKS DEPARTMENT

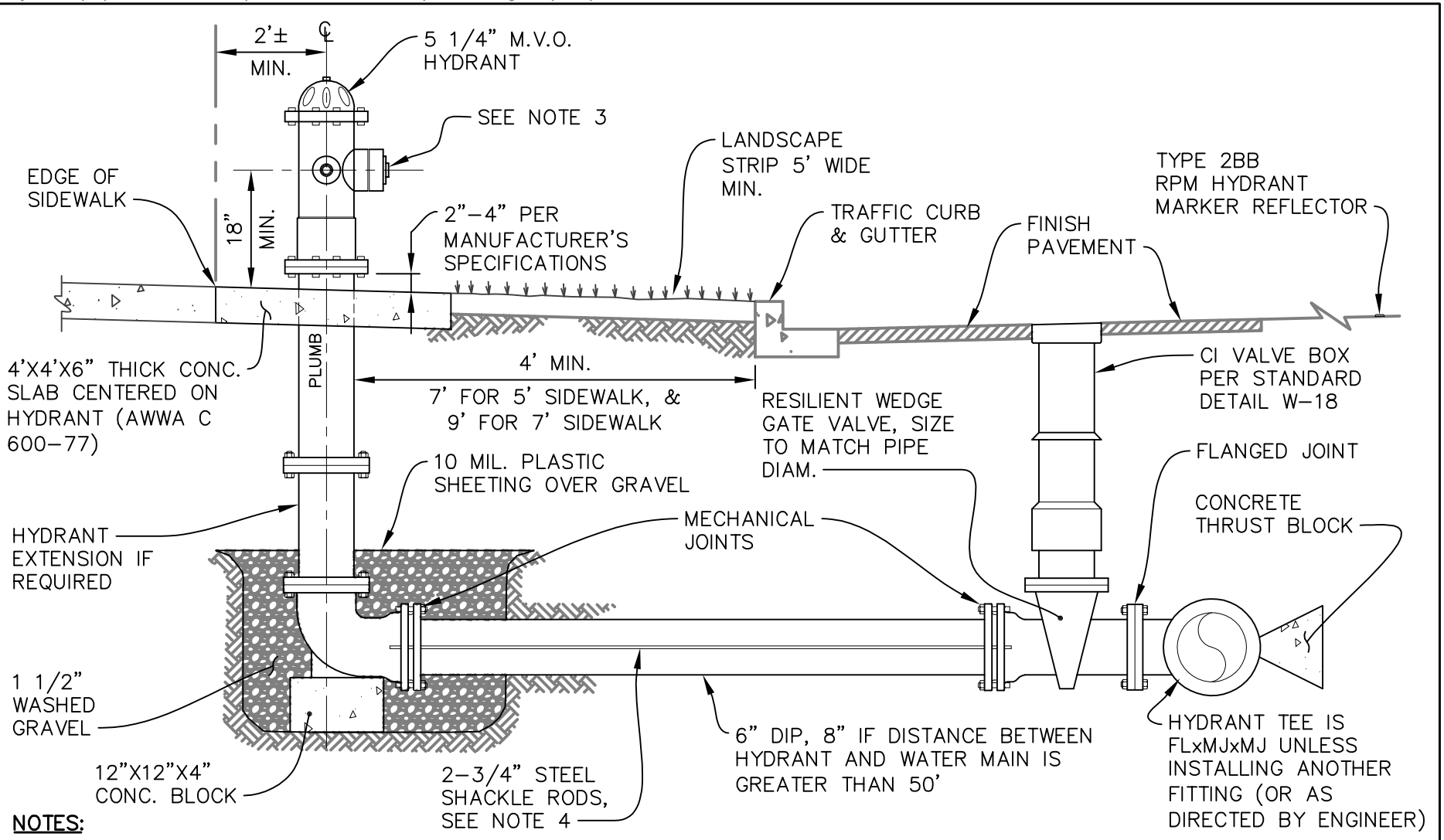
APPROVED BY CITY ENGINEER: Jason Sweeney

DATE: 02/09/2023

CITY OF AUBURN WASHINGTON

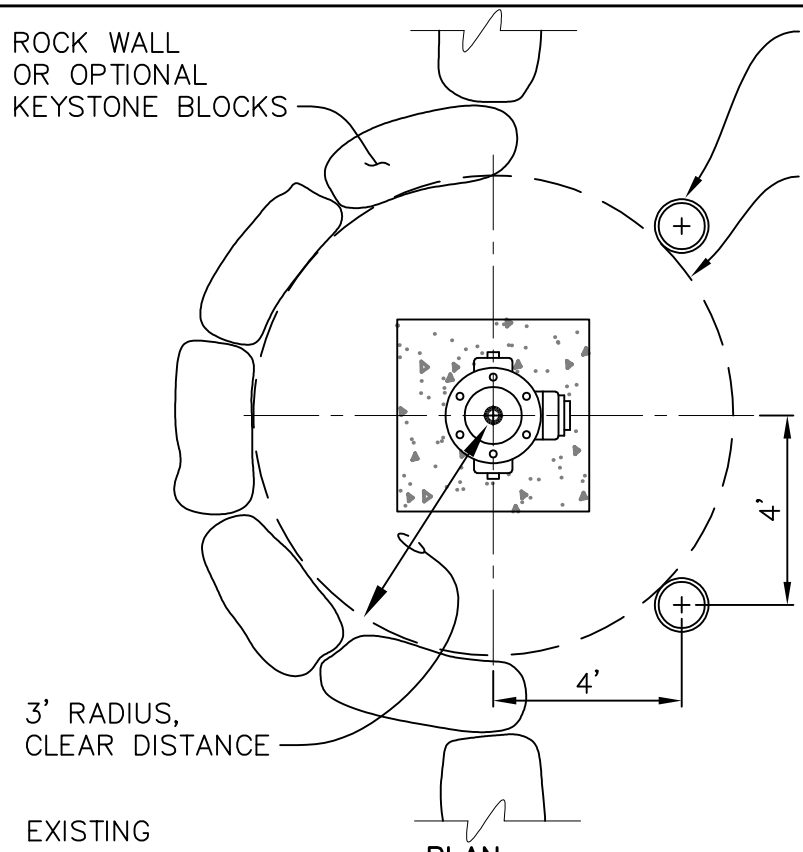
5 1/4" M.V.O. HYDRANT SETTING DETAIL

STANDARD DETAIL: W-07.3

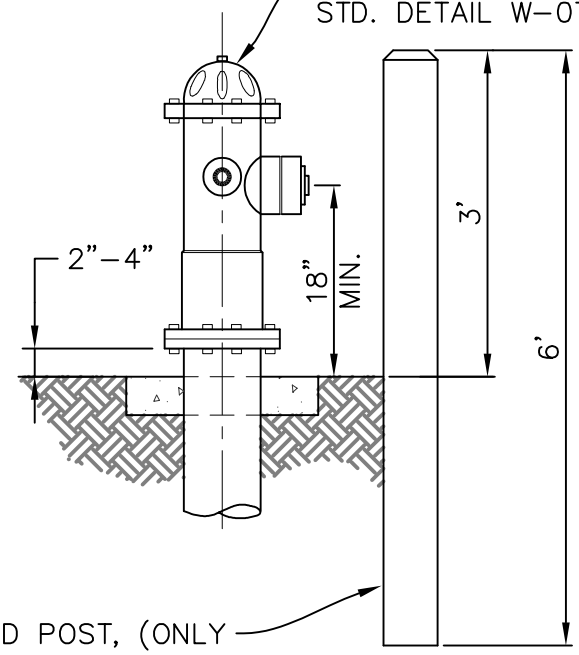


NOTES:

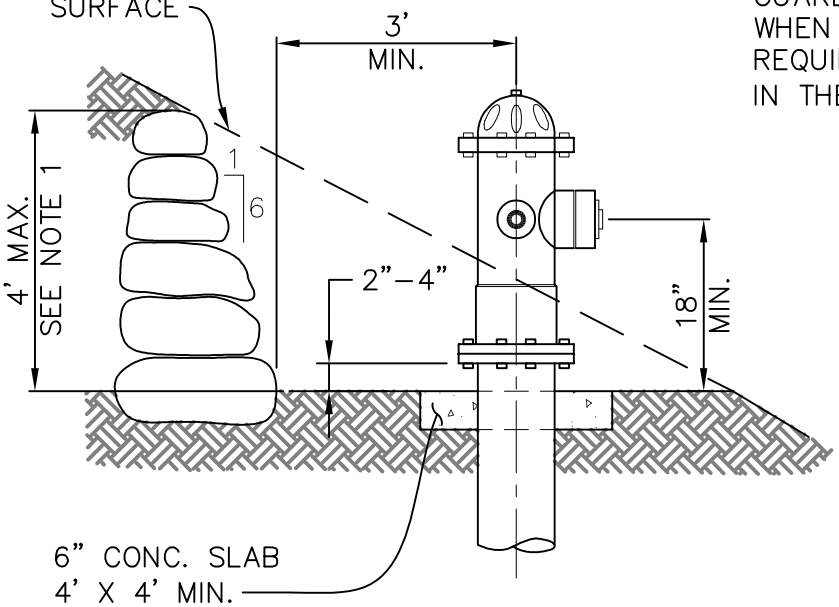
1. HYDRANT SHALL BE LOCATED WITHIN THE LANDSCAPE STRIP. WHERE LANDSCAPE STRIP IS NOT PRESENT OR IS LESS THAN 5' WIDE, HYDRANT AND PAD SHALL BE PLACED BEHIND THE SIDEWALK IN R.O.W. OR EASEMENT.
2. WHERE NO CURB & GUTTER IS INSTALLED, FIRE HYDRANT SHALL BE LOCATED (IN RELATION TO STREET CENTER LINE) AS INDICATED ON THE DRAWINGS.
3. HYDRANTS SHALL HAVE 2-2 1/2" NATIONAL STANDARD THREAD (NST) HOSE PORTS & 1-4 1/2" NST WITH 5" STORZ ADAPTER AND CAP.
4. MEGA-LUGS OR PUSH-ON JOINT RESTRAINTS MAY BE USED IN PLACE OF SHACKLE RODS WITH PRIOR ENGINEER APPROVAL.
5. ENSURE 5' MINIMUM CLEARANCE TO OBSTACLES FROM CENTERLINE OF HYDRANT.
6. REMOVE CHAINS.



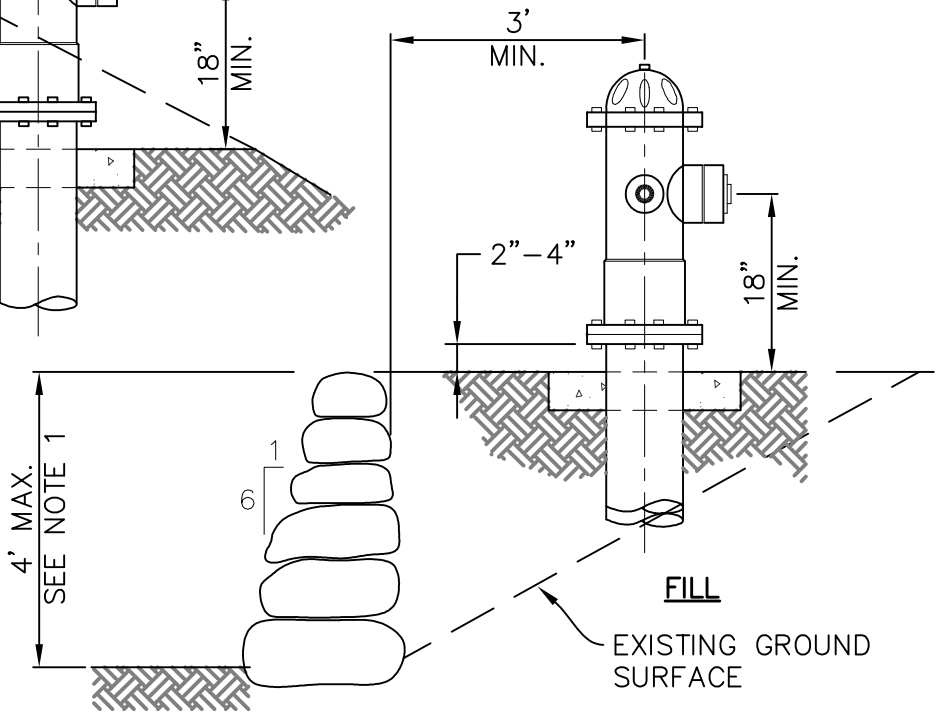
PLAN



GUARD POST ELEVATION



CUT



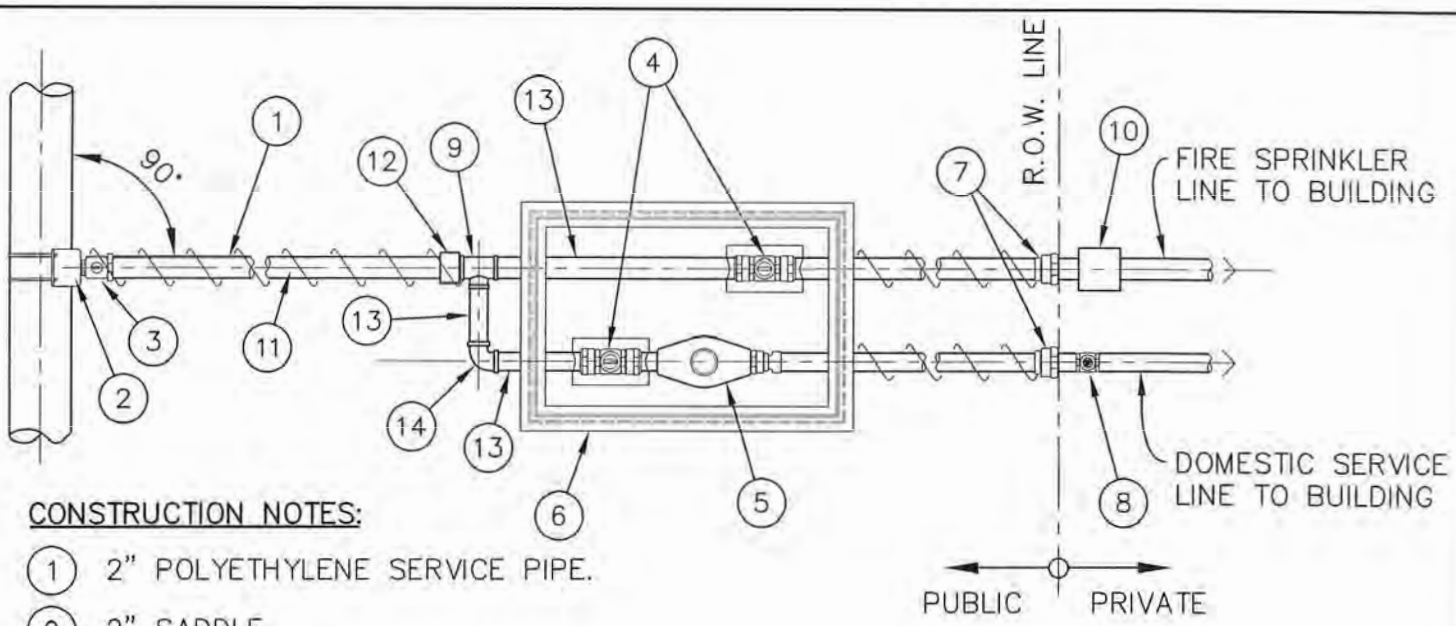
FILL

NOTES:

1. SEE PLAN FOR WALLS EXCEEDING 4'-0" IN HEIGHT.

APPROVED BY CITY ENGINEER: Jacob Sweeting	DATE: 2/7/24	CITY OF AUBURN WASHINGTON	FIRE HYDRANT LOCATION IN CUT OR FILL W/ GUARD POSTS
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: W-08.3

Plotted by: Craig Dobyns on 1/12/2024 File location: M:\Construction Standard Details\Current Working DWG\Water\STDETL-W-08.3



CONSTRUCTION NOTES:

(1) 2" POLYETHYLENE SERVICE PIPE.

(2) 2" SADDLE.

(3) 2" CORPORATION STOP.

(4) CURB VALVE WITH COUPLINGS AND LOCK WING EARS, ENCASED VERTICALLY BY 3" DIA. SCH. 40 PVC PIPE, NOTCHED AT BOTTOM TO FIT OVER COUPLINGS. FIRE LINE PVC PIPE SHALL BE PAINTED RED TO IDENTIFY AS A FIRE LINE.

(5) METER YOLK WITH SPACER PIPE W/ HOLE IN SPACER. DO NOT INSTALL GASKETS.

(6) 17"x30" METER BOX.

(7) ADAPTER COUPLING, TEMPORARILY CAP IF PRIVATE SIDE CONNECTION IS NOT READY.

(8) SHUT OFF VALVE ON DOMESTIC LINE (CUSTOMER TO INSTALL AND MAINTAIN).

(9) 2"x2"x*" TEE, WHERE *" IS METER SIZE IN INCHES (1" MINIMUM) FOR DOMESTIC LINE.

(10) BACKFLOW PREVENTION ASSEMBLY ON FIRE SPRINKLER LINE (CUSTOMER TO INSTALL AND MAINTAIN).

(11) #10 INSULATED COPPER TRACER WIRE.

(12) 2" ADAPTER (MIPxCOMP)

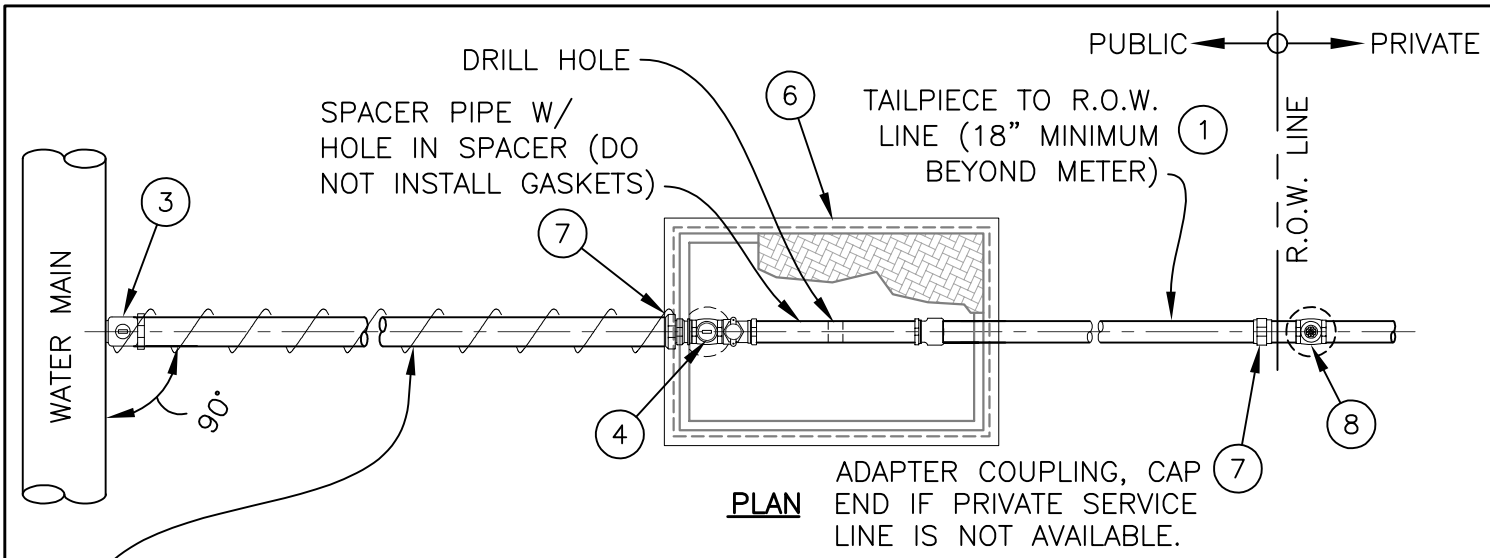
(13) *" BRASS NIPPLE, LENGTH AS NEEDED.

(14) *" BRASS ELBOW

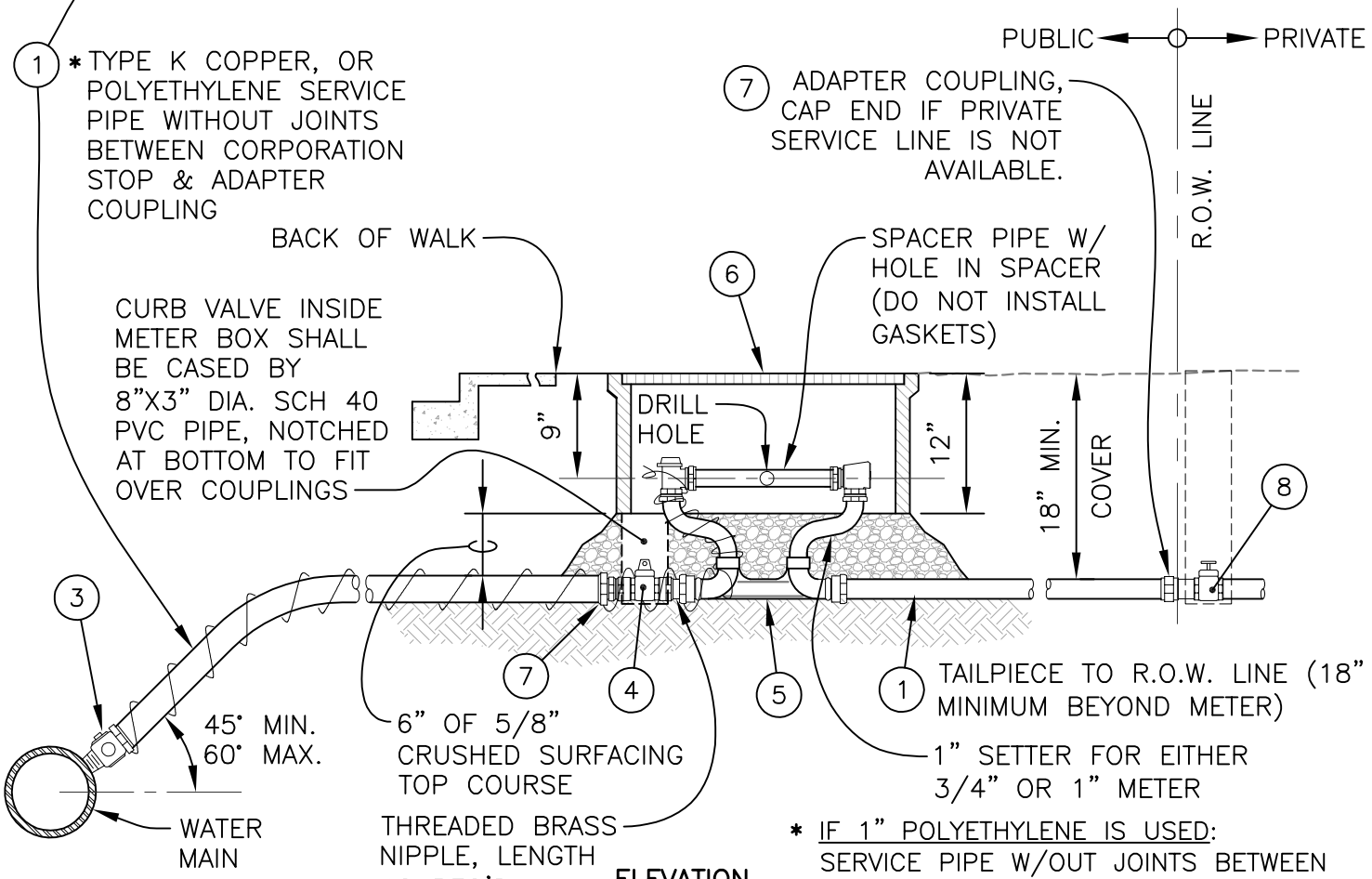
NOTES:

1. THIS DETAIL IS APPLICABLE TO SINGLE FAMILY RESIDENCES ONLY.
2. CONNECTION TO CITY WATER MAIN PER CITY OF AUBURN REQUIREMENTS.
3. BACKFLOW PREVENTION ASSEMBLY SHALL BE PER DESIGN STANDARDS.
4. PLANS FOR SEPARATE FIRE SPRINKLER LINE MUST BE SUBMITTED AND APPROVED BY THE FIRE MARSHAL PRIOR TO INSTALLATION.
5. NO DETAIL IS REQUIRED FOR FLOW-THROUGH FIRE SPRINKLER SYSTEMS.
6. SEE STANDARD DETAIL W-15 FOR MATERIAL SCHEDULE.

APPROVED BY CITY ENGINEER: Jacob Sprueling DATE: 12/20/19	CITY OF AUBURN WASHINGTON	2" FIRE SPRINKLER LINES WITH 3/4" to 2" DOMESTIC SERVICE LINE
PUBLIC WORKS DEPARTMENT		STANDARD DETAIL: W-09.3



PLAN



ELEVATION

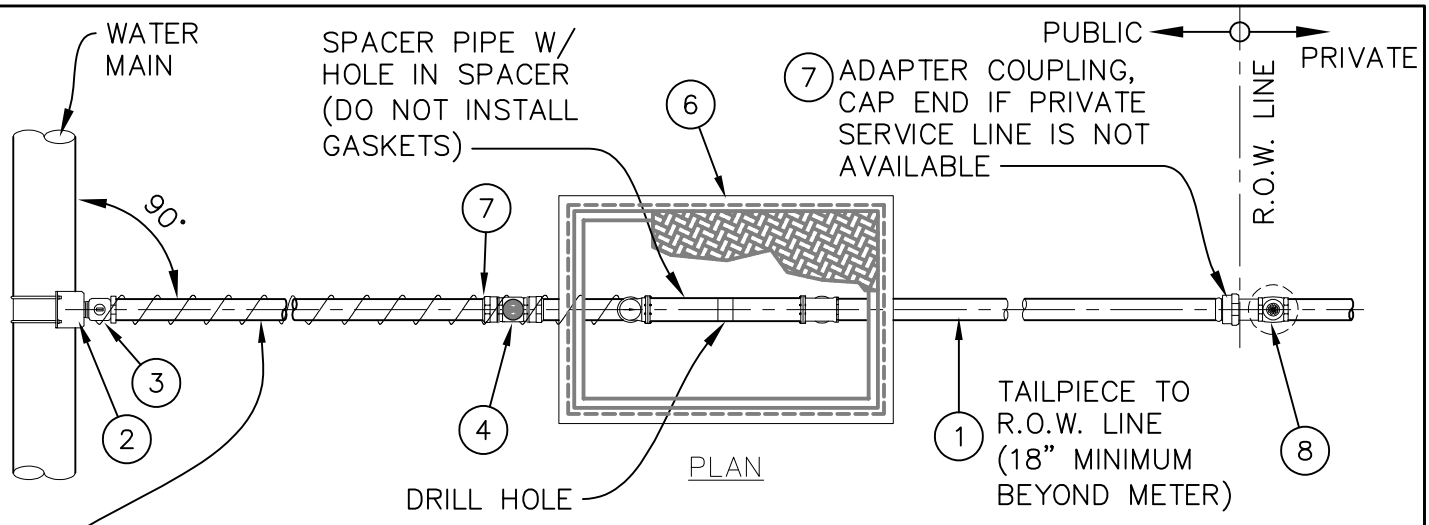
NOTES:

1. SEE STANDARD DETAIL W-15 FOR MATERIAL SCHEDULE.
2. ALL DOMESTIC SERVICE LINES FROM THE WATER MAIN, INCLUDING THE METER YOKE, SHALL BE A MINIMUM OF 1" IN DIAMETER.
3. METER PROVIDED BY CITY, CONNECTIONS MADE FROM EXISTING WATER MAIN SHALL BE INSTALLED BY THE CITY OF AUBURN AND PAID FOR BY THE APPLICANT OR CONTRACTOR.
4. METER LAY LENGTH 1" METER = 10-3/4"

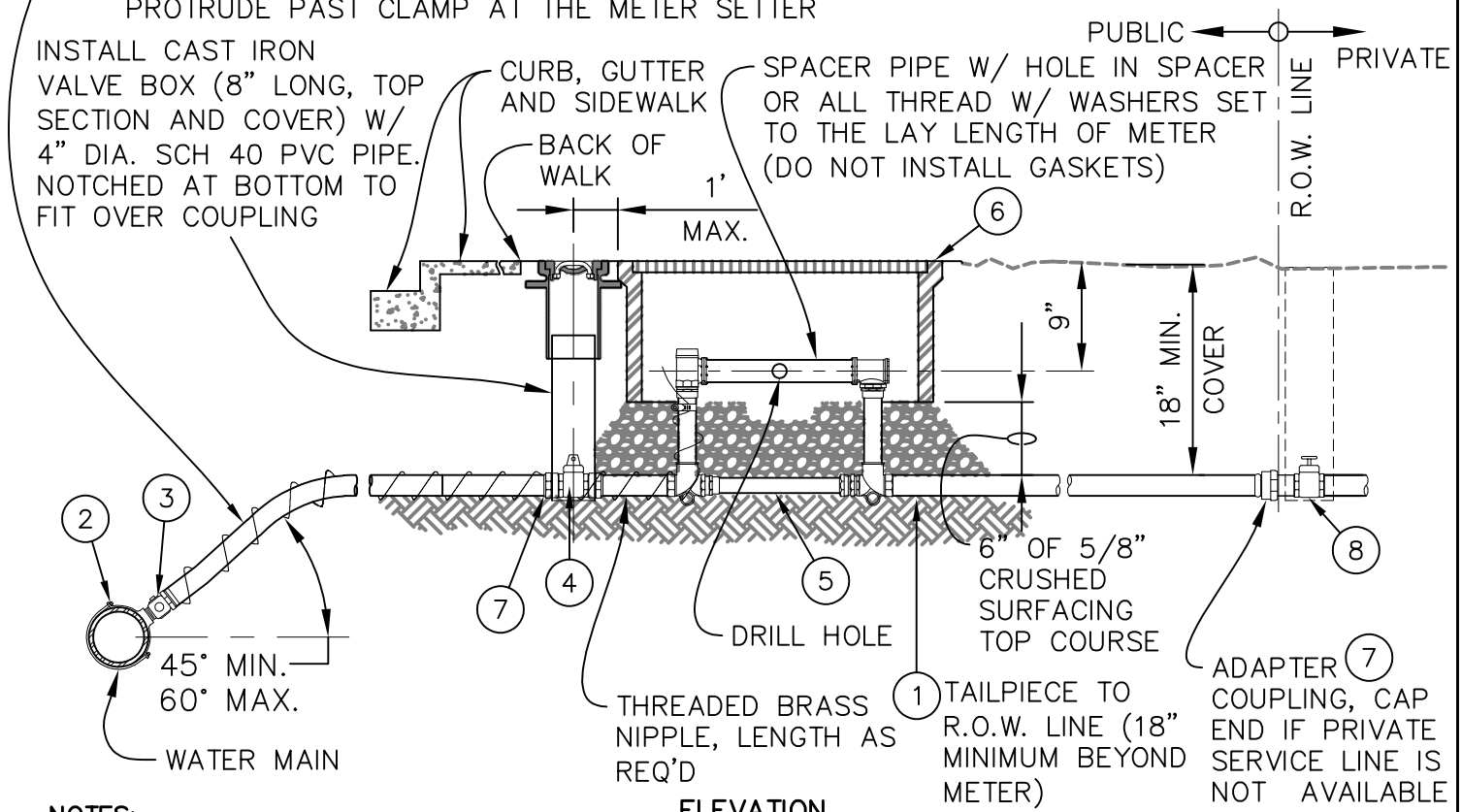
* IF 1" POLYETHYLENE IS USED: SERVICE PIPE W/OUT JOINTS BETWEEN CORP. STOP AND CURB VALVE AND WRAPPED W/ #10 INSULATED COPPER TRACER WIRE. ATTACH BARE TRACER WIRE TO CORP. STOP AND WRAP IT AROUND THE HDPE PIPE AND METER SETTER AS SHOWN W/ HIGH TORQUE SMOOTH STAINLESS STEEL HOSE CLAMPS. A MINIMUM OF 8" BARE WIRE SHALL PROTRUDE PAST CLAMP AT THE METER SETTER

APPROVED BY CITY ENGINEER: Jacob Sweeting	DATE: 2/7/24	CITY OF AUBURN WASHINGTON	1" WATER SERVICE INSTALLATION
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: W-13.6

Plotted by: Craig Dobyns on 1/24/2024 File location: M:\Construction Standard Details\Current Working DWG\Water\STDETL-W-13.6



1 SERVICE PIPE W/OUT JOINTS BETWEEN CORP. STOP AND CURB VALVE AND WRAPPED W/ #10 INSULATED COPPER TRACER WIRE. ATTACH BARE TRACER WIRE TO CORP. STOP AND WRAP IT AROUND THE HDPE PIPE AND METER SETTER AS SHOWN W/ HIGH TORQUE SMOOTH STAINLESS STEEL HOSE CLAMPS. A MINIMUM OF 8" BARE WIRE SHALL PROTRUDE PAST CLAMP AT THE METER SETTER



ELEVATION

NOTES:

1. SEE STANDARD DETAIL W–15 FOR MATERIAL SCHEDULE.
2. ALL DOMESTIC SERVICE LINES FROM THE WATER MAIN TO THE ADAPTER COUPLING, STRAIGHT COUPLING, OR CURB VALVE, SHALL BE A MINIMUM OF 1" IN DIAMETER.
3. METER PROVIDED BY CITY, CONNECTIONS MADE FROM EXISTING WATER MAIN SHALL BE INSTALLED BY THE CITY OF AUBURN AND PAID FOR BY THE APPLICANT OR CONTRACTOR.
4. METER LAY LENGTHS: 1.5" METER = 13" || 2" METER = 17"

APPROVED BY CITY ENGINEER:	DATE:		
Jacob Sweeting	1/17/2022	CITY OF AUBURN WASHINGTON	1 1/2" & 2" WATER SERVICE
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: W–14.3

Plotted by: Craig Dobyns on 1/6/2022 File location: M:\Construction Standard Details\Current Working DWG\Water\STDETL–W–14.3

WATER SERVICE MATERIAL SCHEDULE

(1) THE CITY OF AUBURN ALLOWS 1" TO 2" POLYETHYLENE SDR-9 (IN COPPER TUBE SIZES) W/ STAINLESS STEEL LINERS IN ALL COUPLINGS & WRAPPED W/ A #10 INSULATED COPPER TRACER WIRE WRAPPED AROUND HDPE PIPE AS SHOWN. FOR 1" COPPER, IT SHALL BE TYPE K COPPER TUBING W/OUT TRACER WIRE FOR WATER SERVICE & TAILPIECE CONNECTION, IN ACCORDANCE W/ STANDARD SPECIFICATION SECTION 9-30.6(3). ALL CONNECTIONS TO POLYETHYLENE OR COPPER TUBING SHALL BE W/ MUELLER 110 COMPRESSION CONNECTIONS OR EQUAL. TAILPIECE SHALL EXTEND TO R.O.W. LINE (18" MINIMUM BEYOND METER) & SHALL BE THE SAME SIZE AS THE SERVICE LINE.

(2) SADDLES FOR 1", 1-1/2", OR 2" PIPE TAPS SHALL BE EPOXY COATED OR E-COATED DUCTILE IRON W/ DOUBLE STAINLESS STEEL STRAPS & NEOPRENE GASKETS. SADDLES SHALL HAVE I.P.S. FEMALE THREADS.

(8) CONTRACTOR SHALL FURNISH & INSTALL PRIVATE SERVICE LINE SHUT-OFF VALVE & RISER. FOR CAPITAL PROJECTS, SEE CONTRACT DOCUMENTS, OTHERWISE PROPERTY OWNER TO INSTALL PRIVATE SERVICE LINE SHUT-OFF VALVE AT POINT OF CONNECTION.

METER LOCATIONS:

1. WHERE LANDSCAPE STRIPS ARE PLANNED OR EXIST, THE METER & METER BOX WILL BE PLACED BETWEEN THE BACK OF THE CURB & THE SIDEWALK, ADJACENT TO THE SIDEWALK IF ROOM PERMITS;
2. WHERE THE SIDEWALK IS LOCATED ADJACENT TO THE BACK OF THE CURB OR THE LANDSCAPE STRIP IS TOO NARROW TO ACCOMMODATE THE METER BOX, THE METER & METER BOX WILL BE PLACED ADJACENT TO & AT THE BACK OF SIDEWALK;
3. WHERE METERS & METER BOXES ARE LOCATED IN THE STREET OR SIDEWALK OR IN LOCATIONS WHICH ARE SUBJECTED TO VEHICULAR TRAFFIC, INCLUDING DRIVEWAYS, ETC., A TRAFFIC BEARING METER BOX & LID OF APPROPRIATE LOAD RATING SHALL BE PROVIDED AS SPECIFIED (EAST JORDAN IRON WORKS, OR EQUAL).
4. LOCATE CURB VALVE IN THE METER BOX WHERE POSSIBLE & 1 FT. OUTSIDE IF NO ROOM INSIDE METER BOX IS AVAILABLE.
5. OFF STREET METER LOCATION SHALL BE APPROVED BY THE CITY.

SCHEDULE NO. & PART	SERVICE LINE SIZE & MUELLER/AY McDONALD/FORD CATALOG NO. OR APPROVED EQUAL		
	1"	1-1/2"	2"
(3) CORP. STOP	DIRECT TAP OPTION: MUELLER B-25008N, AY McDONALD 74701BQ, OR FORD FB1000-4-Q-NL SADDLE OPTION: MUELLER B-20013N W/ H-15451N OUTLET COUPLING, AY McDONALD 73131B W/ 74754Q OUTLET COUPLING, OR FORD FB500-4-NL W/ C14-44-Q-NL OUTLET COUPLING	MUELLER B-2969N W/ H-15451N OUTLET COUPLING, AY McDONALD 73131B W/ 74754Q, OR FORD FB500-6-NL W/ C14-66-Q-NL OUTLET COUPLING	MUELLER B-2969N W/ H-15451N OUTLET COUPLING, AY MCDONALD 73131B W/ 74754Q, OR FORD FB500-7-NL W/ C14-77-Q-NL OUTLET COUPLING
(4) CURB VALVE	MUELLER B-20200N, AY McDONALD 76101W, OR FORD B11-444W-NL	MUELLER B-20200N, AY MCDONALD 76101W, OR FORD B11-666W-NL	MUELLER B-20200N, AY MCDONALD 76101W, OR FORD B11-777W-NL
(5) METER YOKE	MUELLER B-2404R-2N W/ H-14222N INLET & H-14227N OUTLET COUPLINGS, 12" RISER OR AY McDONALD 723-412WDDQ44 W/ MUELLER H-10879 5/8"x3/4"x1", AY McDONALD 710J24KIT, OR FORD VBH74-12W-14-44-Q-NL ADAPTERS FOR 3/4" METERS	MUELLER B-2423-2N W/ H-15428N OUTLET COUPLING, AY McDONALD 720B612WDFF 665.8 W/ 74753Q, OR FORD VBH76-12B-11-66-NL W/ C84-66-Q-NL OUTLET COUPLING, 12" RISER	MUELLER B-2423-2N W/ H-15428N OUTLET COUPLING, AY MCDONALD 720B612WDFF 775.8 W/ 74753Q OR FORD VBH77-12B-11-77-NL W/ C84-77-Q-NL OUTLET COUPLING, 12" RISER
(6) METER BOX	HUBBELL QUAZITE OR ARMORCAST (NOT PERMITTED FOR USE IN PEDESTRIAN PATHWAYS) 13"x24"x12" POLYMER CONCRETE BOX & COVER W/ READER LID & 2" AMR PORT W/ (2) 2 ½ X 3 MOUSEHOLES (BO3132412M)	HUBBELL QUAZITE OR ARMORCAST (NOT PERMITTED FOR USE IN PEDESTRIAN PATHWAYS), 17"x30"x12" POLYMER CONCRETE BOX & COVER W/ READER LID & 2" AMR PORT & W/ (2) 2 ½ x 3 MOUSEHOLES (BO3173012M)	
(7) COUPLING	MUELLER H-15428N, AY McDONALD 74753Q, OR FORD C84-44-Q-NL	MUELLER H-15428N, AY McDONALD 74753Q OR FORD C84-66-Q-NL	MUELLER H-15428N, AY McDONALD 74753Q, OR FORD C84-77-Q-NL
(8) SHUT-OFF VALVE	MUELLER B-20200N W/ B-20298-99000 LEVER HANDLE, OR AY McDONALD 76101W W/ 6120B LEVER HANDLE W/ 10" IRRIGATION BOX AND 8" PVC RISER		

APPROVED BY CITY ENGINEER: Jacob Sweeting DATE: 2/7/24

CITY OF AUBURN WASHINGTON

WATER METER LOCATION & MATERIAL SCHEDULE

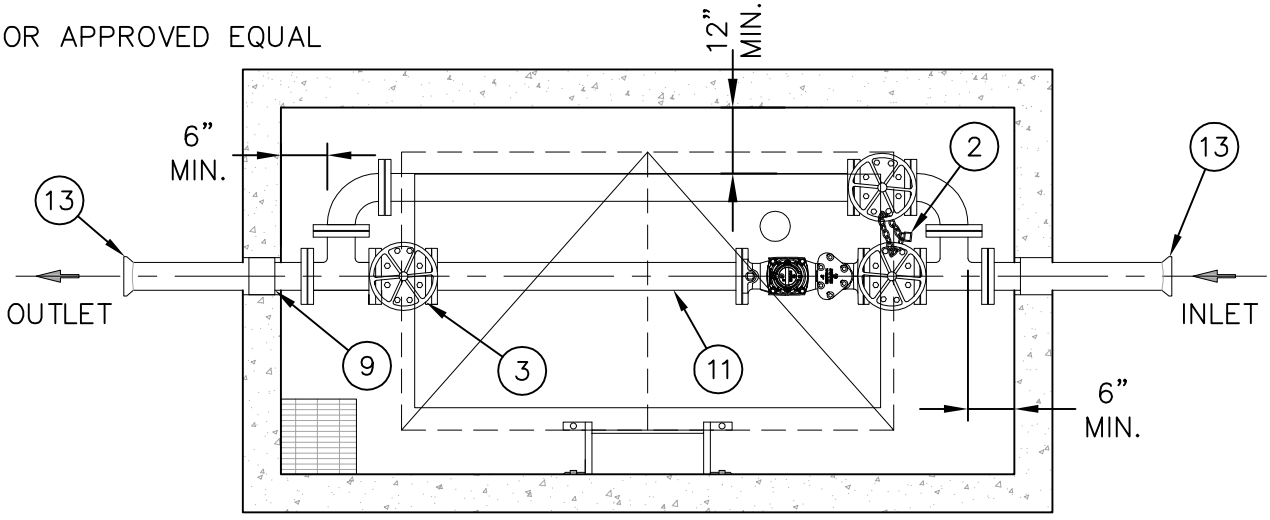
PUBLIC WORKS DEPARTMENT

STANDARD DETAIL: W-15.8

Plotted by: Craig Dobyns on 1/24/2024 File location: M:\Construction Standard Details\Current Working DWG\Water\STDETL-W-15.8

METER SIZE	MAIN LINE	BYPASS	METER LENGTH FLG. TO FLG.	MIN. LENGTH	MIN. WIDTH	MIN. HEIGHT	OLDCASTLE VAULT MODEL**	GRANITE VAULT MODEL**
3"	3" D.I.P.	3" D.I.P.	17"	8'–4"	4'–4"	6'–2"	4484–LA	4x8 MV
4"	4" D.I.P.	4" D.I.P.	20"	8'–4"	4'–4"	6'–2"	4484–LA	4x8 MV
6"	6" D.I.P.	6" D.I.P.	24"	10'–6"	5'–0"	6'–2"	5106–LA	5x10 MV
8"	8" D.I.P.	8" D.I.P.	30 1/8"	12'–0"	6'–0"	6'–5"	612–LA	6x12 MV
10"	10" D.I.P.	10" D.I.P.	41 7/8"	14'–0"	8'–0"	6'–5"	814–LA	8x14 MV

** OR APPROVED EQUAL



PLAN
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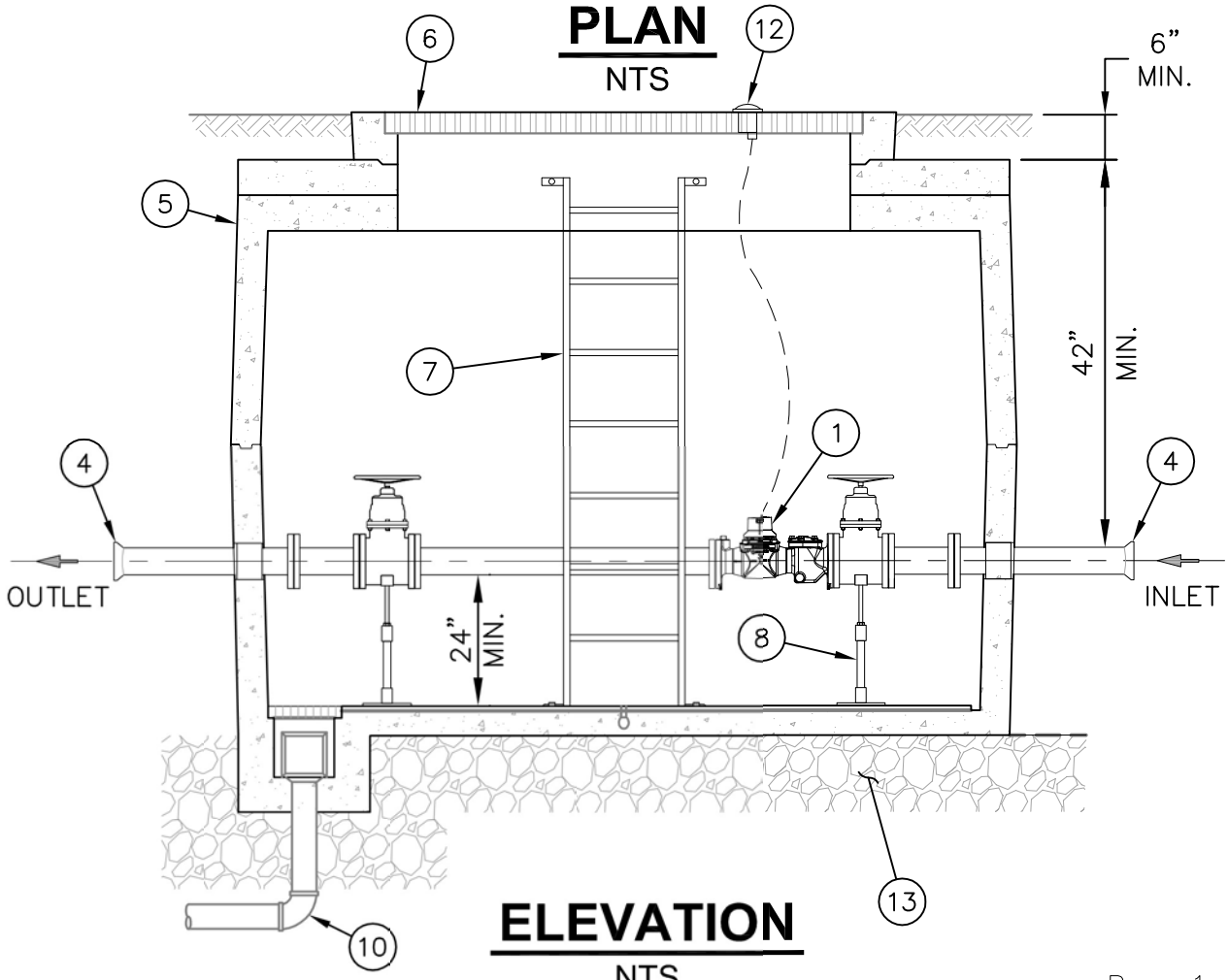


ELEVATION
NTS

APPROVED BY CITY ENGINEER: Jacob Sweeting
DATE: 01/05/2021
CITY OF AUBURN WASHINGTON
3" OR LARGER WATER METER INSTALLATION
PUBLIC WORKS DEPARTMENT
STANDARD DETAIL: W–16.3

Plotted by: Craig Dobyns on 12/10/2020 File location: M:\Construction Standard Details\Current Working DWG\Water\STDETL–W–16.3

Plotted by: Craig Dobyns on 12/10/2020 File location: M:\Construction Standard Details\Current Working DWG\Water\STDETL-W-16a.4

PUBLIC WORKS DEPARTMENT

APPROVED BY CITY ENGINEER: Cyrus Sheeling

DATE: 01/05/2021

CITY OF AUBURN WASHINGTON

3" OR LARGER WATER METER INSTALLATION

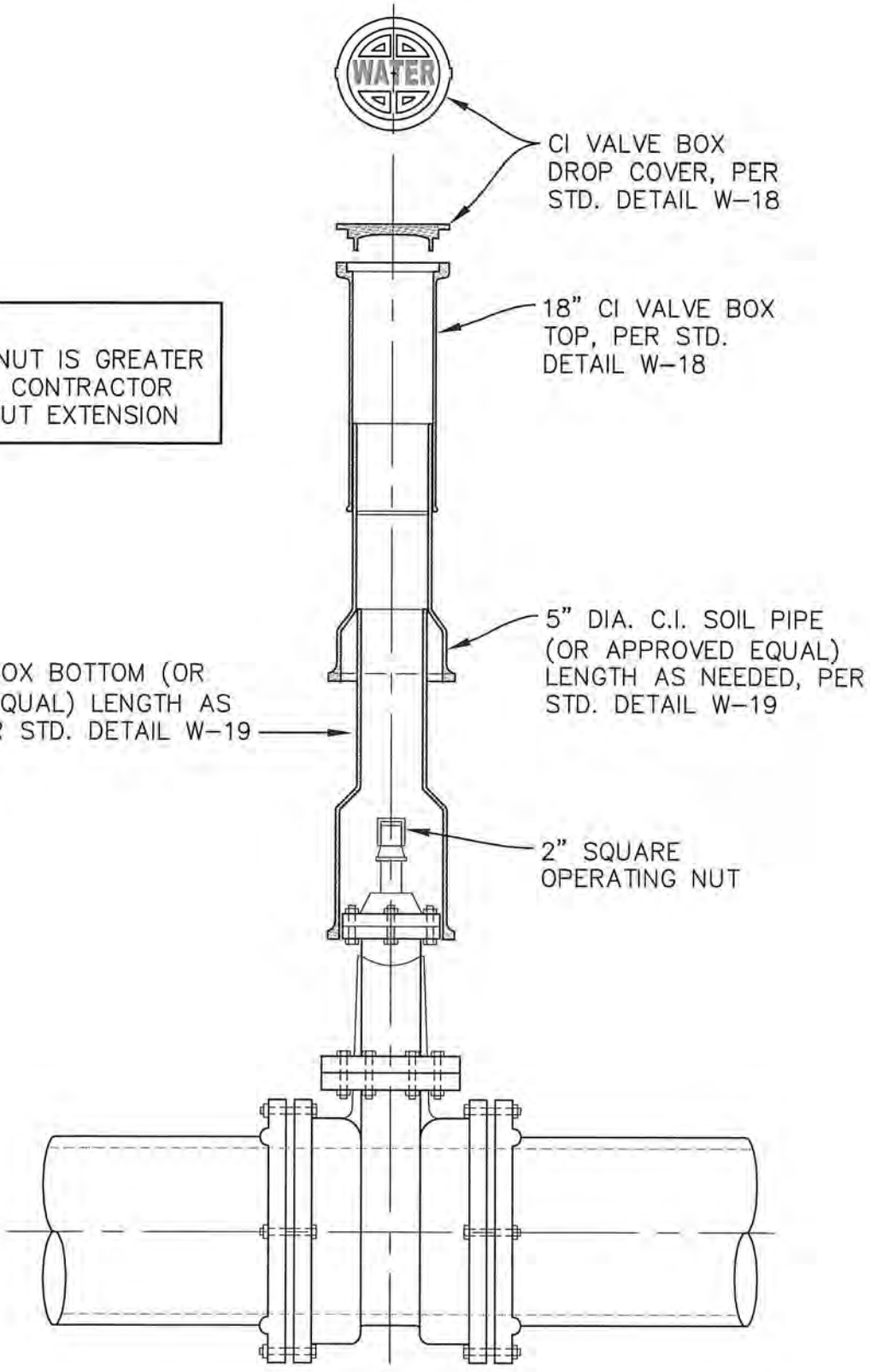
STANDARD DETAIL: W-16a.4

BILL OF MATERIALS

PART NO.	QUANTITY	DESCRIPTION
(1)	1	METER PROVIDED BY CITY FOR CONTRACTOR INSTALLATION: SENSUS OMNI C2 COMPOUND METER OR APPROVED EQUAL FLANGED WITH BUILT-IN STRAINER AND ENCODERS COMPATIBLE WITH CURRENT SENSUS AMR/AMI SYSTEM
(2)	1	LOCK WITH CHAINS
(3)	3	AWWA C-509 OR C-515 GATE VALVE COMPLETE WITH HAND WHEEL
(4)	2	FIRST JOINT OUTSIDE VAULT REQUIRES FIELD LOK GASKET OR OTHER FORM OF JOINT RESTRAINT
(5)	1	PRECAST CONCRETE VAULT COMPLETE WITH COLLAR, C555 WHITE INTERIOR PAINT
(6)	1	36"x72" ALUMINUM HATCH H20-44 CLASS B, STATIC LOADING WITH HOLD OPEN ARM
(7)	1	O.S.H.A. APPROVED SAFETY LADDER W/ TELESCOPING SAFETY POST (IF VAULT IS OVER 30" DEEP). BOLT LADDER TO VAULT FLOOR AND TO VAULT WALL
(8)	2	GALVANIZED STEEL ADJUSTABLE PIPE SUPPORT
(9)	2	MEGALUG OR ROMAGRIP SEALED IN CONCRETE FILLING KNOCKOUT
(10)	1	SUMP DRAIN, CONNECT TO CITY STORM SYSTEM, IF GRAVITY DRAIN IS NOT FEASIBLE, A SUMP PUMP WITH CHECK VALVE ON DISCHARGE LINE IS REQUIRED
(11)	1	SPOOL, MINIMUM LENGTH 2'-0", ONE END OF SPOOL TO BE INSTALLED WITH A UNI-FLANGE W/ RESTRAINT LUGS.
(12)	1	2" AMR PORT
(13)	AS REQ'D	5/8" MINUS CRUSHED ROCK FOUNDATION WITH COMPACTED DEPTH OF 12" MINIMUM

STANDARD FABRICATION & FINISHING SPECIFICATION

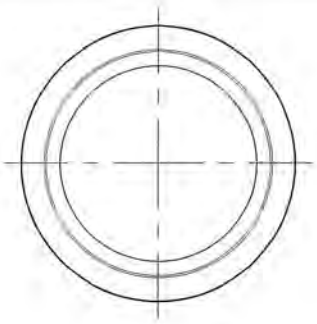
1. ALL STEEL PIPE SHALL BE SANDBLASTED, EPOXY LINED AND COATED TO AWWA C-120 AND NSF-61 SPECIFICATIONS. FINISH COATING SHALL BE BLUE ENAMEL.
2. GATE VALVE ON THE BYPASS SHALL BE NORMALLY CLOSED AND LOCKED WITH THE GATE VALVE ON THE MAIN LINE AS SHOWN AND KEYS GIVEN TO THE CITY.
3. DUCTILE IRON PIPE SHALL BE ACCORDING TO 9-30.1(1) OF THE STANDARD SPECIFICATIONS.



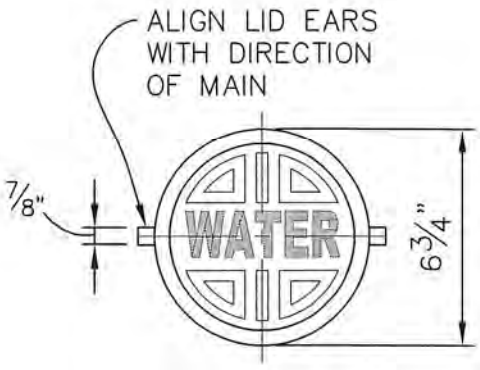
NOTE:
IF DEPTH OF NUT IS GREATER THAN 7 FEET, CONTRACTOR TO PROVIDE NUT EXTENSION

APPROVED BY CITY ENGINEER:	DATE: 8/5/2016	CITY OF AUBURN WASHINGTON	VALVE WRENCH EXTENSION BOX
COMMUNITY DEVELOPMENT & PUBLIC WORKS DEPT.			STANDARD DETAIL: W-17.1

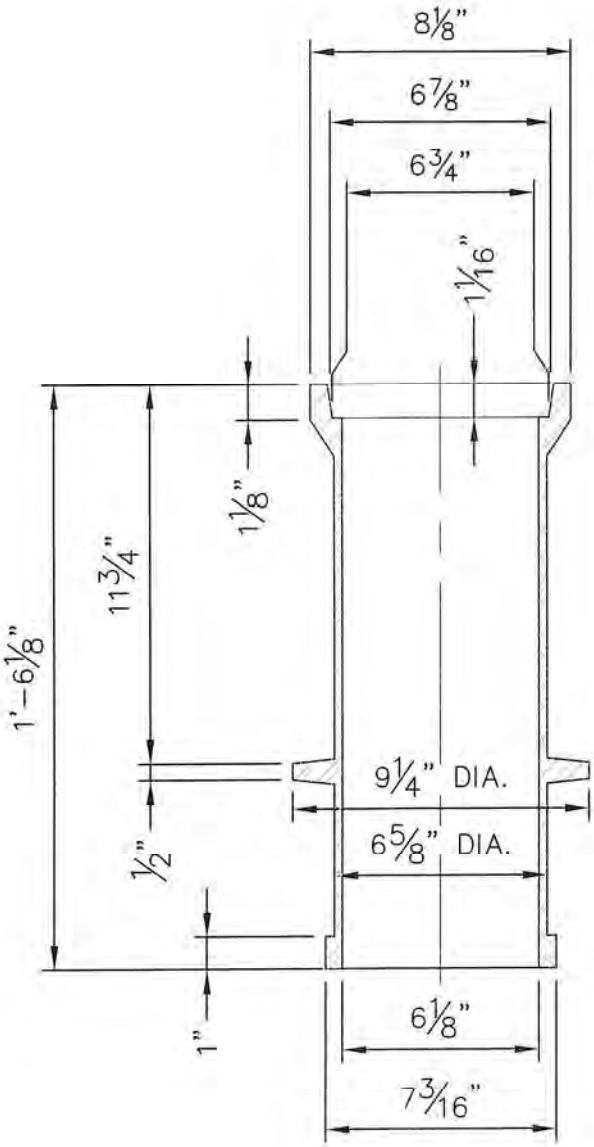
Plotted by: Craig Dobyns on 7/13/2016 File location: M:\Construction Standard Details\Approved Drawing Files (dwg)\Water\STDETL-W-17.1



TOP VIEW

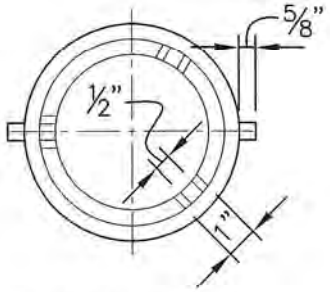


TOP VIEW

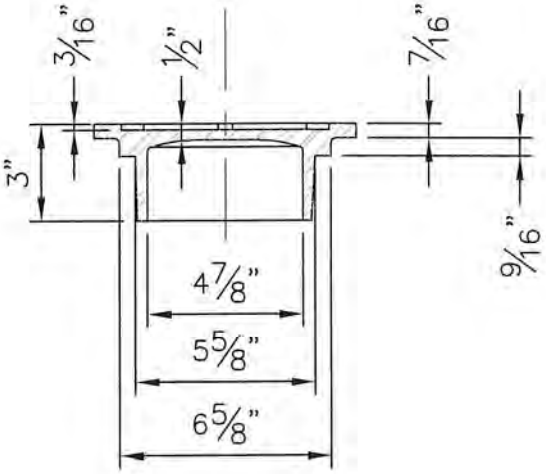


18" CAST IRON VALVE BOX TOP & COVER

NOT TO SCALE



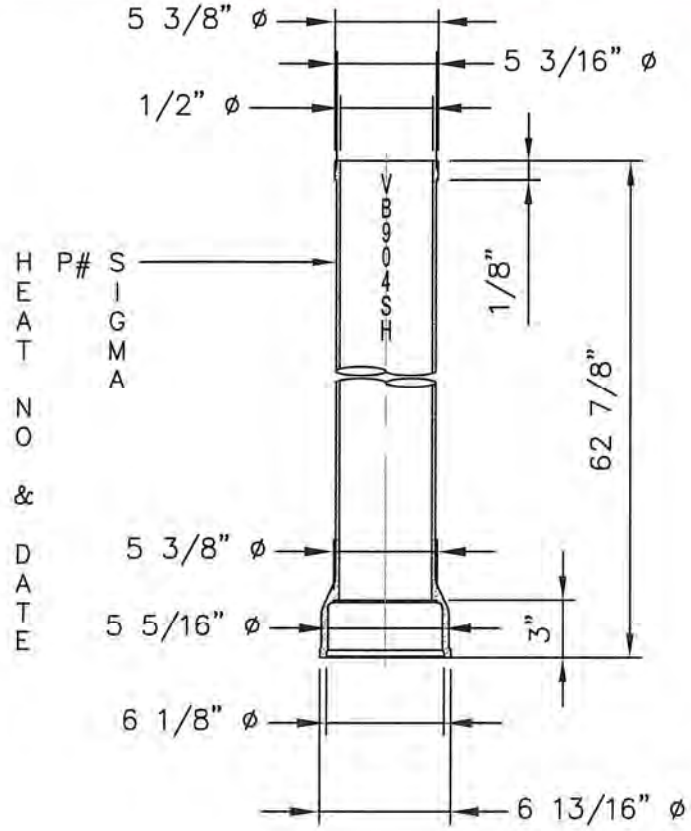
BOTTOM VIEW



VALVE BOX DROP COVER

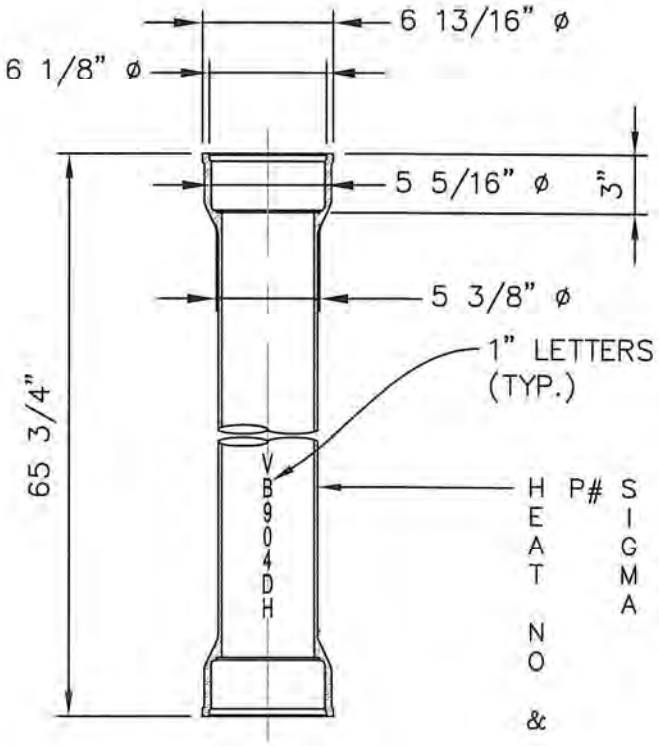
NOT TO SCALE

APPROVED BY CITY ENGINEER: Jacob Sweeting DATE: 12/20/19	CITY OF AUBURN WASHINGTON	C.I. VALVE BOX TOP & VALVE BOX COVER
PUBLIC WORKS DEPARTMENT		STANDARD DETAIL: W-18.3



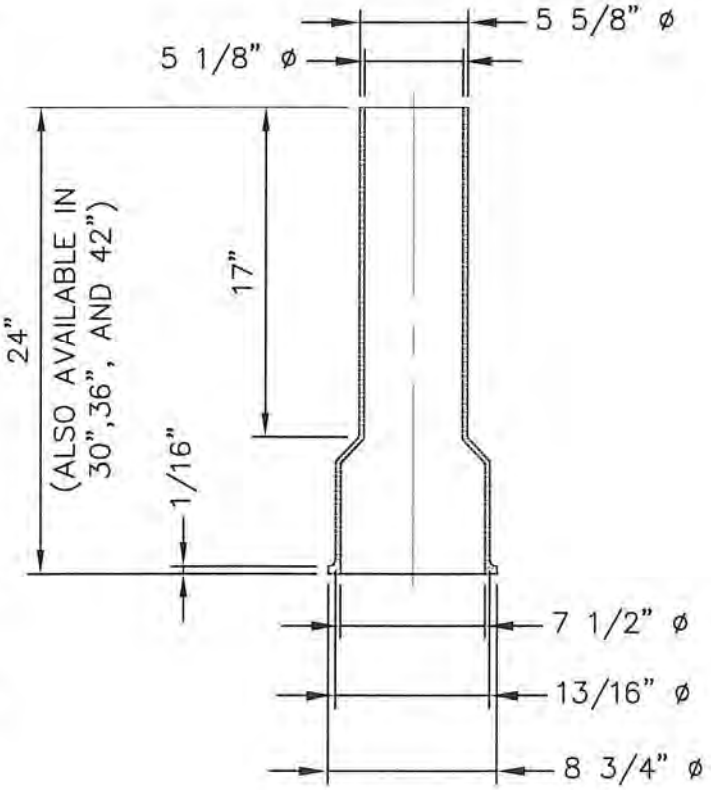
SINGLE HUB 5" C.I. SOIL PIPE VALVE BOX EXTENSION

NOT TO SCALE



DOUBLE HUB 5" C.I. SOIL PIPE VALVE BOX EXTENSION

NOT TO SCALE



C.I. VALVE BOX BOTTOM

NOT TO SCALE

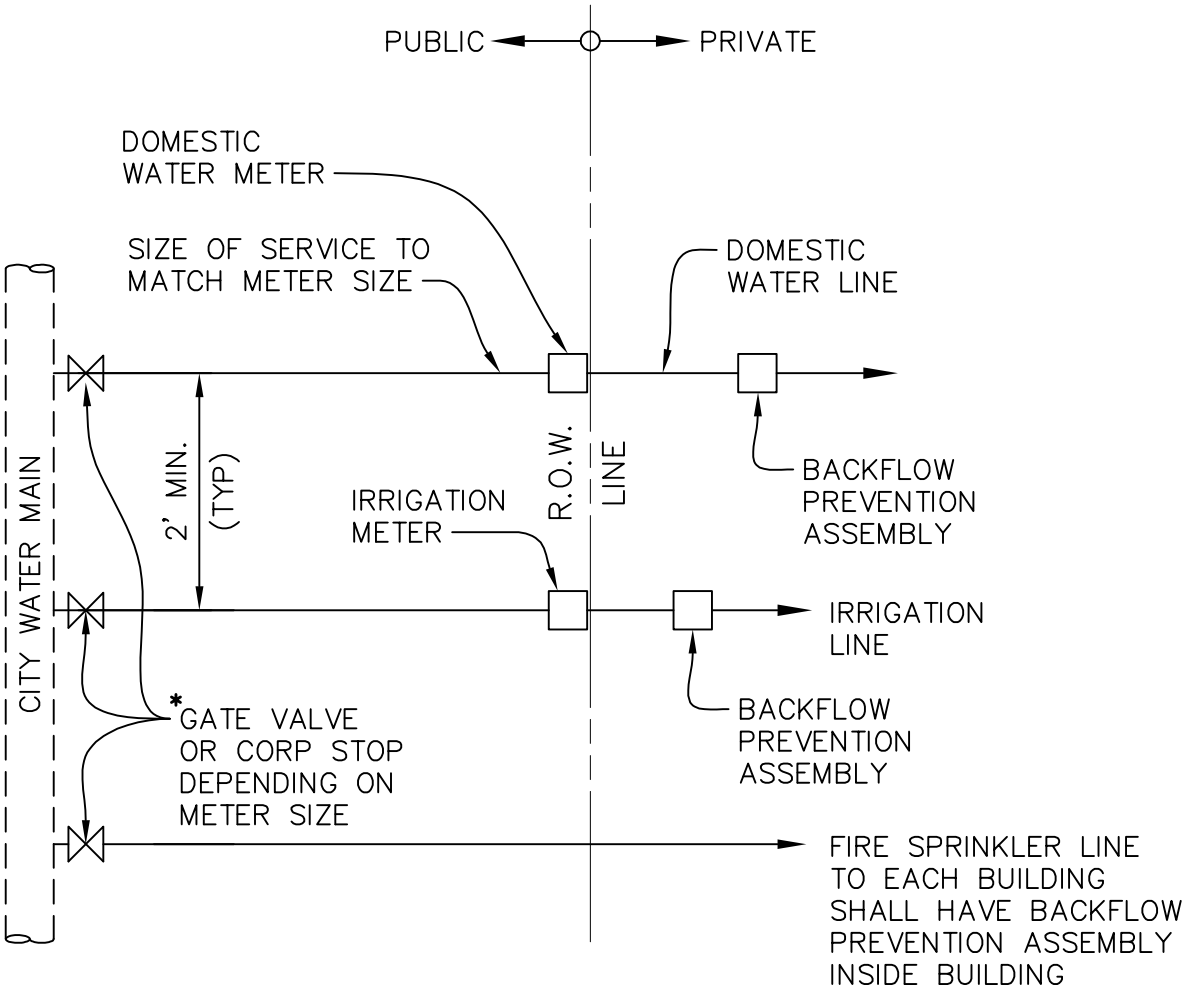
APPROVED BY CITY ENGINEER: DATE: 8/5/2016

CITY OF AUBURN WASHINGTON

5" C.I. SOIL PIPE VALVE BOX EXTENSION & C.I. VALVE BOX BOTTOM

COMMUNITY DEVELOPMENT & PUBLIC WORKS DEPT. STANDARD DETAIL: W-19.1

Plotted by: Craig Dobyns on 7/13/2016 File location: N:\Construction Standard Details\Approved Drawing Files (dwg)\Water\STDETL-W-19.1



NOTES:

1. CONNECTION TO CITY WATER MAIN PER CITY OF AUBURN REQUIREMENTS.
2. BACKFLOW ASSEMBLY IS REQUIRED ON FIRE SPRINKLER, DOMESTIC, & IRRIGATION LINES. TYPE OF ASSEMBLY SHALL BE PER DESIGN STANDARDS.
3. PLANS FOR SEPARATE FIRE SPRINKLER LINE MUST BE SUBMITTED & APPROVED BY THE FIRE MARSHAL PRIOR TO INSTALLATION, AND SHALL BE DESIGNED BY A FIRE PROTECTION ENGINEER.

* FOR METERS 2" OR LESS USE CORP STOP & FOR METERS LARGER THAN 2" USE GATE VALVE WITH 2" STANDARD OPERATING NUT & COA VALVE BOX TO SURFACE.

APPROVED BY CITY ENGINEER:	DATE:		NON-SINGLE FAMILY SERVICE LINES
Jacob Sweeting	01/05/2021	CITY OF AUBURN WASHINGTON	
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: W-20.3

Plotted by: Craig Dobyns on 12/30/2020 File location: M:\Construction Standard Details\Current Working DWG\Water\STDETL-W-20.3

Plotted by: Craig Dobyns on 7/13/2016 File location: M:\Construction Standard Details\Approved Drawing Files (dwg)\Water\STDETL-W-21.1

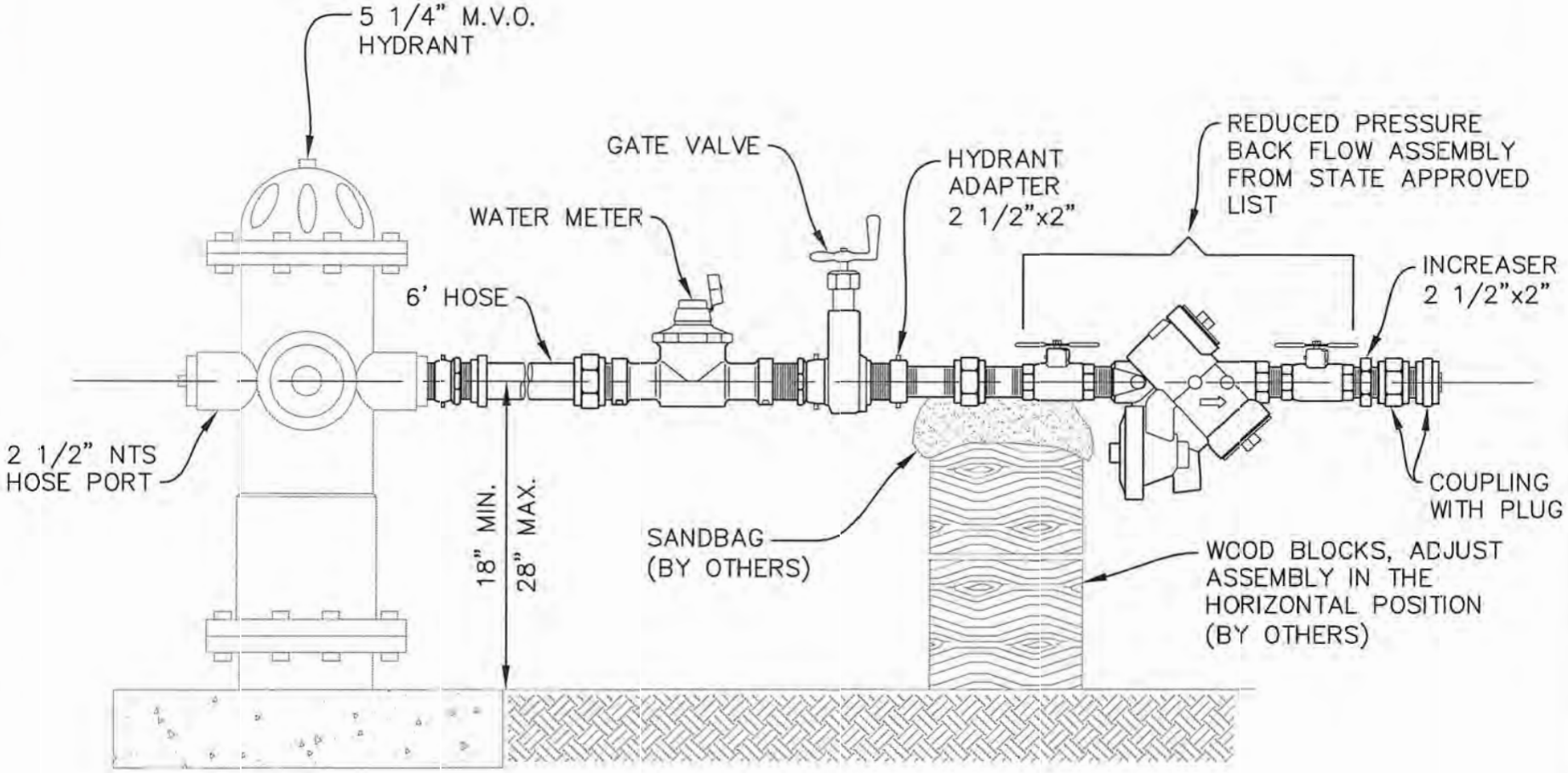
APPROVED BY CITY ENGINEER: Phil Sab DATE: 8/5/2016

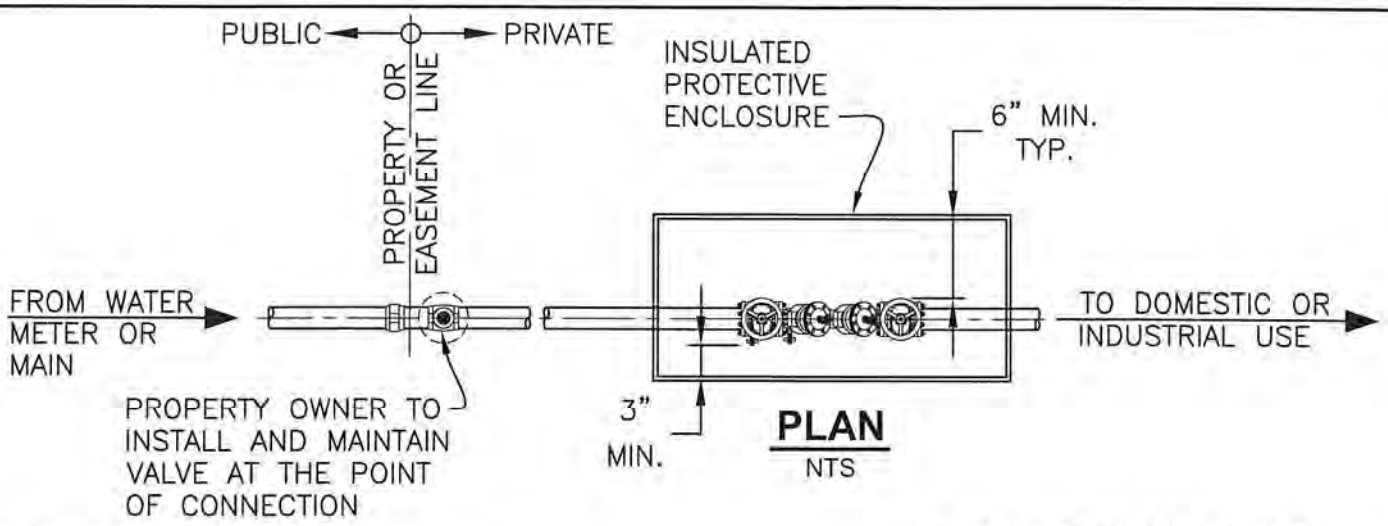
CITY OF AUBURN WASHINGTON

COMMUNITY DEVELOPMENT & PUBLIC WORKS DEPT.

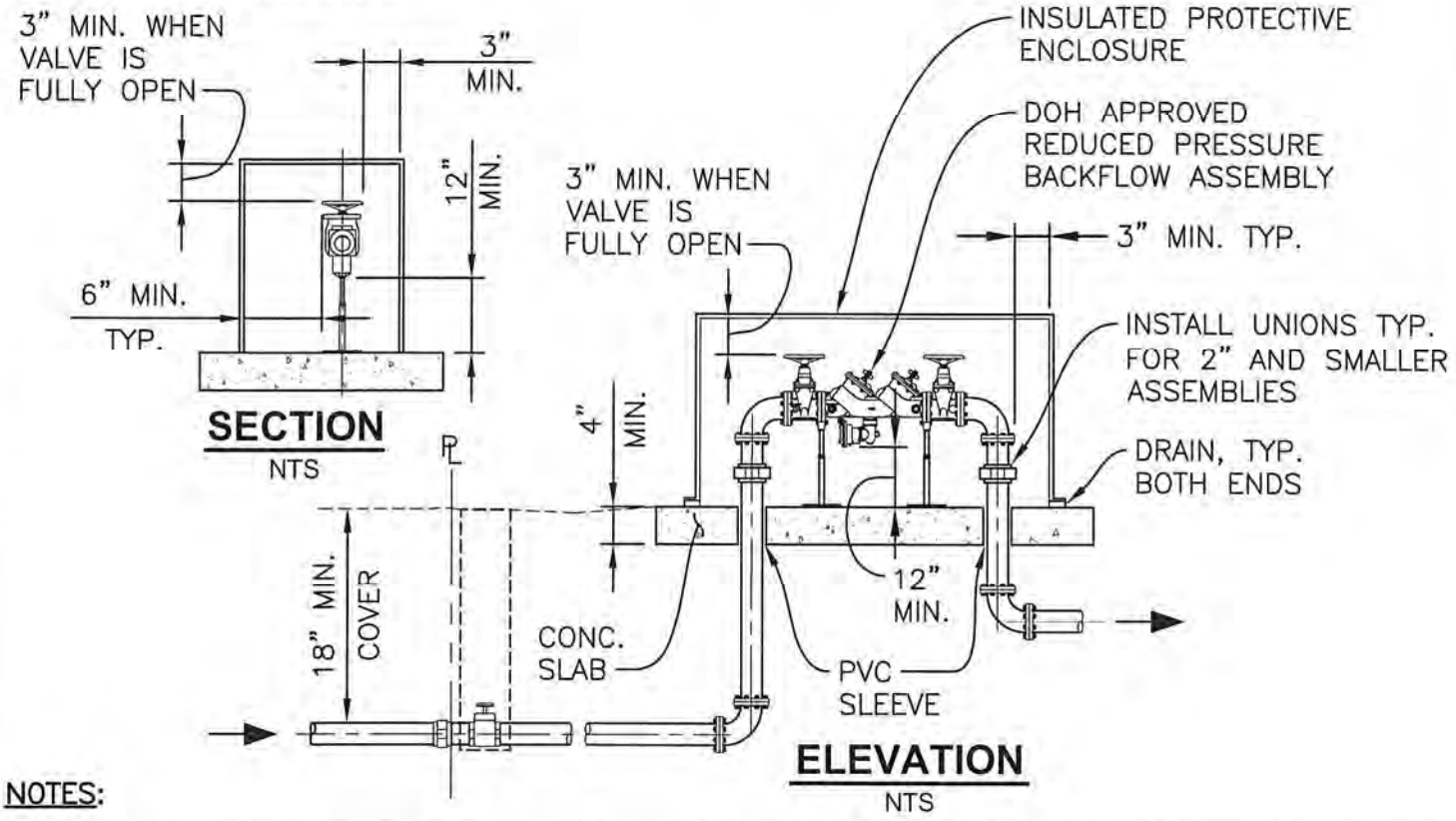
TEMP. COMBINATION HYDRANT METER/ REDUCED PRESSURE BACKFLOW ASSY.

STANDARD DETAIL: W-21.1





PLAN
NTS



SECTION
NTS

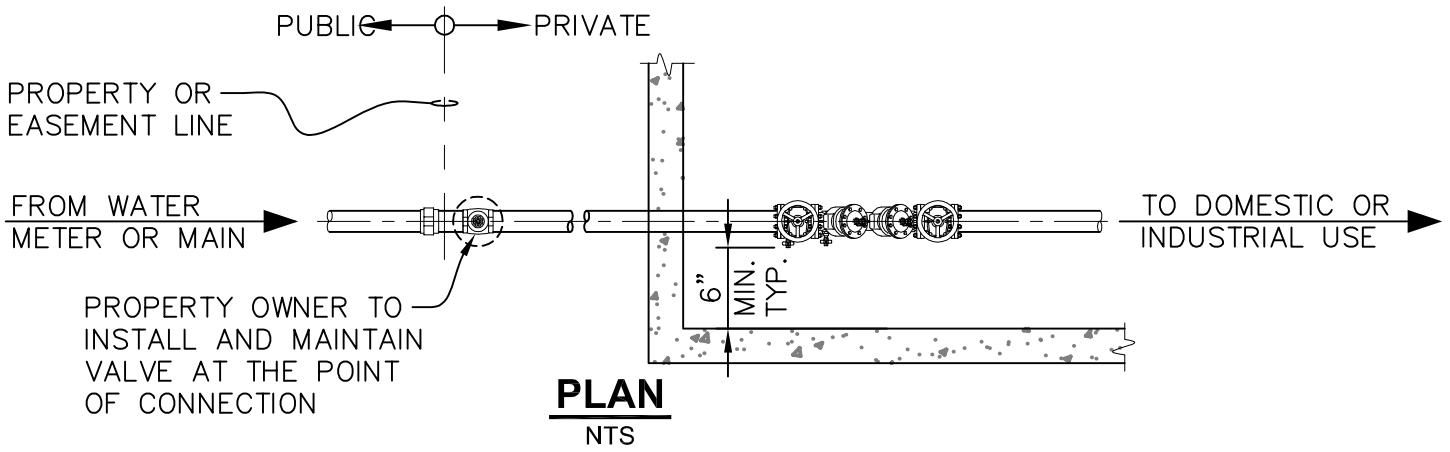
ELEVATION
NTS

NOTES:

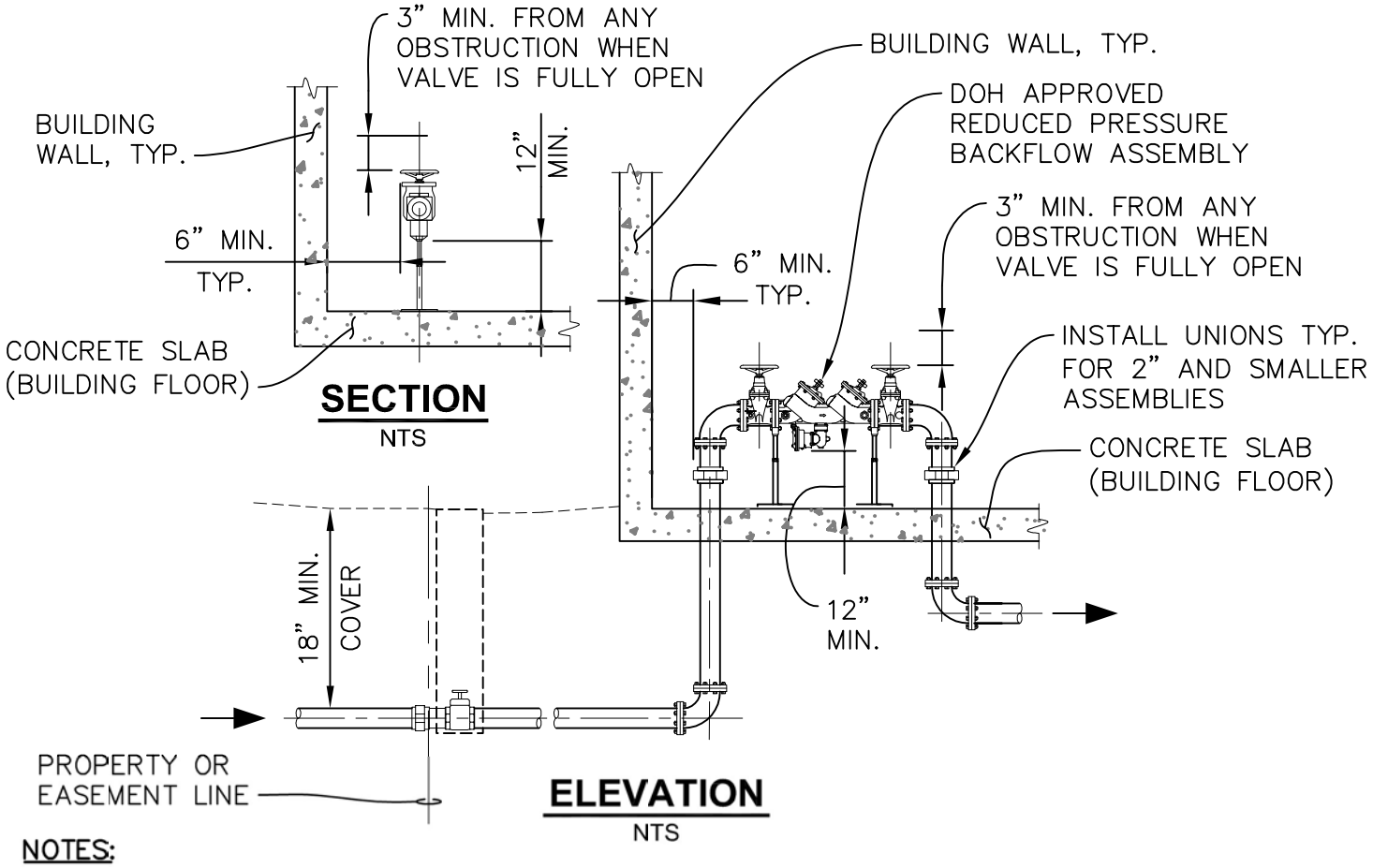
1. INSULATED PROTECTIVE ENCLOSURE MUST COMPLY WITH THE AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE) 1060 OUTDOOR ENCLOSURES FOR BACKFLOW PREVENTION ASSEMBLIES. IT SHALL BE LOCKABLE WITH A KEY LOCK OR PADLOCK AND SHALL ALLOW FOR MINIMUM CLEARANCES AND PROVIDE ADEQUATE DRAINAGE.
2. RPBA SHALL BE INSTALLED ADJACENT TO THE METER AND HAVE NO BRANCH CONNECTION BETWEEN THE METER AND THE BACKFLOW ASSEMBLY. INSTALL RPBA HORIZONTALLY.
3. BACKFLOW ASSEMBLY MUST BE APPROVED FOR USE IN WASHINGTON STATE BY THE DEPARTMENT OF HEALTH (DOH). IT MUST BE TESTED BY A STATE CERTIFIED "BAT" AT THE TIME OF INSTALLATION, ANNUALLY, AFTER THE ASSEMBLY IS REPAIRED, MOVED OR AFTER AN INCIDENT AT OWNER'S EXPENSE.
4. BACKFLOW ASSEMBLY SHALL BE PURCHASED AND INSTALLED AS A UNIT, AS SHIPPED BY THE MANUFACTURER, WITH NO MODIFICATIONS TO ANY PART OF THE ASSEMBLY.
5. A MINIMUM OF TWO SUPPORTS MUST FIRMLY ANCHOR THE ASSEMBLY.

APPROVED BY CITY ENGINEER:	DATE:	CITY OF AUBURN WASHINGTON	REDUCED PRESSURE BACKFLOW ASSY. (OUTSIDE INSTALLATION)
Chad Lorentzen	12/31/18		
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: W-22.2

Plotted by: Craig Debyns on 12/31/2018 File location: M:\Construction Standard Details\Current Working DWG\Water\STDDET-W-22.2



PLAN
NTS



SECTION
NTS

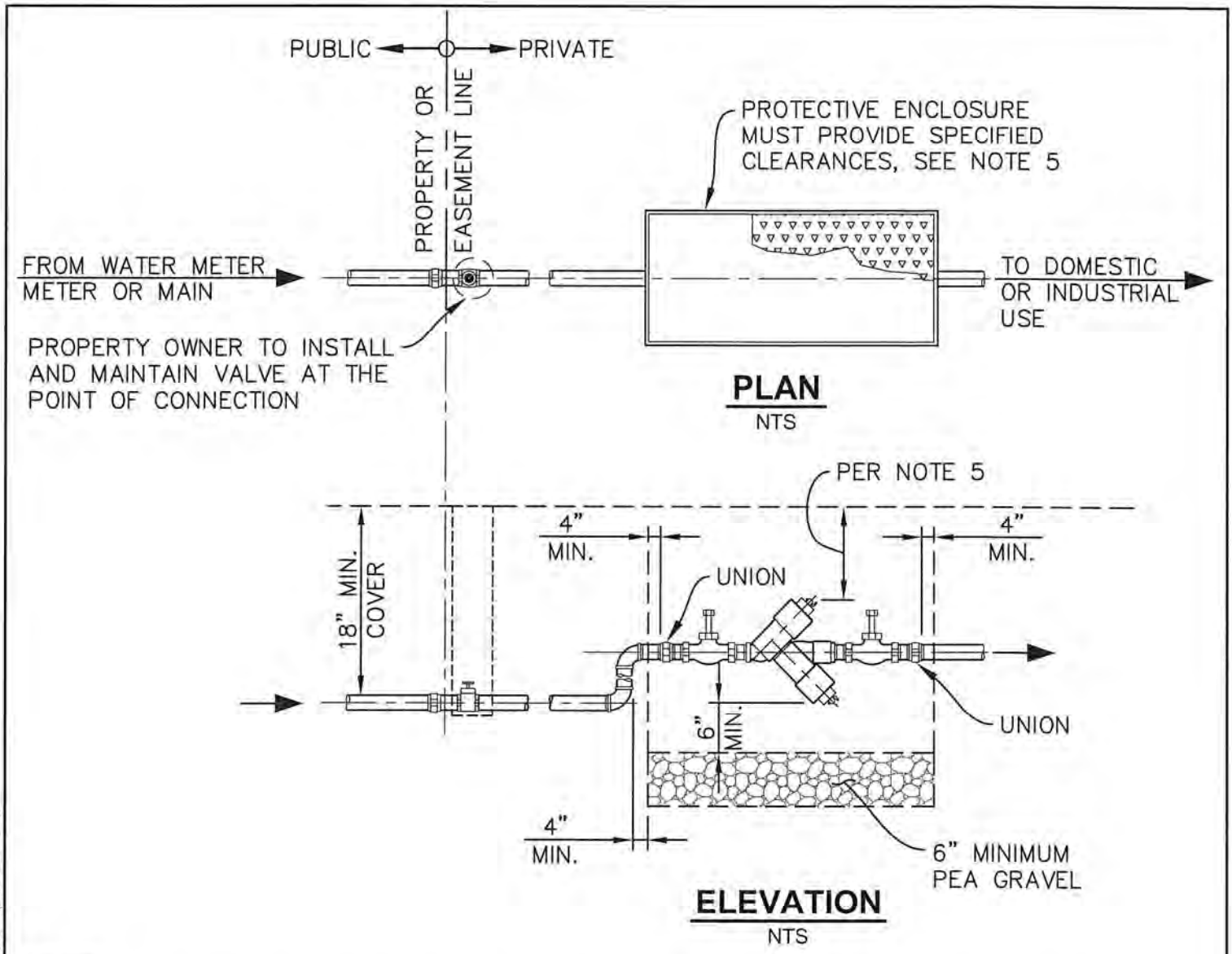
ELEVATION
NTS

NOTES:

1. RPBA INSTALLED INSIDE BUILDING SHALL HAVE NO BRANCH CONNECTIONS BETWEEN THE METER AND THE BACKFLOW ASSEMBLY. INSTALL RPBA HORIZONTALLY.
2. BACKFLOW ASSEMBLY MUST BE APPROVED FOR USE IN WASHINGTON STATE BY THE DEPARTMENT OF HEALTH (DOH). IT MUST BE TESTED BY A STATE CERTIFIED "BAT" AT THE TIME OF INSTALLATION, ANNUALLY, AFTER THE ASSEMBLY IS REPAIRED, MOVED OR AFTER AN INCIDENT AT OWNER'S EXPENSE.
3. BACKFLOW ASSEMBLY SHALL BE PURCHASED AND INSTALLED AS A UNIT, AS SHIPPED BY THE MANUFACTURER, WITH NO MODIFICATIONS TO ANY PART OF THE ASSEMBLY.
4. A MINIMUM OF TWO SUPPORTS MUST FIRMLY ANCHOR THE ASSEMBLY.
5. ADEQUATE DRAINAGE MUST BE PROVIDED.

APPROVED BY CITY ENGINEER:	DATE:		REDUCED PRESSURE BACKFLOW ASSY. (INSIDE INSTALLATION)
Jacob Sweeting	01/05/2021	CITY OF AUBURN WASHINGTON	
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: W-23.3

Plotted by: Craig Dobyns on 12/10/2020 File location: M:\Construction Standard Details\Current Working DWG\Water\STDETL-W-23.3

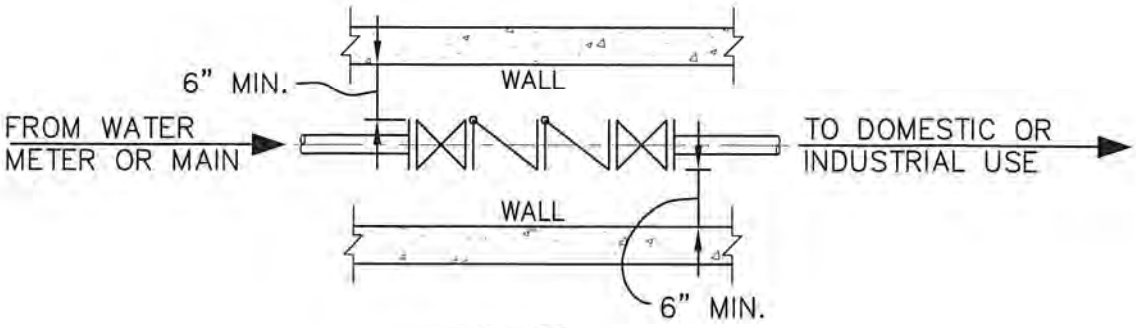


NOTES:

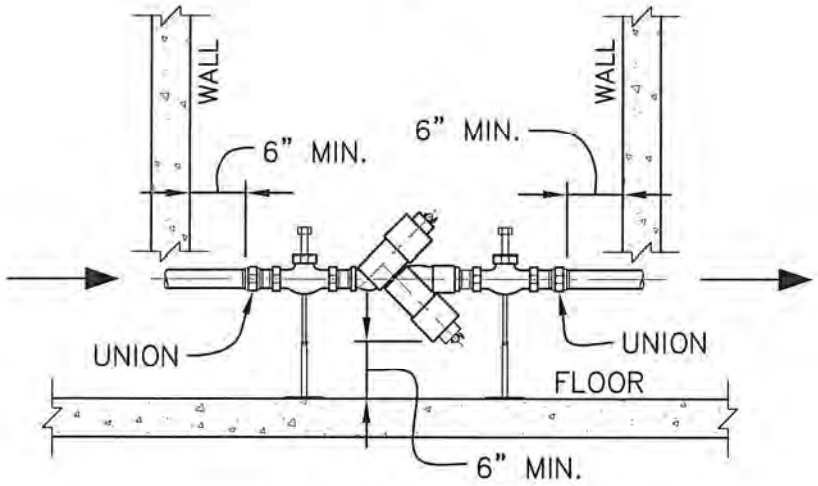
1. BACKFLOW ASSEMBLY MUST HAVE ADEQUATE SPACE CONSIDERATIONS FOR PROPER TESTING AND MAINTENANCE. A MINIMUM OF 12" CLEARANCE FROM ANY OBSTRUCTIONS ON THE TEST SIDE. A MINIMUM OF 6" CLEARANCE BELOW ASSEMBLY AND A MINIMUM OF 6" OF PEA GRAVEL IN THE BOTTOM OF THE BOX. THE MINIMUM CLEARANCE FROM THE TOP OF THE PEA GRAVEL TO THE BOTTOM OF THE ASSEMBLY IS 6".
2. DCVA MUST BE INSTALLED WITH TEST COCKS FACING UP. TEST COCKS MUST BE PLUGGED WITH BRASS OR PLASTIC PLUGS. INSTALL DCVA HORIZONTALLY.
3. BACKFLOW ASSEMBLY MUST BE APPROVED FOR USE IN WASHINGTON STATE BY THE DEPARTMENT OF HEALTH (DOH). IT MUST BE TESTED BY A STATE CERTIFIED "BAT" AT THE TIME OF INSTALLATION, ANNUALLY, AFTER THE ASSEMBLY IS REPAIRED, MOVED OR AFTER AN INCIDENT AT OWNER'S EXPENSE.
4. BACKFLOW ASSEMBLY SHALL BE PURCHASED AND INSTALLED AS A UNIT, AS SHIPPED BY THE MANUFACTURER, WITH NO MODIFICATIONS TO ANY PART OF THE ASSEMBLY.
5. MINIMUM CLEARANCE AT ABOVE ASSEMBLY SHALL BE: 9" (FOR 3/4" METER), 12" (FOR 1" METER), AND 14" (FOR 1 1/2" & 2" METER).

APPROVED BY CITY ENGINEER: Chris Searing DATE: 12/31/18	CITY OF AUBURN WASHINGTON	DOUBLE CHECK VALVE ASSEMBLY (OUTSIDE INSTALLATION)
PUBLIC WORKS DEPARTMENT		STANDARD DETAIL: W-24.2

Plotted by: Craig Dobyns on 12/31/2018 File location: M:\Construction Standard Details\Current Working DWG\Water\STDETL-W-24.2



PLAN
NTS



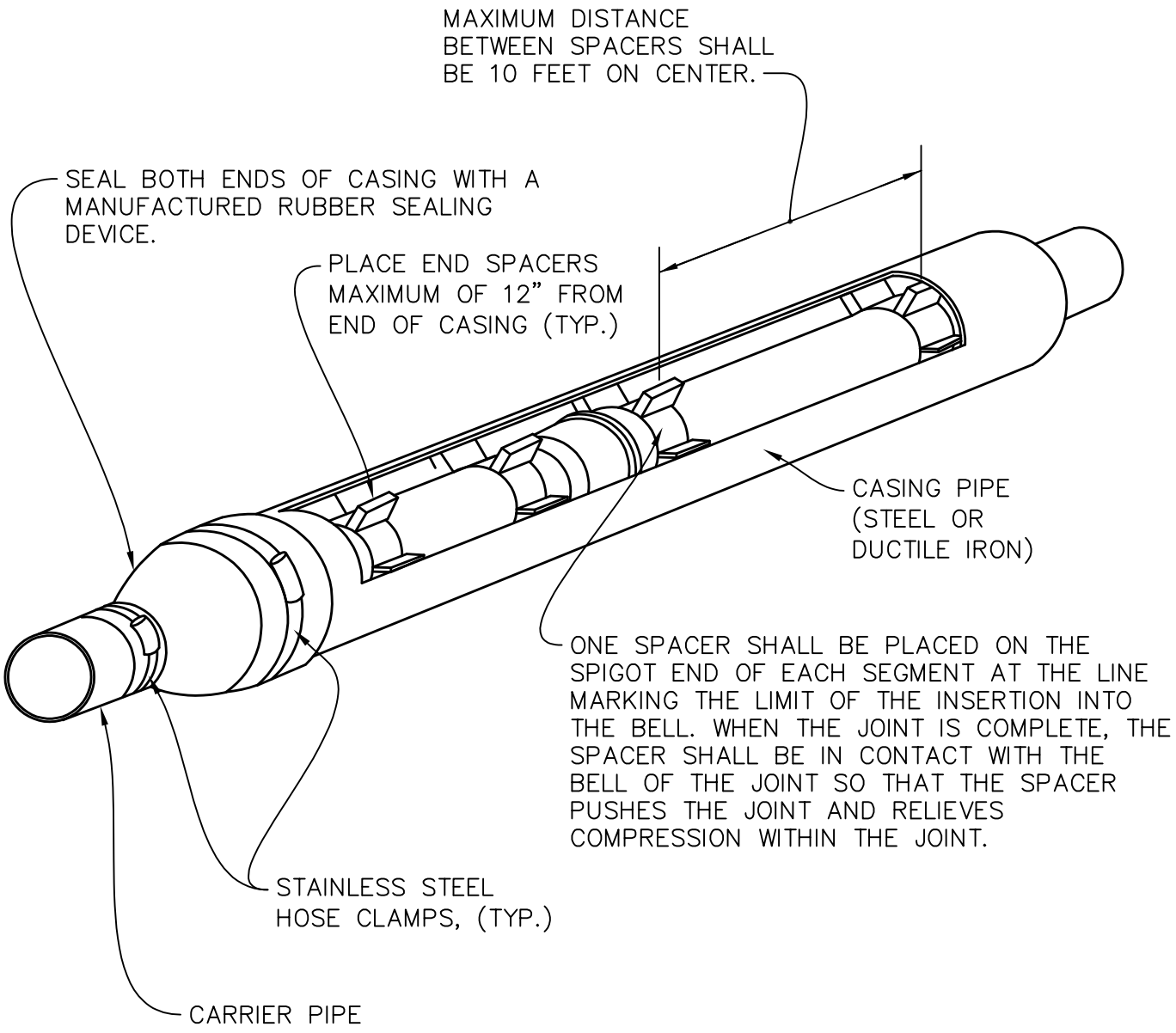
ELEVATION
NTS

NOTES:

1. BACKFLOW ASSEMBLY MUST HAVE ADEQUATE SPACE CONSIDERATIONS FOR PROPER TESTING AND MAINTENANCE. A MINIMUM OF 6" SIDE CLEARANCE BETWEEN DCVA AND WALL OR ANY OBSTRUCTIONS AND A MINIMUM OF 6" CLEARANCE BELOW ASSEMBLY SHALL BE PROVIDED.
2. DCVA MUST BE INSTALLED WITH TEST COCKS FACING UP. TEST COCKS MUST BE PLUGGED WITH BRASS OR PLASTIC PLUGS.
3. DCVA INSTALLED INSIDE BUILDING SHALL HAVE NO BRANCH CONNECTIONS BETWEEN THE METER AND THE BACKFLOW ASSEMBLY. INSTALL DCVA HORIZONTALLY.
4. BACKFLOW ASSEMBLY MUST BE APPROVED FOR USE IN WASHINGTON STATE BY THE DEPARTMENT OF HEALTH (DOH). IT MUST BE TESTED BY A STATE CERTIFIED "BAT" AT THE TIME OF INSTALLATION, ANNUALLY, AFTER THE ASSEMBLY IS REPAIRED, MOVED OR AFTER AN INCIDENT AT OWNER'S EXPENSE.
5. BACKFLOW ASSEMBLY SHALL BE PURCHASED AND INSTALLED AS A UNIT, AS SHIPPED BY THE MANUFACTURER, WITH NO MODIFICATIONS TO ANY PART OF THE ASSEMBLY.
6. TWO SUPPORTS, EITHER WALL OR FLOOR, ONE ON EACH SIDE OF THE ASSEMBLY, MUST FIRMLY ANCHOR THE ASSEMBLY.

APPROVED BY CITY ENGINEER:	DATE:	CITY OF AUBURN WASHINGTON	DOUBLE CHECK VALVE ASSEMBLY (INSIDE INSTALLATION)
	12/31/18		
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: W-25.2

Plotted by: Craig Dobyns on 12/31/2018 File location: K:\Construction Standard Details\Current Working DWG\Water\STDETL-W-25.2



PIPE CASING

NTS

NOTES:

1. CASING SPACERS SHALL BE "CENTER POSITIONING" TYPE.
2. MINIMUM RUNNER WIDTH SHALL BE 2 INCHES.
3. RUNNER HEIGHT SHALL BE SIZED TO PROVIDE:
   - 3.1. MINIMUM 0.75" BETWEEN CARRIER PIPE BELL AND CASING PIPE WALL AT ALL TIMES.
   - 3.2. MINIMUM 1" CLEARANCE BETWEEN RUNNERS AND TOP OF CASING WALL TO PREVENT JAMMING DURING INSTALLATION.
4. SPACER BAND WIDTH SHALL BE 8".

APPROVED BY CITY ENGINEER:	DATE:	CITY OF AUBURN WASHINGTON	PIPE CASING DETAIL
Jacob Sweeting	02/09/2023		
PUBLIC WORKS DEPARTMENT			STANDARD DETAIL: W-26.2

Plotted by: Craig Dobyns on 2/9/2023 File location: M:\Construction Standard Details\Current Working DWG\Water\STDETL-W-26.2

TECHNICAL SPECIAL PROVISIONS

February 2024

City of Auburn
Engineering Services
Public Works Department
25 West Main Street
Auburn, WA 98001-4998

Approved By:

Jacob Sweeting

Jacob Sweeting, P.E.
Assistant Director of Engineering Services/City Engineer

2/15/2024
Date

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PREFACE FOR THE
CITY OF AUBURN
TECHNICAL SPECIAL PROVISIONS

Per Auburn City Code (ACC) 12.04.020, all public work construction contracts of the City, including but not limited to streets and sidewalks, storm water and sanitary sewer systems, and water systems, and all work within City public right-of-way performed by the City and others shall conform to the Engineering Construction Standards (ECS). The ECS apply to City capital projects and to work performed by developers and others under construction permits (CON), grading permits (GRA), storm permits (STM), other utility permits, and public facility extensions (FAC). The City of Auburn has adopted the ECS to require the standardization of design and construction elements for consistency, to assure that public safety needs are met, and to comply with Local, State, and Federal regulations.

The Technical Special Provisions is a sub-part of the ECS and includes the following elements:

A) By reference, Divisions 2 through 9 of the Washington State Department of Transportation's (WSDOT) Standard Specifications (M41-10) for Road, Bridge and Municipal Construction, 2024 edition publication (Standard Specifications). The Standard Specifications are available at https://wsdot.wa.gov/engineering-standards/all-manuals-and-standards/manuals/standard-specifications-road-bridge-and-municipal-construction. Terms and conditions in the Standard Specifications that reference the following elements apply only to City Contracts and do not apply to CON, GRA, or FAC work: Bidding, Award, Claims, Payment, Measurement, Liquidated Damages, Compensation, Sales Tax, Requests to Sublet, and other terms and conditions that are specific a contractual obligations between the City and Contractor.

B) Special Provisions are adopted by the City that supplement, delete, replace, and revise the Standard Specifications. The Special Provisions include references that indicate the applicability of the special provision, the date it was last updated, and the source of the special provision contents:

("Applicability", "Month" "Year" "Specification Source")

Where "Applicability" indicates "City Contracts" the specification applies only to capital projects under contract with the City. Where applicability indicates "Non-City Contracts" the specification only applies to projects and work that is not a capital project under contract with the City. Where "Applicability" is omitted, the specification applies to all work.

C) Additional special provisions may be adopted on a project specific basis and provided separately with the specific project and/or permit that they apply to and are referred to as Project Specific Special Provisions.

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TABLE OF CONTENTS

DIVISION 2 Earthwork 15

2-01 Clearing, Grubbing and Roadside Cleanup 15

2-01.1 Description 15

2-01.2 Disposal of Usable Material and Debris 15

2-01.3 Construction Requirements 15

2-02 Removal of Structures and Obstructions 15

2-02.1 Description 15

2-02.3 Construction Requirements 16

2-02.4 Measurement 18

2-02.5 Payment 18

2-03 Roadway Excavation And Embankment 19

2-03.1 Description 19

2-03.3 Construction Requirements 19

2-03.4 Measurement 20

2-03.5 Payment 21

2-04 Haul 21

2-04.2 Hauling on other than City Streets 21

2-04.4 Measurement 21

2-04.5 Payment 22

2-06 Subgrade Preparation 22

2-06.3 Construction Requirements 22

2-06.5 Measurement and Payment 23

2-07 Watering 23

2-07.3 Construction Requirements 23

2-07.4 Measurement 23

DIVISION 3 Aggregate Production and Acceptance 25

3-04 Acceptance of Aggregate 25

3-04.3 Construction Requirements 25

DIVISION 4 Bases 26

DIVISION 5 Surface Treatments and Pavements 27

5-04 Hot Mix Asphalt 27

5-04.1 Description 27

5-04.2 Materials 27

5-04.3 Construction Requirements 30

HMA Tolerances and Adjustments 40

5-04.4 Measurement 58

5-04.5 Payment 58

5-05 Cement Concrete Pavement 62

5-05.4 Measurement 65

5-05.5 Payment 65

5-06 Pervious Concrete Pavement 66

5-06.1 Description 66

5-06.2 Materials 66

5-06.3 Construction Requirements 66

5-06.4 Measurement 75

5-06.5 Payment 75

5-07 Textured Asphalt 76

5-07.1 Description 76

5-07.2 Materials 76

5-07.3 Construction Requirements 76

5-07.4 Measurement 79

5-07.5 Payment 79

5-08 Stamped Colored Cement Concrete 80

5-08.1 Description 80

5-08.2 Materials 80

5-08.3 Construction Requirements 81

5-08.4 Measurement 82

5-08.5 Payment 82

5-09 Slurry Seal Surface Treatment 82

5-09.1 Description 82

5-09.2 Materials 83

5-09.3 Construction Requirements 84

5-09.4 Measurement 87
5-09.5 Payment 87
5-10 Non-Woven Fabric for Pavement Overlays 87
5-10.1 Description 87
5-10.2 Materials 87
5-10.3 Construction Requirements 87
5-10.4 Measurement 89
5-10.5 Payment 89
5-11 High Friction Surface Treatment 89
5-11.1 Description 89
5-11.2 Materials 90
5-11.3 Construction Requirements 92
5-11.4 Measurement 100
5-11.5 Payment 100
DIVISION 6 Structures 101
6-02 Concrete Structures 101
6-02.1 Description 101
6-02.4 Measurement 101
6-02.5 Payment 101
6-07 PAINTING 101
6-07.1 Description 101
6-07.2 Materials 101
6-07.5 Payment 103
DIVISION 7 Drainage Structures, Storm Sewers, Sanitary Sewers, Water Mains and Conduits ... 104
7-01 Drains 104
7-01.2 Materials 104
7-01.3 Construction Requirements 104
7-01.5 Payment 104
7-04 Storm Sewers 105
7-04.2 Materials 105
7-04.3 Construction Requirements 105
7-04.4 Measurement 105

7-04.5 Payment....106
7-05 Manholes, Inlets, Catch Basins, and Drywells....106
7-05.2 Materials....106
7-05.3 Construction Requirements....107
7-05.4 Measurement....109
7-05.5 Payment....109
7-07 Cleaning Existing Drainage Structures....110
7-07.5 Payment....110
7-08 General Pipe Installation Requirements....110
7-08.1 Description....110
7-08.2 Materials....110
7-08.3 Construction Requirements....111
7-08.4 Measurement....114
7-08.5 Payment....114
7-09 Water Mains....115
7-09.1 Description....115
7-09.2 Materials....115
7-09.4 Measurement....118
7-09.5 Payment....118
7-12 Valves for Water Mains....119
7-12.3 Construction Requirements....119
7-12.5 Payment....120
7-14 Hydrants....120
7-14.3 Construction Requirements....120
7-14.5 Payment....121
7-15 Service Connections....122
7-15.2 Materials....122
7-15.3 Construction Requirements....122
7-15.5 Payment....123
7-17 Sanitary Sewers....124
7-17.2 Materials....124
7-17.3 Construction Requirements....124
7-17.4 Measurement....126

7-17.5 Payment....126
7-18 Side Sewers....127
7-18.3 Construction Requirements....127
7-19 Sewer Cleanouts....128
7-19.3 Construction Requirements....128
DIVISION 8 Miscellaneous Construction....129
8-01 Erosion Control and Water Pollution Control....129
8-01.3 Construction Requirements....129
8-01.4 Measurement....134
8-01.5 Payment....134
8-02 Roadside Restoration....135
8-02.1 Description....135
8-02.3 Construction Requirements....135
8-02.4 Measurement....141
8-02.5 Payment....141
8-03 Irrigation Systems....142
8-03.1 Description....142
8-03.2 Materials....142
8-03.4 Measurement....144
8-03.5 Payment....144
8-04 Curbs, Gutters and Spillways....145
8-04.3 Construction Requirements....145
8-04.4 Measurement....145
8-04.5 Payment....146
8-05 VACANT....146
8-05 Dewatering System....146
8-05.1 General....146
8-05.2 Vacant....149
8-05.3 Construction Requirements....149
8-05.4 Measurement....151
8-05.5 Payment....152
8-06 Cement Concrete Driveway Entrances....152

8-06.1 Description 152
8-06.2 Materials 153
8-06.3 Construction Requirements 153
8-06.4 Measurement 153
8-06.5 Payment 153
8-07 Precast Traffic Curb 154
8-07.2 Materials 154
8-07.3 Construction Requirements 154
8-07.4 Measurement 155
8-07.5 Payment 155
8-09 Raised Pavement Markers 155
8-09.3 Construction Requirements 155
8-09.4 Measurement 156
8-09.5 Payment 156
8-12 Chain Link and Wire Fence 156
8-12.2 Materials 156
8-12.4 Measurement 157
8-12.5 Payment 157
8-13 Monument Cases 157
8-13.1 Description 157
8-13.2 Materials 157
8-13.3 Construction Requirements 157
8-13.4 Measurement 158
8-13.5 Payment 158
8-14 Cement Concrete Sidewalks 159
8-14.1 Description 159
8-14.3 Construction Requirements 159
8-14.4 Measurement 161
8-14.5 Payment 161
8-18 Mailbox Supports 161
8-18.2 Materials 161
8-18.4 Measurement 161
8-18.5 Payment 162

8-20 Illumination, Traffic Signal Systems, Intelligent Transportation Systems, and Electrical 162

8-20.1 Description 162

8-20.3 Construction Requirements 163

8-20.4 Measurement 173

8-20.5 Payment 173

8-21 Permanent Signing 175

8-21.3 Construction Requirements 175

8-21.4 Measurement 175

8-21.5 Payment 175

8-22 Pavement Marking 176

8-22.1 Description 176

8-23 Temporary Pavement Markings 176

8-23.1 Description 176

8-24 Rock and Gravity Block Wall and Gabion Cribbing 176

8-24.2 Materials 176

8-24.3 Construction Requirements 177

8-24.4 Measurement 177

8-24.5 Payment 177

8-32 Fiber Optic Communications 178

8-32.1 Description 178

8-32.2 Construction Requirements 178

8-32.3 Fiber Optic Cable Testing 182

8-32.4 Measurement 184

8-32.5 Payment 184

8-33 Bollards 185

8-33.1 Description 185

8-33.2 Materials 185

8-33.4 Measurement 185

8-33.5 Payment 185

8-34 Wood Fence and Gates 186

8-34.1 Description 186

8-34.2 Construction Requirements 186

8-34.4 Measurement 186
8-34.5 Payment 186
DIVISION 9 Materials 187
9-05 Drainage Structures and Culverts 187
9-05.7 Concrete Storm Sewer Pipe 187
9-05.12 Polyvinyl Chloride (PVC) Pipe 187
9-05.13 Ductile Iron Sewer Pipe 187
9-14 Erosion Control and Roadside Planting 187
9-14.2 Topsoil 187
9-14.5 Mulch and Amendments 188
9-14.7 Plant Materials 188
9-15 Irrigation System 189
9-15.3 Automatic Controllers 189
9-15.5 Valve Boxes 189
9-15.6 Gate Valves 189
9-15.8 Quick Coupling Equipment 189
9-15.9 Drain Valves 190
9-15.11 Cross Connection Control Devices 190
9-15.17 Electrical Wire and Splices 190
9-15.18 Detectable Marking Tape 190
9-29 Illumination, Signal, Electrical 191
9-29.1 Conduit, Innerduct, Outerduct 191
9-29.2 Junction Boxes, Cable Vaults, and Pull Boxes 191
9-29.3 Fiber Optic Cable, Electrical Conductors, and Cable 191
9-29.7 Luminaire Fusing & Electrical Connections at Light Standard Bases, Cantilever Bases and Sign Bridge Bases 197
9-29.9 Ballast, Transformers 197
9-29.10 Luminaires 197
9-29.16 Vehicular Signal Heads, Displays, and Housing 201
9-29.18 Vehicle Detector 202
9-29.19 Pedestrian Push Buttons 202
9-29.20 Pedestrian Signals 202
9-29.22 Rectangular Rapid Flashing Beacon (RRFB) 203

9-29.23 Video Detection Cameras....203
9-29.24 Service Cabinets....204
9-29.26 Traffic Signal Battery Backup System....204
9-29.27 CCTV System....204
9-29.28 Variable Message Sign System....205
9-30 Water Distribution Materials....212
9-30.1 Pipe....212
9-30.2 Fittings....212
9-30.3 Valves....213
9-30.5 Hydrants....214
9-30.6 Water Service Connections (2 inches and Smaller)....214
9-37 VACANT....214
9-37 Filter Fabric....215
9-37.1 Filter Fabric for Infiltration Systems....215
9-38 Submittal Approval....215
9-38.1 Submittals....215
9-38.2 Schedule of Submittals....221

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DIVISION 2 Earthwork

2-01 Clearing, Grubbing and Roadside Cleanup

2-01.1 Description

(December 2016 City of Auburn GSP)

Supplement this section with the following:

Clearing and grubbing shall be done to the construction limits shown on the Plans. When no clearing and grubbing limits are shown, the clearing and grubbing limits shall be the smallest area required to complete the other Contract Work.

2-01.2 Disposal of Usable Material and Debris

2-01.2(1) Disposal Method No. 1 – Open Burning

(December 2016 City of Auburn GSP)

Delete this section and replace it with the following:

Open burning will not be permitted on this project.

2-01.2(3) Disposal Method No. 3 - Chipping

(January 2017 City of Auburn GSP)

Supplement this section with the following:

Woodchips shall not be utilized on the project site unless approved by the Engineer. Wood chips shall be disposed of by Disposal Method No. 2 – Waste Site.

2-01.3 Construction Requirements

(January 2018 City of Auburn GSP)

Supplement this section with the following:

Where the Plans indicate clearing and grubbing on private property, the terms of the easement agreements referenced in Section 1-07.24 (Rights of Way) shall dictate if the property owners are responsible for relocating trees, shrubs, or other landscaping from the work area, and the required advance notice to the property owner(s) from the Contractor. Absent of these stipulations, respective property owners are responsible for relocating or removing trees, shrubs, or any other landscaping material within the work areas that they wish to save, unless specified elsewhere in the contract documents, and the Contractor shall notify property owners a minimum of 7 calendar days in advance of clearing the site, to allow the owner time to remove landscape material.

2-02 Removal of Structures and Obstructions

2-02.1 Description

(January 2018 City of Auburn GSP)

Supplement this section with the following:

Items in the Plans designated to be removed are to be included in the lump sum bid price for “Removal of Structures and Obstructions.” If the Plans or other Contract Documents

provide quantities, they are estimates only and are provided for Contractor convenience as a basis for bidding only. The Contractor shall verify the listed items and quantities, as shown on the Plans, before bidding. When included in the Proposal, The lump sum bid price for "Removal of Structures and Obstructions" shall include all work specified in Section 2-02 (Removal of Structures and Obstructions), unless there is a separate and applicable pay item included in the Proposal.

Removal of all asphalt and/or cement concrete pavement, cement and/or asphalt flatwork (including sidewalks, driveways, and ramps), and curb and gutter, is included in the bid item price for "Roadway Excavation, Incl. Haul", unless specified otherwise.

2-02.3 Construction Requirements

2-02.3(2) Removal of Bridges, Box Culverts, and other Drainage Structures

(January 2017 City of Auburn GSP)

Supplement this section with the following:

The Contractor shall remove storm drainage structures as described in the Plans. The resultant void shall be backfilled with Gravel Borrow per Section 9-03.14(1) (Gravel Borrow), unless otherwise noted. All material removed from the site shall be properly disposed of, unless otherwise identified to be salvaged.

2-02.3(3) Removal of Pavement, Sidewalks, Curbs and Gutters

(City Contracts, December 2016 City of Auburn GSP)

Supplement this section with the following:

Saw cutting costs shall be included in the bid item for which the sawcut is being made and no separate payment for saw cutting shall be made.

(January 2018, City of Auburn GSP)

Add the following new section including subsections:

2-02.3(4) Removal and Resetting of Miscellaneous Items

(August 2016, City of Auburn GSP)

The Contractor shall remove and reset miscellaneous items as described in the Plans. Unless a separate and applicable pay item is included in the Proposal, removal and resetting of miscellaneous items shall be paid under the lump sum bid item "Removal and Resetting of Miscellaneous Items". When included in the Proposal ,Items listed in the Plans to be removed and reset are to be included in the lump sum bid price for "Removal and Resetting of Miscellaneous Items." If the Plans or other contract documents provide quantities, they are estimates only and are provided for Contractor convenience as a basis for bidding only. The Contractor shall verify the listed items and quantities, as shown on the Plans, before bidding.

2-02.3(4)A Remove and Reset Fencing

(January 2018 City of Auburn GSP)

This work consists of removing and resetting fencing as shown on the Plans. The Contractor is responsible for ensuring that any remaining fence and fence to be reset is

undamaged. The Contractor shall repair any damage caused by the Contractor's negligence at no additional cost to the City. Costs for the replacement of fencing components and finishes (such as gates, posts, foundations, fabric, stain, and other material) required for the resetting of removed fence shall be included in the costs for removing and resetting the fence.

For the protection of pets and security of the property, the Contractor shall schedule removal of fencing with the property owner at least 5 working days in advance. Unless approved by the property owner, no site shall be left unfenced.

2-02.3(4)B Remove and Reset Private Signs

(August 2016 City of Auburn GSP)

Where shown on the Plans, the Contractor shall remove existing private signs for placement in new locations.

The Contractor is responsible for ensuring that the sign(s) and mounting apparatus(es) remain undamaged. Any damage caused by the Contractor's negligence shall be repaired or replaced by the Contractor at the Contractor's expense. The new cement concrete foundation(s) shall be equal or larger in size than the existing foundation(s), unless otherwise designated in the Contract Documents.

All electrical work shall be performed in accordance with applicable subsections of Section 8-20 (Illumination, Traffic Signal Systems, and Electrical) of the Standard Specifications and as amended by these Special Provisions.

2-02.3(4)C Remove and Reset Private Luminaires

(August 2016 City of Auburn GSP)

Where shown on the Plans, the Contractor shall move existing private luminaires to new locations.

Following removal of the existing light fixture, the Contractor shall protect the fixture and all component parts from loss or damage until such time as the fixture is relocated. Any damage caused by the Contractor's negligence shall be repaired or replaced by the Contractor at the Contractor's expense. The new cement concrete foundation(s) shall be equal or larger in size than the existing foundation(s), unless otherwise designated in the Contract Documents.

All electrical work shall be performed in accordance with applicable subsections of Section 8-20 (Illumination, Traffic Signal Systems, and Electrical) of the Standard Specifications and as amended by these Special Provisions.

(September 2019 City of Auburn GSP)

Add the following new section:

2-02.3(5) Salvage

All casings, pipe, frames, grates, covers, traffic signal equipment, poles, luminaires and other material of recoverable value identified to be salvaged from the project shall be carefully delivered to the City of Auburn Maintenance & Operations Facility (1305 "C" Street SW) in their existing condition.

Items have been identified in the Plans.

The Contractor shall provide notice to the Engineer a minimum of 3 working days prior to delivery of any salvaged item.

All costs for salvaging and delivering salvaged items to the City shall be included in the appropriate unit Bid prices for the work involved and no further compensation will be paid.

Following removal items to be salvaged, the Contractor shall protect the items and all component parts from loss or damage until such time as all they are delivered by the Contractor to the City of Auburn Maintenance and Operations Facility. The Contractor shall replace lost, damaged, or destroyed items in kind, at the Contractor's expense. The Contractor shall coordinate the receiving of salvaged items by the City. The Contractor shall label any salvaged traffic signal poles, mast arms, and signal/lighting equipment with the City contract number and location from which they were salvaged. Labels shall be removable weather proof tags that will not damage or mark the salvaged item.

2-02.4 Measurement

(City Contracts, April 2022 City of Auburn GSP)

Supplement this section with the following:

Removal of cement concrete or asphalt flatwork will be measured by the square yard.

Removal of asphalt pavement will be measured by the square yard.

Removal of pipe will be measured by the linear foot of pipe removed outside the limits of other trench excavations.

Removal of curb and gutter will be measured by the linear foot.

Removal and reset fence will be measured by the linear foot.

Removal of catch basin will be measured per each.

Remove and reset private sign will be measured per each.

Removal of manhole will be measured per each.

2-02.5 Payment

(City Contracts, April 2017 City of Auburn GSP)

Supplement this section with the following:

Payment will be made for each of the following Bid items that are included in the Proposal:

"Remove and Reset Miscellaneous Items", Per Lump Sum
"Remove and Reset Fencing", Per Lineal Foot
"Remove and Reset Private Sign", Per Each
"Removal of Cement Concrete of Asphalt Flat Work", Per Square Yard
"Removal of Curb and Gutter", Per Lineal Foot
"Removal of Asphalt Pavement", Per Square Yard
"Removal of Pipe", Per Lineal Foot
"Remove Manhole", Per Each
"Remove Catch Basin", Per Each

The Contract price for “Remove and Reset Fencing” and “Remove and Reset Private Sign” shall be full pay for all labor, tools, and equipment to complete the work outlined in according to the Construction Plans and these Specifications.

The unit Contract price for “Removal of Cement Concrete of Asphalt Flat Work” shall be full pay for all labor, tools, and equipment to remove and dispose of the concrete flat work, including industrial or commercial driveways, saw cutting and any dowel bars or reinforcing steel, at the locations shown on the Contract plans.

Removal items include all applicable costs including, but not limited to, sawcutting, excavation, stockpiling, haul, disposal, furnishing (when the backfill material is not included in the Proposal) and installing backfill as specified, and protecting adjacent items to remain.

2-03 Roadway Excavation And Embankment

2-03.1 Description

(City Contracts, August 2016 City of Auburn GSP)

The second paragraph is revised as follows:

The work excludes these items if they are listed as individual bid items in the Proposal or if the specifications indicate the payment for these items is included with any other item(s) listed in the Proposal:

1. Haul.
2. Excavation for structures and ditches.
3. Removal of unsuitable materials.
4. Removal Items being separately paid for under Section 2-02 of these contract documents.

(December 2016 City of Auburn GSP)

Supplement this section with the following:

Any excavation beyond the set limits, unless ordered by the Engineer in writing, shall not be paid for. The Contractor, at Contractor expense, shall provide all work and material required to return these over excavated areas to their set limits or original conditions.

2-03.3 Construction Requirements

2-03.3(3) Excavation Below Subgrade

(January 2018 City of Auburn GSP)

Supplement this section with the following:

The Contractor shall remove and dispose of unsuitable roadway subgrade material. The Contractor shall replace the removed material with crushed surfacing base course per Section 9-03.9(3) (Crushed Surfacing), unless otherwise specified in the Contract Documents. When specified in the Plans, the Contractor shall place construction geo-synthetic beneath the crushed surfacing base course.

2-03.3(7) Disposal of Surplus Material

2-03.3(7)C Contractor-Provided Disposal Site

(February 2023 City of Auburn GSP)

Supplement this section with the following:

If, during the course of this project, it becomes necessary to dispose of either excess or unsuitable materials, the additional following requirements shall be observed:

1. In no case shall any waste materials be disposed of on any site within the City limits of Auburn, unless the Contractor has a valid Grading (Fill) Permit according to Section 1-07.5(7) (City of Auburn Requirements) in this document;

2. Grading (Fill) Permits are issued by the City of Auburn Community Development Department after all conditions have been met to the satisfaction of the City Engineer;

3. The Grading Permits are issued to the legal owner of the property. Any questions regarding the requirements should be directed to the City of Auburn Community Development Services at 253.931.3020 (Option 3) or permitcenter@auburnwa.gov;

4. Any waste material disposed of outside the City limits of Auburn shall be at the Contractor's risk. The Contractor is responsible for complying with all local codes and ordinances;

5. Time lost by failure to satisfy these requirements shall be insufficient reason for granting extensions of Contract time.

(City Contracts, February 2023 City of Auburn GSP)

Supplement this section with the following:

6. Failure to comply with the above requirements shall be grounds to withhold payment of money due until such time as the requirements have been satisfied;

2-03.3(14) Embankment Construction

(December 2016 City of Auburn GSP)

Supplement this section with the following:

Embankments shall be constructed in compacted layers of uniform thickness by Method C of Section 2-03.3(14)C (Compacting Earth Embankments).

2-03.4 Measurement

(City Contracts, February 2023 City of Auburn GSP)

All references in this section to measurement of roadway excavation are replaced with the following:

Excavation that is not classified as Structure Excavation under Section 2-09 (Structure Excavation) and is not included under other bid items listed in the Proposal shall be measured and paid at the unit contract price per cubic yard for "Roadway Excavation Including Haul".

The original ground elevation will be determined only once on this project. Measurement for Roadway Excavation and Embankment will be based on the original ground elevations recorded before the award of this Contract, and the alignment, profile, grade, and roadway section as shown in the Plans. Control stakes will be set during construction to provide the Contractor with alignment, slope, and grade information for the construction of excavation and embankments.

If discrepancies are discovered in the ground elevations that will change the original bid quantities of earthwork by more than 25%, the original computations of earthwork quantities will be adjusted accordingly.

Earthwork quantities will be computed, either manually or electronically, by using the average end area method.

With at least 2 business days advance request to the Engineer, electronic copies of the ground cross-section notes will be made available for the bidder's inspection before the opening of bids at the City of Auburn Public Works Department, Customer Service Center, One East Main Street, Auburn, Washington. Upon award of the Contract, copies of the original ground cross-sections will be furnished the successful bidder upon request to the Engineer.

”Gravel Backfill for Roadway Subgrade” will be measured per ton of material placed and compacted as roadway subgrade.

2-03.5 Payment

(City Contracts, January 2018 City of Auburn GSP)

Supplement this section with the following:

Payment will be made for each of the following Bid items that are included in the Proposal:

“Gravel Backfill for Roadway Subgrade”, Per Ton

Payment for “Gravel Backfill for Roadway Subgrade” shall include all costs to remove and dispose of material that is unsuitable for the roadway subgrade and all costs to furnish and install crushed surfacing base course. When a bid item is not included in the proposal for channel excavation or ditch excavation all costs shall be included in the bid item price for ‘Roadway Excavation, Including Haul’.

2-04 Haul

2-04.2 Hauling on other than City Streets

(January 2017 City of Auburn GSP)

Supplement this section with the following:

If the sources of materials provided by the Contractor necessitate hauling over roads other than City of Auburn streets, the Contractor shall, at the Contractor’s expense, make all arrangements for the use and cleaning, if necessary, of the haul routes.

2-04.4 Measurement

(City Contracts, December 2016 City of Auburn GSP)

Delete this section and replace it with the following:

No measurement shall be made for hauling.

2-04.5 Payment

(City Contracts, December 2016 City of Auburn GSP)

Delete this section and replace it with the following:

All costs associated with hauling materials of any description to, from, and within the project site shall be included in the appropriate unit Bid prices in the Proposal and no further compensation will be paid.

2-06 Subgrade Preparation

2-06.3 Construction Requirements

2-06.3(1) Subgrade for Surfacing

(September 2020 City of Auburn GSP)

Supplement this section with the following:

Before placing base course, subgrade shall be shaped to conform to the "typical cross-section" shown in the Plans. Adequate water shall be spread on the subgrade to obtain optimum moisture content for compaction. The subgrade shall be graded to a uniform cross-section true to line and grade and compacted as directed by the Engineer prior to placing base material.

(March 9, 2016 APWA GSP)

Add the following new section:

2-06.3(3) Subgrade for Permeable Pavements

Before placing permeable ballast for Porous HMA/WMA, the Contractor shall bring the Subgrade to the required line, grade, and cross-section. The Contractor shall compact the Subgrade to a depth of 6 inches to at least 90 percent, but not more than 92 percent, of the maximum density as determined by the compaction control tests described in Section 2-03.3(14)D. Two (2) density tests will be conducted for every 5,000 square feet of prepared subgrade; or four (4) tests per 200 lineal feet of roadway or sidewalk. All subgrade shall be firm and unyielding as determined by the Engineer.

The Contractor shall take measures to protect the prepared and approved subgrade from traffic, water run-on, standing water, or other damage. Subgrade that has been over compacted, shall be scarified to a minimum depth of eight (8) inches and recompacted.

Material used to protect the Subgrade from traffic or provide access to adjacent facilities shall be removed and the subgrade compacted prior to placing geotextile, if used and/or permeable ballast.

2-06.5 Measurement and Payment

(City Contracts, March 9, 2016 APWA GSP)

Supplement this section with the following:

Measurement for Subgrade for Permeable Pavement will be in accordance with 2-06.5.

2-06.5(1) Subgrade Constructed Under Same Contract

(City Contracts, January 2018 City of Auburn GSP)

The second sentence of the first paragraph is deleted.

Supplement this section with the following:

"Subgrade Preparation," for building a Subgrade for surfacing or treated base, will be measured by the square yard of full depth (subgrade to surface) roadway constructed or re-constructed. Quantities for "Subgrade Preparation" will be measured at a width of 1 foot beyond the outside face of curbs or 18-inches beyond the edge of pavement where no curbs are installed.

Payment will be made for each of the following Bid items that are included in the Proposal:

"Subgrade Prep", Per Square Yard

2-07 Watering

2-07.3 Construction Requirements

(December 2016 City of Auburn GSP)

Supplement this section with the following:

The Contractor shall water to control dust and shall have a water truck available for watering.

2-07.4 Measurement

(City Contracts, January 2017 City of Auburn GSP)

Delete this section and replace it with the following:

No Measurement for water will be made.

(February 2023 City of Auburn GSP)

Add the following new section:

2-07.4(1) Water from City Hydrants

The Contractor shall obtain a Fire Hydrant Meter Permit from the City of Auburn Permit Center (1 East Main Street) before taking of water from hydrants. Water will be furnished by the City from the fire hydrant to be designated at the time a Fire Hydrant Meter Permit is obtained and in accordance with the terms of the Fire Hydrant Meter Permit. To obtain a Fire Hydrant Meter Permit the Contractor shall complete a hydrant permit application

at MyBuildingPermit.com. The Contractor shall pay all permit fee(s) and deposit(s). The deposit covers the use of a water meter, hydrant wrench, brass adapter, backflow prevention device and hydrant gate valve, and is refundable if returned in acceptable condition. When the meter, hydrant wrench, backflow prevention device, and gate valve are returned in an acceptable condition and all water usage fees have been paid, the deposit will then be refunded to the Contractor. The Contractor shall pay a base fee for a 3" meter size per month and all water usage will be paid by the applicant at the commercial customer class rate per hundred cubic feet. Fees, deposits, and rates shall be as published in Auburn City Code 13.06.511 and 13.06.360 at the time of hydrant permit application submission.

The Contractor shall furnish all required equipment and material necessary for transporting the water from the hydrant, including gauges for testing (except the meter, wrench and valve as stated above).

(City Contracts, February 2023 City of Auburn GSP)

Supplement this section with the following:

The Contractor shall be responsible to contact the City and verify hydrant fee and water usage rates when preparing the bid. Adjustment of these rates by the City will not be the basis for any contract unit price adjustment.

END OF DIVISION 2

DIVISION 3 Aggregate Production and Acceptance

3-04 Acceptance of Aggregate

3-04.3 Construction Requirements

3-04.3(8) Price Adjustment for Quality of Aggregate

(December 2016 City of Auburn GSP)

Delete this section and replace it with the following:

No aggregate compliance price adjustments shall be made.

END OF DIVISION 3

DIVISION 4 Bases

No Revisions.

END OF DIVISION 4

DIVISION 5 Surface Treatments and Pavements

5-04 Hot Mix Asphalt

(July 18, 2018 APWA GSP)

Delete Section 5-04 and amendments, Hot Mix Asphalt and replace it with the following:

5-04.1 Description

This Work shall consist of providing and placing one or more layers of plant-mixed hot mix asphalt (HMA) on a prepared foundation or base in accordance with these Specifications and the lines, grades, thicknesses, and typical cross-sections shown in the Plans. The manufacture of HMA may include warm mix asphalt (WMA) processes in accordance with these Specifications. WMA processes include organic additives, chemical additives, and foaming.

HMA shall be composed of asphalt binder and mineral materials as may be required, mixed in the proportions specified to provide a homogeneous, stable, and workable mixture.

(January 2017, City of Auburn GSP)

Supplement this section with the following:

HMA Class 3/8-inch, Class 1/2-inch, and Class 3/4-inch are designated as leveling or wearing courses. HMA Class 1-inch is designated as a pavement base course. All mixtures are considered dense graded HMA.

(Non-City Contracts, February 2023, City of Auburn GSP)

Supplement this section with the following:

The Contractor shall be responsible for performing all sampling, testing, and reporting described throughout Section 5-04 at its own cost.

5-04.2 Materials

(July 18, 2018 APWA GSP)

Materials shall meet the requirements of the following sections:

Asphalt Binder	9-02.1(4)
Cationic Emulsified Asphalt	9-02.1(6)
Anti-Stripping Additive	9-02.4
HMA Additive	9-02.5
Aggregates	9-03.8
Recycled Asphalt Pavement	9-03.8(3)B
Mineral Filler	9-03.8(5)
Recycled Material	9-03.21
Portland Cement	9-01

Sand	9-03.1(2)
(As noted in 5-04.3(5)C for crack sealing)	
Joint Sealant	9-04.2
Foam Backer Rod	9-04.2(3)A

The Contract documents may establish that the various mineral materials required for the manufacture of HMA will be furnished in whole or in part by the Contracting Agency. If the documents do not establish the furnishing of any of these mineral materials by the Contracting Agency, the Contractor shall be required to furnish such materials in the amounts required for the designated mix. Mineral materials include coarse and fine aggregates, and mineral filler.

The Contractor may choose to utilize recycled asphalt pavement (RAP) in the production of HMA. The RAP may be from pavements removed under the Contract, if any, or pavement material from an existing stockpile.

The Contractor may use up to 20 percent RAP by total weight of HMA with no additional sampling or testing of the RAP. The RAP shall be sampled and tested at a frequency of one sample for every 1,000 tons produced and not less than ten samples per project. The asphalt content and gradation test data shall be reported to the Contracting Agency when submitting the mix design for approval on the QPL. The Contractor shall include the RAP as part of the mix design as defined in these Specifications.

The grade of asphalt binder shall be as required by the contract. Blending of asphalt binder from different sources is not permitted.

The Contractor may only use warm mix asphalt (WMA) processes in the production of HMA with 20 percent or less RAP by total weight of HMA. The Contractor shall submit to the Engineer for approval the process that is proposed and how it will be used in the manufacture of HMA.

Production of aggregates shall comply with the requirements of Section 3-01.

Preparation of stockpile site, the stockpiling of aggregates, and the removal of aggregates from stockpiles shall comply with the requirements of Section 3-02.

(January 2018, City of Auburn GSP)

Supplement this section with the following:

The crack sealant material shall be rubberized asphalt per Section 9-04.2(1) (Hot Poured Joint Sealants).

5-04.2(1) How to Get an HMA Mix Design on the QPL

(July 18, 2018 APWA GSP)

If the contractor wishes to submit a mix design for inclusion in the Qualified Products List (QPL), please follow the WSDOT process outlined in Standard Specification 5-04.2(1).

5-04.2(1)A Vacant

5-04.2(2) Mix Design – Obtaining Project Approval

(July 18, 2018 APWA GSP)

No paving shall begin prior to the approval of the mix design by the Engineer.

Nonstatistical evaluation will be used for all HMA not designated as Commercial HMA in the contract documents.

Commercial evaluation will be used for Commercial HMA and for other classes of HMA in the following applications: sidewalks, road approaches, ditches, slopes, paths, trails, gores, prelevel, and pavement repair. Other nonstructural applications of HMA accepted by commercial evaluation shall be as approved by the Project Engineer. Sampling and testing of HMA accepted by commercial evaluation will be at the option of the Project Engineer. The Proposal quantity of HMA that is accepted by commercial evaluation will be excluded from the quantities used in the determination of nonstatistical evaluation.

Nonstatistical Mix Design. Fifteen days prior to the first day of paving the contractor shall provide one of the following mix design verification certifications for Contracting Agency review;

- The WSDOT Mix Design Evaluation Report from the current WSDOT QPL, or one of the mix design verification certifications listed below.
- The proposed HMA mix design on WSDOT Form 350-042 with the seal and certification (stamp & sig-nature) of a valid licensed Washington State Professional Engineer.
- The Mix Design Report for the proposed HMA mix design developed by a qualified City or County laboratory that is within one year of the approval date.**

The mix design shall be performed by a lab accredited by a national authority such as Laboratory Accreditation Bureau, L-A-B for Construction Materials Testing, The Construction Materials Engineering Council (CMEC's) ISO 17025 or AASHTO Accreditation Program (AAP) and shall supply evidence of participation in the AASHTO: resource proficiency sample program.

Mix designs for HMA accepted by Nonstatistical evaluation shall;

- Have the aggregate structure and asphalt binder content determined in accordance with WSDOT Standard Operating Procedure 732 and meet the requirements of Sections 9-03.8(2), except that Hamburg testing for ruts and stripping are at the discretion of the Engineer, and 9-03.8(6).
- Have anti-strip requirements, if any, for the proposed mix design determined in accordance with AASHTO T 283 or T 324, or based on historic anti-strip and aggregate source compatibility from previous WSDOT lab testing.

At the discretion of the Engineer, agencies may accept verified mix designs older than 12 months from the original verification date with a certification from the Contractor that the materials and sources are the same as those shown on the original mix design.

Commercial Evaluation Approval of a mix design for "Commercial Evaluation" will be based on a review of the Contractor's submittal of WSDOT Form 350-042 (For commercial mixes, AASHTO T 324 evaluation is not required) or a Mix Design from the current WSDOT QPL or from one of the processes allowed by this section. Testing of the HMA by the Contracting Agency for mix design approval is not required.

For the Bid Item Commercial HMA, the Contractor shall select a class of HMA and design level of Equivalent Single Axle Loads (ESAL's) appropriate for the required use.

5-04.2(2)B Using Warm Mix Asphalt Processes

(July 18, 2018 APWA GSP)

The Contractor may elect to use additives that reduce the optimum mixing temperature or serve as a compaction aid for producing HMA. Additives include organic additives, chemical additives and foaming processes. The use of Additives is subject to the following:

- Do not use additives that reduce the mixing temperature more than allowed in Section 5-04.3(6) in the production of mixtures.
- Before using additives, obtain the Engineer's approval using WSDOT Form 350-076 to describe the proposed additive and process.

5-04.3 Construction Requirements

5-04.3(1) Weather Limitations

(July 18, 2018 APWA GSP)

Do not place HMA for wearing course on any Traveled Way beginning October 1st through March 31st of the following year without written concurrence from the Engineer.

Do not place HMA on any wet surface, or when the average surface temperatures are less than those specified below, or when weather conditions otherwise prevent the proper handling or finishing of the HMA.

Minimum Surface Temperature for Paving

Compacted Thickness (Feet)	Wearing Course	Other Courses
Less than 0.10	55◦F	45◦F
0.10 to .20	45◦F	35◦F
More than 0.20	35◦F	35◦F

5-04.3(2) Paving Under Traffic

(July 18, 2018 APWA GSP)

When the Roadway being paved is open to traffic, the requirements of this Section shall apply.

The Contractor shall keep intersections open to traffic at all times except when paving the intersection or paving across the intersection. During such time, and provided that there has been an advance warning to the public, the intersection may be closed for the minimum time required to place and compact the mixture. In hot weather, the Engineer may require the application of water to the pavement to accelerate the finish rolling of the pavement and to shorten the time required before reopening to traffic.

Before closing an intersection, advance warning signs shall be placed and signs shall also be placed marking the detour or alternate route.

During paving operations, temporary pavement markings shall be maintained throughout the project. Temporary pavement markings shall be installed on the Roadway prior to opening to traffic. Temporary pavement markings shall be in accordance with Section 8-23.

All costs in connection with performing the Work in accordance with these requirements, except the cost of temporary pavement markings, shall be included in the unit Contract prices for the various Bid items involved in the Contract.

5-04.3(3) Equipment

5-04.3(3)A Mixing Plant

(July 18, 2018 APWA GSP)

Plants used for the preparation of HMA shall conform to the following requirements:

1. **Equipment for Preparation of Asphalt Binder** – Tanks for the storage of asphalt binder shall be equipped to heat and hold the material at the required temperatures. The heating shall be accomplished by steam coils, electricity, or other approved means so that no flame shall be in contact with the storage tank. The circulating system for the asphalt binder shall be designed to ensure proper and continuous circulation during the operating period. A valve for the purpose of sampling the asphalt binder shall be placed in either the storage tank or in the supply line to the mixer.
2. **Thermometric Equipment** – An armored thermometer, capable of detecting temperature ranges expected in the HMA mix, shall be fixed in the asphalt binder feed line at a location near the charging valve at the mixer unit. The thermometer location shall be convenient and safe for access by Inspectors. The plant shall also be equipped with an approved dial-scale thermometer, a mercury actuated thermometer, an electric pyrometer, or another approved

thermometric instrument placed at the discharge chute of the drier to automatically register or indicate the temperature of the heated aggregates. This device shall be in full view of the plant operator.

3. **Heating of Asphalt Binder** – The temperature of the asphalt binder shall not exceed the maximum recommended by the asphalt binder manufacturer nor shall it be below the minimum temperature required to maintain the asphalt binder in a homogeneous state. The asphalt binder shall be heated in a manner that will avoid local variations in heating. The heating method shall provide a continuous supply of asphalt binder to the mixer at a uniform average temperature with no individual variations exceeding 25°F. Also, when a WMA additive is included in the asphalt binder, the temperature of the asphalt binder shall not exceed the maximum recommended by the manufacturer of the WMA additive.
4. **Sampling and Testing of Mineral Materials** – The HMA plant shall be equipped with a mechanical sampler for the sampling of the mineral materials. The mechanical sampler shall meet the requirements of Section 1-05.6 for the crushing and screening operation. The Contractor shall provide for the setup and operation of the field testing facilities of the Contracting Agency as provided for in Section 3-01.2(2).
5. **Sampling HMA** – The HMA plant shall provide for sampling HMA by one of the following methods:
    a. A mechanical sampling device attached to the HMA plant.
    b. Platforms or devices to enable sampling from the hauling vehicle without entering the hauling vehicle.

5-04.3(3)B Hauling Equipment

(July 18, 2018 APWA GSP)

Trucks used for hauling HMA shall have tight, clean, smooth metal beds and shall have a cover of canvas or other suitable material of sufficient size to protect the mixture from adverse weather. Whenever the weather conditions during the work shift include, or are forecast to include, precipitation or an air temperature less than 45°F or when time from loading to unloading exceeds 30 minutes, the cover shall be securely attached to protect the HMA.

The contractor shall provide an environmentally benign means to prevent the HMA mixture from adhering to the hauling equipment. Excess release agent shall be drained prior to filling hauling equipment with HMA. Petroleum derivatives or other coating material that contaminate or alter the characteristics of the HMA shall not be used. For live bed trucks, the conveyer shall be in operation during the process of applying the release agent.

5-04.3(3)C Pavers

(July 18, 2018 APWA GSP)

HMA pavers shall be self-contained, power-propelled units, provided with an internally heated vibratory screed and shall be capable of spreading and finishing courses of HMA plant mix material in lane widths required by the paving section shown in the Plans.

The HMA paver shall be in good condition and shall have the most current equipment available from the manufacturer for the prevention of segregation of the HMA mixture installed, in good condition, and in working order. The equipment certification shall list the make, model, and year of the paver and any equipment that has been retrofitted.

The screed shall be operated in accordance with the manufacturer's recommendations and shall effectively produce a finished surface of the required evenness and texture without tearing, shoving, segregating, or gouging the mixture. A copy of the manufacturer's recommendations shall be provided upon request by the Contracting Agency. Extensions will be allowed provided they produce the same results, including ride, density, and surface texture as obtained by the primary screed. Extensions without augers and an internally heated vibratory screed shall not be used in the Traveled Way.

When specified in the Contract, reference lines for vertical control will be required. Lines shall be placed on both outer edges of the Traveled Way of each Roadway. Horizontal control utilizing the reference line will be permitted. The grade and slope for intermediate lanes shall be controlled automatically from reference lines or by means of a mat referencing device and a slope control device. When the finish of the grade prepared for paving is superior to the established tolerances and when, in the opinion of the Engineer, further improvement to the line, grade, cross-section, and smoothness can best be achieved without the use of the reference line, a mat referencing device may be substituted for the reference line. Substitution of the device will be subject to the continued approval of the Engineer. A joint matcher may be used subject to the approval of the Engineer. The reference line may be removed after the completion of the first course of HMA when approved by the Engineer. Whenever the Engineer determines that any of these methods are failing to provide the necessary vertical control, the reference lines will be reinstalled by the Contractor.

The Contractor shall furnish and install all pins, brackets, tensioning devices, wire, and accessories necessary for satisfactory operation of the automatic control equipment.

If the paving machine in use is not providing the required finish, the Engineer may suspend Work as allowed by Section 1-08.6. Any cleaning or solvent type liquids spilled on the pavement shall be thoroughly removed before paving proceeds.

(January 2018, City of Auburn GSP)

Supplement this section with the following:

When laying HMA, the paver shall be operated at a uniform forward speed consistent with the plant production rate and roller train capacity to result in a continuous operation. The auger speed and flight gate opening shall be adjusted to coordinate with the operation.

5-04.3(3)D Material Transfer Device or Material Transfer Vehicle

(October 2019, City of Auburn GSP)

A Material Transfer Device/Vehicle (MTD/V) only applies to paving on State Routes and within the right of way of the State, unless other-wise required by the contract.

When used, the MTD/V shall mix the HMA after delivery by the hauling equipment and prior to laydown by the paving machine. Mixing of the HMA shall be sufficient to obtain a uniform temperature throughout the mixture. If a windrow elevator is used, the length of the windrow may be limited in urban areas or through intersections, at the discretion of the Engineer.

To be approved for use, an MTV:

1. Shall be self-propelled vehicle, separate from the hauling vehicle or paver.
2. Shall not be connected to the hauling vehicle or paver.
3. May accept HMA directly from the haul vehicle or pick up HMA from a windrow.
4. Shall mix the HMA after delivery by the hauling equipment and prior to placement into the paving machine.
5. Shall mix the HMA sufficiently to obtain a uniform temperature throughout the mixture.

To be approved for use, an MTD:

1. Shall be positively connected to the paver.
2. May accept HMA directly from the haul vehicle or pick up HMA from a windrow.
3. Shall mix the HMA after delivery by the hauling equipment and prior to placement into the paving machine.
4. Shall mix the HMA sufficiently to obtain a uniform temperature throughout the mixture.

5-04.3(3)E Rollers

(July 18, 2018 APWA GSP)

Rollers shall be of the steel wheel, vibratory, oscillatory, or pneumatic tire type, in good condition and capable of reversing without backlash. Operation of the roller shall be in accordance with the manufacturer's recommendations. When ordered by the Engineer for any roller planned for use on the project, the Contractor shall provide a copy of the manufacturer's recommendation for the use of that roller for compaction of HMA. The number and weight of rollers shall be sufficient to compact the mixture in compliance with the requirements of Section 5-04.3(10). The use of equipment that results in crushing of the aggregate will not be permitted. Rollers producing pickup, washboard, uneven compaction of the surface, displacement of the mixture or other undesirable results shall not be used.

5-04.3(4) Preparation of Existing Paved Surfaces

(July 18, 2018 APWA GSP)

When the surface of the existing pavement or old base is irregular, the Contractor shall bring it to a uniform grade and cross-section as shown on the Plans or approved by the Engineer.

Preleveling of uneven or broken surfaces over which HMA is to be placed may be accomplished by using an asphalt paver, a motor patrol grader, or by hand raking, as approved by the Engineer.

Compaction of preleveling HMA shall be to the satisfaction of the Engineer and may require the use of small steel wheel rollers, plate compactors, or pneumatic rollers to avoid bridging across preleveled areas by the compaction equipment. Equipment used for the compaction of preleveling HMA shall be approved by the Engineer.

Before construction of HMA on an existing paved surface, the entire surface of the pavement shall be clean. All fatty asphalt patches, grease drippings, and other objectionable matter shall be entirely removed from the existing pavement. All pavements or bituminous surfaces shall be thoroughly cleaned of dust, soil, pavement grindings, and other foreign matter. All holes and small depressions shall be filled with an appropriate class of HMA. The surface of the patched area shall be leveled and compacted thoroughly. Prior to the application of tack coat, or paving, the condition of the surface shall be approved by the Engineer.

A tack coat of asphalt shall be applied to all paved surfaces on which any course of HMA is to be placed or abutted; except that tack coat may be omitted from clean, newly paved surfaces at the discretion of the Engineer. Tack coat shall be uniformly applied to cover the existing pavement with a thin film of residual asphalt free of streaks and bare spots at a rate between 0.02 and 0.10 gallons per square yard of retained asphalt. The rate of application shall be approved by the Engineer. A heavy application of tack coat shall be applied to all joints. For Roadways open to traffic, the application of tack coat shall be limited to surfaces that will be paved during the same working shift. The spreading equipment shall be equipped with a thermometer to indicate the temperature of the tack coat material.

Equipment shall not operate on tacked surfaces until the tack has broken and cured. If the Contractor’s operation damages the tack coat it shall be repaired prior to placement of the HMA.

The tack coat shall be CSS-1, or CSS-1h emulsified asphalt. The CSS-1 and CSS-1h emulsified asphalt may be diluted once with water at a rate not to exceed one part water to one part emulsified asphalt. The tack coat shall have sufficient temperature such that it may be applied uniformly at the specified rate of application and shall not exceed the maximum temperature recommended by the emulsified asphalt manufacturer.

(January 2017, City of Auburn GSP)

Supplement this section with the following:

The Contractor shall remove existing pavement markers, lane markers, and plastic markings.

5-04.3(4)A Crack Sealing

5-04.3(4)A1 General

(November 2019 City of Auburn GSP)

When the Proposal includes a pay item for crack sealing, seal all cracks ¼ inch in width and greater.

Cleaning: Ensure that cracks are thoroughly clean, dry and free of all loose and foreign material when filling with crack sealant material. Use a hot compressed air lance to dry and warm the pavement surfaces within the crack immediately prior to filling a crack with the sealant material. Do not overheat pavement. Do not use direct flame dryers. Routing cracks is not required.

Hot Poured Sealant: For cracks that are to be filled with hot poured sealant, apply the material in accordance with these requirements and the manufacturer's recommendations. Furnish a Type 1 Working Drawing of the manufacturer's product information and recommendations to the Engineer prior to the start of work, including the manufacturer's recommended heating time and temperatures, allowable storage time and temperatures after initial heating, allowable reheating criteria, and application temperature range. Confine hot poured sealant material within the crack. Clean any overflow of sealant from the pavement surface. If, in the opinion of the Engineer, the Contractor's method of sealing the cracks with hot poured sealant results in an excessive amount of material on the pavement surface, stop and correct the operation to eliminate the excess material.

5-04.3(4)B Soil Residual Herbicide

(November 2019 City of Auburn GSP)

The Contractor shall apply one application of an approved soil residual herbicide. Any area that has not been paved within the 24 hour time limit or that has been rained on, shall be treated again at the Contractor's expense. The herbicide shall be applied uniformly in accordance with the manufacturer's recommendations.

Use herbicide registered with the Washington State Department of Agriculture for use under pavement. Before use, obtain the Engineer's approval of the herbicide and the proposed rate of application. Include the following information in the request for approval of the material:

- Brand Name of the Material;
- Manufacturer;
- Environmental Protection Agency (EPA) Registration Number;
- Material Safety Data Sheet; and
- Proposed Rate of Application

5-04.3(4)C Pavement Repair

(July 18, 2018 APWA GSP)

The Contractor shall excavate pavement repair areas and shall backfill these with HMA in accordance with the details shown in the Plans and as marked in the field. The Contractor

shall conduct the excavation operations in a manner that will protect the pavement that is to remain. Pavement not designated to be removed that is damaged as a result of the Contractor's operations shall be repaired by the Contractor to the satisfaction of the Engineer at no cost to the Contracting Agency. The Contractor shall excavate only within one lane at a time unless approved otherwise by the Engineer. The Contractor shall not excavate more area than can be completely finished during the same shift, unless approved by the Engineer.

Unless otherwise shown in the Plans or determined by the Engineer, excavate to a depth of 1.0 feet. The Engineer will make the final determination of the excavation depth required. The minimum width of any pavement repair area shall be 40 inches unless shown otherwise in the Plans. Before any excavation, the existing pavement shall be sawcut or shall be removed by a pavement grinder. Excavated materials will become the property of the Contractor and shall be disposed of in a Contractor-provided site off the Right of Way or used in accordance with Sections 2-02.3(3) or 9-03.21.

Asphalt for tack coat shall be required as specified in Section 5-04.3(4). A heavy application of tack coat shall be applied to all surfaces of existing pavement in the pavement repair area.

Placement of the HMA backfill shall be accomplished in lifts not to exceed 0.35-foot compacted depth. Lifts that exceed 0.35-foot of compacted depth may be accomplished with the approval of the Engineer. Each lift shall be thoroughly compacted by a mechanical tamper or a roller.

(April 2020, City of Auburn GSP)

Supplement this section with the following:

HMA for pavement repair shall be HMA Class 1/2-inch PG 58H-22 or as shown in the Plans. Pavement repair areas shown in the Plans, if any, are for reference only. The repair areas shall be as directed by the Engineer in the field.

5-04.3(5) Producing/Stockpiling Aggregates and RAP

(July 18, 2018 APWA GSP)

Aggregates and RAP shall be stockpiled according to the requirements of Section 3-02. Sufficient storage space shall be provided for each size of aggregate and RAP. Materials shall be removed from stockpile(s) in a manner to ensure minimal segregation when being moved to the HMA plant for processing into the final mixture. Different aggregate sizes shall be kept separated until they have been delivered to the HMA plant.

5-04.3(5)A Vacant

5-04.3(6) Mixing

(July 18, 2018 APWA GSP)

After the required amount of mineral materials, asphalt binder, recycling agent and anti-stripping additives have been introduced into the mixer the HMA shall be mixed until complete and uniform coating of the particles and thorough distribution of the asphalt binder throughout the mineral materials is ensured.

When discharged, the temperature of the HMA shall not exceed the optimum mixing temperature by more than 25°F as shown on the reference mix design report or as approved by the Engineer. Also, when a WMA additive is included in the manufacture of HMA, the discharge temperature of the HMA shall not exceed the maximum recommended by the manufacturer of the WMA additive. A maximum water content of 2 percent in the mix, at discharge, will be allowed providing the water causes no problems with handling, stripping, or flushing. If the water in the HMA causes any of these problems, the moisture content shall be reduced as directed by the Engineer.

Storing or holding of the HMA in approved storage facilities will be permitted with approval of the Engineer, but in no event shall the HMA be held for more than 24 hours. HMA held for more than 24 hours after mixing shall be rejected. Rejected HMA shall be disposed of by the Contractor at no expense to the Contracting Agency. The storage facility shall have an accessible device located at the top of the cone or about the third point. The device shall indicate the amount of material in storage. No HMA shall be accepted from the storage facility when the HMA in storage is below the top of the cone of the storage facility, except as the storage facility is being emptied at the end of the working shift.

Recycled asphalt pavement (RAP) utilized in the production of HMA shall be sized prior to entering the mixer so that a uniform and thoroughly mixed HMA is produced. If there is evidence of the recycled asphalt pavement not breaking down during the heating and mixing of the HMA, the Contractor shall immediately suspend the use of the RAP until changes have been approved by the Engineer. After the required amount of mineral materials, RAP, new asphalt binder and asphalt rejuvenator have been introduced into the mixer the HMA shall be mixed until complete and uniform coating of the particles and thorough distribution of the asphalt binder throughout the mineral materials, and RAP is ensured.

5-04.3(7) Spreading and Finishing

(July 18, 2018 APWA GSP)

The mixture shall be laid upon an approved surface, spread, and struck off to the grade and elevation established. HMA pavers complying with Section 5-04.3(3) shall be used to distribute the mixture. Unless otherwise directed by the Engineer, the nominal compacted depth of any layer of any course shall not exceed the following:

HMA Class 1”	0.35 feet
HMA Class ¾” and HMA Class ½”	
wearing course	0.30 feet
other courses	0.35 feet

HMA Class ⅜"	0.15 feet

On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impractical, the paving may be done with other equipment or by hand.

When more than one JMF is being utilized to produce HMA, the material produced for each JMF shall be placed by separate spreading and compacting equipment. The intermingling of HMA produced from more than one JMF is prohibited. Each strip of HMA placed during a work shift shall conform to a single JMF established for the class of HMA specified unless there is a need to make an adjustment in the JMF.

(November 2019 City of Auburn GSP)

Supplement this section with the following:

In all instances, wearing courses of 3 inches or greater shall be created using a maximum depth of 1 ½-inch lifts.

5-04.3(8) Aggregate Acceptance Prior to Incorporation in HMA

(July 18, 2018 APWA GSP)

For HMA accepted by nonstatistical evaluation the aggregate properties of sand equivalent, uncompacted void content and fracture will be evaluated in accordance with Section 3-04. Sampling and testing of aggregates for HMA accepted by commercial evaluation will be at the option of the Engineer.

5-04.3(9) HMA Mixture Acceptance

(July 18, 2018 APWA GSP)

Acceptance of HMA shall be as provided under nonstatistical, or commercial evaluation.

Nonstatistical evaluation will be used for the acceptance of HMA unless Commercial Evaluation is specified.

Commercial evaluation will be used for Commercial HMA and for other classes of HMA in the following applications: sidewalks, road approaches, ditches, slopes, paths, trails, gores, prelevel, temporary pavement, and pavement repair. Other nonstructural applications of HMA accepted by commercial evaluation shall be as approved by the Engineer. Sampling and testing of HMA accepted by commercial evaluation will be at the option of the Engineer.

The mix design will be the initial JMF for the class of HMA. The Contractor may request a change in the JMF. Any adjustments to the JMF will require the approval of the Engineer and may be made in accordance with this section.

HMA Tolerances and Adjustments

1. **Job Mix Formula Tolerances** – The constituents of the mixture at the time of acceptance shall be within tolerance. The tolerance limits will be established as follows:

   For Asphalt Binder and Air Voids (Va), the acceptance limits are determined by adding the tolerances below to the approved JMF values. These values will also be the Upper Specification Limit (USL) and Lower Specification Limit (LSL) required in Section 1-06.2(2)D2

Property	Non-Statistical Evaluation	Commercial Evaluation
Asphalt Binder	+/- 0.5%	+/- 0.7%
Air Voids, Va	2.5% min. and 5.5% max	N/A

   For Aggregates in the mixture:

   a. First, determine preliminary upper and lower acceptance limits by applying the following tolerances to the approved JMF.

Aggregate Percent Passing	Non-Statistical Evaluation	Commercial Evaluation
1", ¾", ½", and 3/8" sieves	+/- 6%	+/- 8%
No. 4 sieve	+/-6%	+/- 8%
No. 8 Sieve	+/- 6%	+/-8%
No. 200 sieve	+/- 2.0%	+/- 3.0%

   b. Second, adjust the preliminary upper and lower acceptance limits determined from step (a) the minimum amount necessary so that none of the aggregate properties are outside the control points in Section 9-03.8(6). The resulting values will be the upper and lower acceptance limits for aggregates, as well as the USL and LSL required in Section 1-06.2(2)D2.

2. Job Mix Formula Adjustments – An adjustment to the aggregate gradation or asphalt binder content of the JMF requires approval of the Engineer. Adjustments to the JMF will only be considered if the change produces material of equal or better quality and may require the development of a new mix design if the adjustment exceeds the amounts listed below.

   a. **Aggregates** –2 percent for the aggregate passing the 1½″, 1″, ¾″, ½″, ⅜″, and the No. 4 sieves, 1 percent for aggregate passing the No. 8 sieve, and 0.5 percent for the aggregate passing the No. 200 sieve. The adjusted JMF shall be within the range of the control points in Section 9-03.8(6).

   b. **Asphalt Binder Con**tent – The Engineer may order or approve changes to asphalt binder content. The maximum adjustment from the approved mix design for the asphalt binder content shall be 0.3 percent

5-04.3(9)A Vacant

5-04.3(9)B Vacant

5-04.3(9)C Mixture Acceptance – Nonstatistical Evaluation

(July 18, 2018 APWA GSP)

HMA mixture which is accepted by Nonstatistical Evaluation will be evaluated by the Contracting Agency by dividing the HMA tonnage into lots.

5-04.3(9)C1 Mixture Nonstatistical Evaluation – Lots and Sublots

(July 18, 2018 APWA GSP)

A lot is represented by randomly selected samples of the same mix design that will be tested for acceptance. A lot is defined as the total quantity of material or work produced for each Job Mix Formula placed. Only one lot per JMF is expected. A sublot shall be equal to one day's production or 800 tons, whichever is less except that the final sublot will be a minimum of 400 tons and may be increased to 1200 tons.

All of the test results obtained from the acceptance samples from a given lot shall be evaluated collectively. If the Contractor requests a change to the JMF that is approved, the material produced after the change will be evaluated on the basis of the new JMF for the remaining sublots in the current lot and for acceptance of subsequent lots. For a lot in progress with a CPF less than 0.75, a new lot will begin at the Contractor's request after the Engineer is satisfied that material conforming to the Specifications can be produced.

Sampling and testing for evaluation shall be performed on the frequency of one sample per sublot.

5-04.3(9)C2 Mixture Nonstatistical Evaluation Sampling

(July 18, 2018 APWA GSP)

Samples for acceptance testing shall be obtained by the Contractor when ordered by the Engineer. The Contractor shall sample the HMA mixture in the presence of the Engineer and in accordance with AASH-TO T 168. A minimum of three samples should be taken for each class of HMA placed on a project. If used in a structural application, at least one of the three samples shall to be tested.

Sampling and testing HMA in a Structural application where quantities are less than 400 tons is at the discretion of the Engineer.

For HMA used in a structural application and with a total project quantity less than 800 tons but more than 400 tons, a minimum of one acceptance test shall be performed. In all cases, a minimum of 3 samples will be obtained at the point of acceptance, a minimum of one of the three samples will be tested for conformance to the JMF:

- If the test results are found to be within specification requirements, additional testing will be at the Engineer's discretion.
- If test results are found not to be within specification requirements, additional testing of the remaining samples to determine a Composite Pay Factor (CPF) shall be performed.

5-04.3(9)C3 Mixture Nonstatistical Evaluation – Acceptance Testing

(July 18, 2018 APWA GSP)

Testing of HMA for compliance of V_a will at the option of the Contracting Agency. If tested, compliance of V_a will use WSDOT SOP 731.

Testing for compliance of asphalt binder content will be by WSDOT FOP for AASHTO T 308.

Testing for compliance of gradation will be by FOP for WAQTC T 27/T 11.

5-04.3(9)C4 Mixture Nonstatistical Evaluation – Pay Factors

(July 18, 2018 APWA GSP)

For each lot of material falling outside the tolerance limits in 5-04.3(9), the Contracting Agency will determine a Composite Pay Factor (CPF) using the following price adjustment factors:

Table of Price Adjustment Factors	
Constituent	**Factor "f"**
All aggregate passing: 1½″, 1″, ¾″, ½″, ⅜″ and No.4 sieves	2
All aggregate passing No. 8 sieve	15
All aggregate passing No. 200 sieve	20
Asphalt binder	40
Air Voids (Va) (where applicable)	20

Each lot of HMA produced under Nonstatistical Evaluation and having all constituents falling within the tolerance limits of the job mix formula shall be accepted at the unit Contract price with no further evaluation. When one or more constituents fall outside the nonstatistical tolerance limits in the Job Mix Formula shown in Table of Price Adjustment Factors, the lot shall be evaluated in accordance with Section 1-06.2 to determine the appropriate CPF. The nonstatistical tolerance limits will be used in the calculation of the CPF and the maximum CPF shall be 1.00. When less than three sublots exist, backup samples of the existing sublots or samples from the Roadway shall be tested to provide a minimum of three sets of results for evaluation.

5-04.3(9)C5 Vacant

5-04.3(9)C6 Mixture Nonstatistical Evaluation – Price Adjustments

(July 18, 2018 APWA GSP)

For each lot of HMA mix produced under Nonstatistical Evaluation when the calculated CPF is less than 1.00, a Nonconforming Mix Factor (NCMF) will be determined. The NCMF equals the algebraic difference of CPF minus 1.00 multiplied by 60 percent. The total job mix compliance price adjustment will be calculated as the product of the NCMF, the quantity of HMA in the lot in tons, and the unit Contract price per ton of mix.

If a constituent is not measured in accordance with these Specifications, its individual pay factor will be considered 1.00 in calculating the Composite Pay Factor (CPF).

5-04.3(9)C7 Mixture Nonstatistical Evaluation – Retests

(July 18, 2018 APWA GSP)

The Contractor may request a sublot be retested. To request a retest, the Contractor shall submit a written request within 7 calendar days after the specific test results have been received. A split of the original acceptance sample will be retested. The split of the sample will not be tested with the same tester that ran the original acceptance test. The sample will be tested for a complete gradation analysis, asphalt binder content, and, at the option of the agency, V_a. The results of the retest will be used for the acceptance of the HMA in place of the original sublot sample test results. The cost of testing will be deducted from any monies due or that may come due the Contractor under the Contract at the rate of $500 per sample.

5-04.3 (9)D Mixture Acceptance – Commercial Evaluation

(July 18, 2018 APWA GSP)

If sampled and tested, HMA produced under Commercial Evaluation and having all constituents falling within the tolerance limits of the job mix formula shall be accepted at the unit Contract price with no further evaluation. When one or more constituents fall outside the commercial tolerance limits in the Job Mix Formula shown in 5-04.3(9), the lot shall be evaluated in accordance with Section 1-06.2 to determine the appropriate CPF. The commercial tolerance limits will be used in the calculation of the CPF and the maximum CPF shall be 1.00. When less than three sublots exist, backup samples of the existing sublots or samples from the street shall be tested to provide a minimum of three sets of results for evaluation.

For each lot of HMA mix produced and tested under Commercial Evaluation when the calculated CPF is less than 1.00, a Nonconforming Mix Factor (NCMF) will be determined. The NCMF equals the algebraic difference of CPF minus 1.00 multiplied by 60 percent. The Job Mix Compliance Price Adjustment will be calculated as the product of the NCMF, the quantity of HMA in the lot in tons, and the unit Contract price per ton of mix.

If a constituent is not measured in accordance with these Specifications, its individual pay factor will be considered 1.00 in calculating the Composite Pay Factor (CPF).

5-04.3(10) HMA Compaction Acceptance

(July 18, 2018 APWA GSP)

HMA mixture accepted by nonstatistical evaluation that is used in traffic lanes, including lanes for intersections, ramps, truck climbing, weaving, and speed change, and having a specified compacted course thickness greater than 0.10-foot, shall be compacted to a specified level of relative density. The specified level of relative density shall be a Composite Pay Factor (CPF) of not less than 0.75 when evaluated in accordance with Section 1-06.2, using a LSL of 92.0 (minimum of 92 percent of the maximum density). The maximum density shall be determined by WSDOT FOP for AASHTO T 729. The specified level of density attained will be determined by the evaluation of the density of the pavement. The density of the pavement shall be determined in accordance with WSDOT FOP for WAQTC TM 8, except that gauge correlation will be at the discretion of the Engineer, when using the nuclear density gauge and WSDOT SOP 736 when using cores to determine density.

Tests for the determination of the pavement density will be taken in accordance with the required procedures for measurement by a nuclear density gauge or roadway cores after completion of the finish rolling.

If the Contracting Agency uses a nuclear density gauge to determine density the test procedures FOP for WAQTC TM 8 and WSDOT SOP T 729 will be used on the day the mix is placed and prior to opening to traffic.

Roadway cores for density may be obtained by either the Contracting Agency or the Contractor in accordance with WSDOT SOP 734. The core diameter shall be 4-inches minimum, unless otherwise approved by the Engineer. Roadway cores will be tested by the Contracting Agency in accordance with WSDOT FOP for AASHTO T 166.

If the Contract includes the Bid item “Roadway Core” the cores shall be obtained by the Contractor in the presence of the Engineer on the same day the mix is placed and at locations designated by the Engineer. If the Contract does not include the Bid item “Roadway Core” the Contracting Agency will obtain the cores.

For a lot in progress with a CPF less than 0.75, a new lot will begin at the Contractor’s request after the Engineer is satisfied that material conforming to the Specifications can be produced.

HMA mixture accepted by commercial evaluation and HMA constructed under conditions other than those listed above shall be compacted on the basis of a test point evaluation of the compaction train. The test point evaluation shall be performed in accordance with instructions from the Engineer. The number of passes with an approved compaction train, required to attain the maximum test point density, shall be used on all subsequent paving.

HMA for preleveling shall be thoroughly compacted. HMA that is used for preleveling wheel rutting shall be compacted with a pneumatic tire roller unless otherwise approved by the Engineer.

Test Results

For a sublot that has been tested with a nuclear density gauge that did not meet the minimum of 92 percent of the reference maximum density in a compaction lot with a CPF below 1.00 and thus subject to a price reduction or rejection, the Contractor may request that a core be used for determination of the relative density of the sublot. The relative density of the core will replace the relative density determined by the nuclear density gauge for the sublot and will be used for calculation of the CPF and acceptance of HMA compaction lot.

When cores are taken by the Contracting Agency at the request of the Contractor, they shall be requested by noon of the next workday after the test results for the sublot have been provided or made available to the Contractor. Core locations shall be outside of wheel paths and as determined by the Engineer. Traffic control shall be provided by the Contractor as requested by the Engineer. Failure by the Contractor to provide the requested traffic control will result in forfeiture of the request for cores. When the CPF for the lot based on the results of the HMA cores is less than 1.00, the cost for the coring will be deducted from any monies due or that may become due the Contractor under the Contract at the rate of $200 per core and the Contractor shall pay for the cost of the traffic control.

5-04.3(10)A HMA Compaction – General Compaction Requirements

(July 18, 2018 APWA GSP)

Compaction shall take place when the mixture is in the proper condition so that no undue displacement, cracking, or shoving occurs. Areas inaccessible to large compaction equipment shall be compacted by other mechanical means. Any HMA that becomes loose, broken, contaminated, shows an excess or deficiency of asphalt, or is in any way defective, shall be removed and replaced with new hot mix that shall be immediately compacted to conform to the surrounding area.

The type of rollers to be used and their relative position in the compaction sequence shall generally be the Contractor’s option, provided the specified densities are attained. Unless the Engineer has approved otherwise, rollers shall only be operated in the static mode when the internal temperature of the mix is less than 175°F. Regardless of mix temperature, a roller shall not be operated in a mode that results in checking or cracking of the mat. Rollers shall only be operated in static mode on bridge decks.

5-04.3(10)B HMA Compaction – Cyclic Density

(July 18, 2018 APWA GSP)

Low cyclic density areas are defined as spots or streaks in the pavement that are less than 90 percent of the theoretical maximum density. At the Engineer’s discretion, the Engineer may evaluate the HMA pavement for low cyclic density, and when doing so will follow WSDOT SOP 733. A $500 Cyclic Density Price Adjustment will be assessed for any 500-foot section with two or more density readings below 90 percent of the theoretical maximum density.

5-04.3(10)C Vacant

5-04.3(10)D HMA Nonstatistical Compaction

5-04.3(10)D1 HMA Nonstatistical Compaction – Lots and Sublots

(July 18, 2018 APWA GSP)

HMA compaction which is accepted by nonstatistical evaluation will be based on acceptance testing performed by the Contracting Agency dividing the project into compaction lots.

A lot is represented by randomly selected samples of the same mix design that will be tested for acceptance. A lot is defined as the total quantity of material or work produced for each Job Mix Formula placed. Only one lot per JMF is expected. A sublot shall be equal to one day's production or 400 tons, whichever is less except that the final sublot will be a minimum of 200 tons and may be increased to 800 tons. Testing for compaction will be at the rate of 5 tests per sublot per WSDOT T 738.

The sublot locations within each density lot will be determined by the Engineer. For a lot in progress with a CPF less than 0.75, a new lot will begin at the Contractor's request after the Engineer is satisfied that material conforming to the Specifications can be produced.

HMA mixture accepted by commercial evaluation and HMA constructed under conditions other than those listed above shall be compacted on the basis of a test point evaluation of the compaction train. The test point evaluation shall be performed in accordance with instructions from the Engineer. The number of passes with an approved compaction train, required to attain the maximum test point density, shall be used on all subsequent paving.

HMA for preleveling shall be thoroughly compacted. HMA that is used to prelevel wheel ruts shall be compacted with a pneumatic tire roller unless otherwise approved by the Engineer.

5-04.3(10)D2 HMA Compaction Nonstatistical Evaluation – Acceptance Testing

(July 18, 2018 APWA GSP)

The location of the HMA compaction acceptance tests will be randomly selected by the Engineer from within each sublot, with one test per sublot.

5-04.3(10)D3 HMA Nonstatistical Compaction – Price Adjustments

(July 18, 2018 APWA GSP)

For each compaction lot with one or two sublots, having all sublots attain a relative density that is 92 percent of the reference maximum density the HMA shall be accepted at the unit Contract price with no further evaluation. When a sublot does not attain a relative density that is 92 percent of the reference maximum density, the lot shall be evaluated in accordance with Section 1-06.2 to determine the appropriate CPF. The maximum CPF

shall be 1.00, however, lots with a calculated CPF in excess of 1.00 will be used to offset lots with CPF values below 1.00 but greater than 0.90. Lots with CPF lower than 0.90 will be evaluated for compliance per 5-04.3(11). Additional testing by either a nuclear moisture-density gauge or cores will be completed as required to provide a minimum of three tests for evaluation.

For compaction below the required 92% a Non-Conforming Compaction Factor (NCCF) will be determined. The NCCF equals the algebraic difference of CPF minus 1.00 multiplied by 40 percent. The Compaction Price Adjustment will be calculated as the product of CPF, the quantity of HMA in the compaction control lot in tons, and the unit Contract price per ton of mix.

5-04.3(11) Reject Work

5-04.3(11)A Reject Work General

(July 18, 2018 APWA GSP)

Work that is defective or does not conform to Contract requirements shall be rejected. The Contractor may propose, in writing, alternatives to removal and replacement of rejected material. Acceptability of such alternative proposals will be determined at the sole discretion of the Engineer. HMA that has been rejected is subject to the requirements in Section 1-06.2(2) and this specification, and the Contractor shall submit a corrective action proposal to the Engineer for approval.

5-04.3(11)B Rejection by Contractor

(July 18, 2018 APWA GSP)

The Contractor may, prior to sampling, elect to remove any defective material and replace it with new material. Any such new material will be sampled, tested, and evaluated for acceptance.

5-04.3(11)C Rejection Without Testing (Mixture or Compaction)

(City Contracts, July 18, 2018 APWA GSP)

The Engineer may, without sampling, reject any batch, load, or section of Roadway that appears defective. Material rejected before placement shall not be incorporated into the pavement. Any rejected section of Roadway shall be removed.

No payment will be made for the rejected materials or the removal of the materials unless the Contractor requests that the rejected material be tested. If the Contractor elects to have the rejected material tested, a minimum of three representative samples will be obtained and tested. Acceptance of rejected material will be based on conformance with the nonstatistical acceptance Specification. If the CPF for the rejected material is less than 0.75, no payment will be made for the rejected material; in addition, the cost of sampling and testing shall be borne by the Contractor. If the CPF is greater than or equal to 0.75, the cost of sampling and testing will be borne by the Contracting Agency. If the material is rejected before placement and the CPF is greater than or equal to 0.75, compensation for

the rejected material will be at a CPF of 0.75. If rejection occurs after placement and the CPF is greater than or equal to 0.75, compensation for the rejected material will be at the calculated CPF with an addition of 25 percent of the unit Contract price added for the cost of removal and disposal.

5-04.3(11)D Rejection - A Partial Sublot

(July 18, 2018 APWA GSP)

In addition to the random acceptance sampling and testing, the Engineer may also isolate from a normal sublot any material that is suspected of being defective in relative density, gradation or asphalt binder content. Such isolated material will not include an original sample location. A minimum of three random samples of the suspect material will be obtained and tested. The material will then be statistically evaluated as an independent lot in accordance with Section 1-06.2(2).

5-04.3(11)E Rejection - An Entire Sublot

(July 18, 2018 APWA GSP)

An entire sublot that is suspected of being defective may be rejected. When a sublot is rejected a minimum of two additional random samples from this sublot will be obtained. These additional samples and the original sublot will be evaluated as an independent lot in accordance with Section 1-06.2(2).

5-04.3(11)F Rejection - A Lot in Progress

(July 18, 2018 APWA GSP)

The Contractor shall shut down operations and shall not resume HMA placement until such time as the Engineer is satisfied that material conforming to the Specifications can be produced:

1. When the Composite Pay Factor (CPF) of a lot in progress drops below 1.00 and the Contractor is taking no corrective action, or
2. When the Pay Factor (PF) for any constituent of a lot in progress drops below 0.95 and the Contractor is taking no corrective action, or
3. When either the PFi for any constituent or the CPF of a lot in progress is less than 0.75.

5-04.3(11)G Rejection - An Entire Lot (Mixture or Compaction)

(July 18, 2018 APWA GSP)

An entire lot with a CPF of less than 0.75 will be rejected.

5-04.3(12) Joints

5-04.3(12)A HMA Joints

5-04.3(12)A1 Transverse Joints

(July 18, 2018 APWA GSP)

The Contractor shall conduct operations such that the placing of the top or wearing course is a continuous operation or as close to continuous as possible. Unscheduled transverse joints will be allowed and the roller may pass over the unprotected end of the freshly laid mixture only when the placement of the course must be discontinued for such a length of time that the mixture will cool below compaction temperature. When the Work is resumed, the previously compacted mixture shall be cut back to produce a slightly beveled edge for the full thickness of the course.

A temporary wedge of HMA constructed on a 20H:1V shall be constructed where a transverse joint as a result of paving or planing is open to traffic. The HMA in the temporary wedge shall be separated from the permanent HMA by strips of heavy wrapping paper or other methods approved by the Engineer. The wrapping paper shall be removed and the joint trimmed to a slightly beveled edge for the full thickness of the course prior to resumption of paving.

The material that is cut away shall be wasted and new mix shall be laid against the cut. Rollers or tamping irons shall be used to seal the joint.

5-04.3(12)A2 Longitudinal Joints

(July 18, 2018 APWA GSP)

The longitudinal joint in any one course shall be offset from the course immediately below by not more than 6 inches nor less than 2 inches. All longitudinal joints constructed in the wearing course shall be located at a lane line or an edge line of the Traveled Way. A notched wedge joint shall be constructed along all longitudinal joints in the wearing surface of new HMA unless otherwise approved by the Engineer. The notched wedge joint shall have a vertical edge of not less than the maximum aggregate size or more than ½ of the compacted lift thickness and then taper down on a slope not steeper than 4H:1V. The sloped portion of the HMA notched wedge joint shall be uniformly compacted.

5-04.3(12)A3 Asphalt Concrete Pavement Butt Joints

(April 2020 City of Auburn GSP)

The Contractor shall provide butt joints where the new asphalt concrete pavement meets the existing pavement as shown on the Plans in a manner to produce a smooth riding connection to the existing pavement. The depth of butt joint required shall be determined by the depth of new asphalt concrete pavement specified on the Plans, but not less than 2 inches. The surface elevation of new and existing Asphalt Concrete Pavement shall be the same at all butt joints.

All asphalt concrete joints shall be sealed with asphalt binder PG 58H-22 per Section 9-02 (Bituminous Materials).

5-04.3(12)B Bridge Paving Joint Seals

5-04.3(12)B1 HMA Sawcut and Seal

(July 18, 2018 APWA GSP)

Prior to placing HMA on the bridge deck, establish sawcut alignment points at both ends of the bridge paving joint seals to be placed at the bridge ends, and at interior joints within the bridge deck when and where shown in the Plans. Establish the sawcut alignment points in a manner that they remain functional for use in aligning the sawcut after placing the overlay.

Submit a Type 1 Working Drawing consisting of the sealant manufacturer's application procedure.

Construct the bridge paving joint seal as specified ion the Plans and in accordance with the detail shown in the Standard Plans. Construct the sawcut in accordance with the detail shown in the Standard Plan. Construct the sawcut in accordance with Section 5-05.3(8)B and the manufacturer's application procedure.

5-04.3(12)B2 Paved Panel Joint Seal

(July 18, 2018 APWA GSP)

Construct the paved panel joint seal in accordance with the requirements specified in section 5-04.3(12)B1 and the following requirement:

1. Clean and seal the existing joint between concrete panels in accordance with Section 5-01.3(8) and the details shown in the Standard Plans.

5-04.3(13) Surface Smoothness

(July 18, 2018 APWA GSP)

The completed surface of all courses shall be of uniform texture, smooth, uniform as to crown and grade, and free from defects of all kinds. The completed surface of the wearing course shall not vary more than ⅛ inch from the lower edge of a 10-foot straightedge placed on the surface parallel to the centerline. The transverse slope of the completed surface of the wearing course shall vary not more than ¼ inch in 10 feet from the rate of transverse slope shown in the Plans.

When deviations in excess of the above tolerances are found that result from a high place in the HMA, the pavement surface shall be corrected by one of the following methods:

1. Removal of material from high places by grinding with an approved grinding machine, or
2. Removal and replacement of the wearing course of HMA, or
3. By other method approved by the Engineer.

Correction of defects shall be carried out until there are no deviations anywhere greater than the allowable tolerances.

Deviations in excess of the above tolerances that result from a low place in the HMA and deviations resulting from a high place where corrective action, in the opinion of the Engineer, will not produce satisfactory results will be accepted with a price adjustment. The Engineer shall deduct from monies due or that may become due to the Contractor the sum of $500.00 for each and every section of single traffic lane 100 feet in length in which any excessive deviations described above are found.

When utility appurtenances such as manhole covers and valve boxes are located in the traveled way, the utility appurtenances shall be adjusted to the finished grade prior to paving. This requirement may be waived when requested by the Contractor, at the discretion of the Engineer or when the adjustment details provided in the project plan or specifications call for utility appurtenance adjustments after the completion of paving.

Utility appurtenance adjustment discussions will be included in the Pre-Paving planning (5-04.3(14)B3). Submit a written request to waive this requirement to the Engineer prior to the start of paving.

5-04.3(14) Planing (Milling) Bituminous Pavement

(July 18, 2018 APWA GSP)

The planing plan must be approved by the Engineer and a pre planing meeting must be held prior to the start of any planing. See Section 5-04.3(14)B2 for information on planing submittals.

Locations of existing surfacing to be planed are as shown in the Drawings.

Where planing an existing pavement is specified in the Contract, the Contractor must remove existing surfacing material and to reshape the surface to remove irregularities. The finished product must be a prepared surface acceptable for receiving an HMA overlay.

Use the cold milling method for planing unless otherwise specified in the Contract. Do not use the planer on the final wearing course of new HMA.

Conduct planing operations in a manner that does not tear, break, burn, or otherwise damage the surface which is to remain. The finished planed surface must be slightly grooved or roughened and must be free from gouges, deep grooves, ridges, or other imperfections. The Contractor must repair any damage to the surface by the Contractor’s planing equipment, using an Engineer approved method.

Repair or replace any metal castings and other surface improvements damaged by planing, as determined by the Engineer.

A tapered wedge cut must be planed longitudinally along curb lines sufficient to provide a minimum of 4 inches of curb reveal after placement and compaction of the final wearing course. The dimensions of the wedge must be as shown on the Drawings or as specified by the Engineer.

A tapered wedge cut must also be made at transitions to adjoining pavement surfaces (meet lines) where butt joints are shown on the Drawings. Cut butt joints in a straight line with vertical faces 2 inches or more in height, producing a smooth transition to the existing adjoining pavement.

After planing is complete, planed surfaces must be swept, cleaned, and if required by the Contract, patched and preleveled.

The Engineer may direct additional depth planing. Before performing this additional depth planing, the Contractor must conduct a hidden metal in pavement detection survey as specified in Section 5-04.3(14)A.

(November 2019, City of Auburn GSP)

Supplement this section with the following:

The full depth beginning and end of each lane of planing shall be squared-off to form a uniform, transverse joint.

The Contractor shall provide for safe vehicle travel over existing manholes, valve boxes, catch basins, etc., for planed areas opened to traffic. Before opening the roadway to traffic, any delaminating of the planed asphalt surface shall be removed and the resulting holes patched with HMA. Also, the surface shall be cleaned by sweeping to remove dust and foreign matter. Where the plans call for a grind an overlay, the overlay work shall commence within 5 working days of completing the pavement grinding except where specified otherwise in the Contract.

Planing tailings may be used as trench backfill. Planing tailings may also be used as crushed surfacing when mixed with Crushed Surfacing per Section 9-03.9(3) (Crushed Surfacing) per Section 4-04.3(3) (Mixing).

5-04.3(14)A Pre-Planing Metal Detection Check

(July 18, 2018 APWA GSP)

Before starting planing of pavements, and before any additional depth planing required by the Engineer, the Contractor must conduct a physical survey of existing pavement to be planed with equipment that can identify hidden metal objects.

Should such metal be identified, promptly notify the Engineer.

See Section 1-07.16(1) regarding the protection of survey monumentation that may be hidden in pavement.

The Contractor is solely responsible for any damage to equipment resulting from the Contractor’s failure to conduct a pre-planing metal detection survey, or from the Contractor’s failure to notify the Engineer of any hidden metal that is detected.

5-04.3(14)B Paving and Planing Under Traffic

5-04.3(14)B1 General

(July 18, 2018 APWA GSP)

In addition the requirements of Section 1-07.23 and the traffic controls required in Section 1-10, and unless the Contract specifies otherwise or the Engineer approves, the Contractor must comply with the following:

1. Intersections:
    a. Keep intersections open to traffic at all times, except when paving or planing operations through an intersection requires closure. Such closure must be kept to the minimum time required to place and compact the HMA mixture, or plane as appropriate. For paving, schedule such closure to individual lanes or portions thereof that allows the traffic volumes and schedule of traffic volumes required in the approved traffic control plan. Schedule work so that adjacent intersections are not impacted at the same time and comply with the traffic control restrictions required by the Traffic Engineer. Each individual intersection closure or partial closure, must be addressed in the traffic control plan, which must be submitted to and accepted by the Engineer, see Section 1-10.2(2).
    b. When planing or paving and related construction must occur in an intersection, consider scheduling and sequencing such work into quarters of the intersection, or half or more of an intersection with side street detours. Be prepared to sequence the work to individual lanes or portions thereof.
    c. Should closure of the intersection in its entirety be necessary, and no trolley service is impacted, keep such closure to the minimum time required to place and compact the HMA mixture, plane, remove asphalt, tack coat, and as needed.
    d. Any work in an intersection requires advance warning in both signage and a number of Working Days advance notice as determined by the Engineer, to alert traffic and emergency services of the intersection closure or partial closure.
    e. Allow new compacted HMA asphalt to cool to ambient temperature before any traffic is allowed on it. Traffic is not allowed on newly placed asphalt until approval has been obtained from the Engineer.
2. Temporary centerline marking, post-paving temporary marking, temporary stop bars, and maintaining temporary pavement marking must comply with Section 8-23.
3. Permanent pavement marking must comply with Section 8-22.

5-04.3(14)B2 Submittals – Planing Plan and HMA Paving Plan

(July 18, 2018 APWA GSP)

The Contractor must submit a separate planing plan and a separate paving plan to the Engineer at least 5 Working Days in advance of each operation’s activity start date. These

plans must show how the moving operation and traffic control are coordinated, as they will be discussed at the pre-planing briefing and pre-paving briefing. When requested by the Engineer, the Contractor must provide each operation's traffic control plan on 24 x 36 inch or larger size Shop Drawings with a scale showing both the area of operation and sufficient detail of traffic beyond the area of operation where detour traffic may be required. The scale on the Shop Drawings is 1 inch = 20 feet, which may be changed if the Engineer agrees sufficient detail is shown.

The planing operation and the paving operation include, but are not limited to, metal detection, removal of asphalt and temporary asphalt of any kind, tack coat and drying, staging of supply trucks, paving trains, rolling, scheduling, and as may be discussed at the briefing.

When intersections will be partially or totally blocked, provide adequately sized and noticeable signage alerting traffic of closures to come, a minimum 2 Working Days in advance. The traffic control plan must show where police officers will be stationed when signalization is or may be, countermanded, and show areas where flaggers are proposed.

At a minimum, the planing and the paving plan must include:

1. A copy of the accepted traffic control plan, see Section 1-10.2(2), detailing each day's traffic control as it relates to the specific requirements of that day's planing and paving. Briefly describe the sequencing of traffic control consistent with the proposed planing and paving sequence, and scheduling of placement of temporary pavement markings and channelizing devices after each day's planing, and paving.
2. A copy of each intersection's traffic control plan.
3. Haul routes from Supplier facilities, and locations of temporary parking and staging areas, including return routes. Describe the complete round trip as it relates to the sequencing of paving operations.
4. Names and locations of HMA Supplier facilities to be used.
5. List of all equipment to be used for paving.
6. List of personnel and associated job classification assigned to each piece of paving equipment.
7. Description (geometric or narrative) of the scheduled sequence of planing and of paving, and intended area of planing and of paving for each day's work, must include the directions of proposed planing and of proposed paving, sequence of adjacent lane paving, sequence of skipped lane paving, intersection planing and paving scheduling and sequencing, and proposed notifications and coordinations to be timely made. The plan must show HMA joints relative to the final pavement marking lane lines.
8. Names, job titles, and contact information for field, office, and plant supervisory personnel.
9. A copy of the approved Mix Designs.
10. Tonnage of HMA to be placed each day.
11. Approximate times and days for starting and ending daily operations.

5-04.3(14)B3 Pre-Paving and Pre-Planing Briefing

(July 18, 2018 APWA GSP)

At least 2 Working Days before the first paving operation and the first planing operation, or as scheduled by the Engineer for future paving and planing operations to ensure the Contractor has adequately prepared for notifying and coordinating as required in the Contract, the Contractor must be prepared to discuss that day's operations as they relate to other entities and to public safety and convenience, including driveway and business access, garbage truck operations, Metro transit operations and working around energized overhead wires, school and nursing home and hospital and other accesses, other contractors who may be operating in the area, pedestrian and bicycle traffic, and emergency services. The Contractor, and Subcontractors that may be part of that day's operations, must meet with the Engineer and discuss the proposed operation as it relates to the submitted planing plan and paving plan, approved traffic control plan, and public convenience and safety. Such discussion includes, but is not limited to:

1. General for both Paving Plan and for Planing Plan:
    a. The actual times of starting and ending daily operations.
    b. In intersections, how to break up the intersection, and address traffic control and signalization for that operation, including use of peace officers.
    c. The sequencing and scheduling of paving operations and of planing operations, as applicable, as it relates to traffic control, to public convenience and safety, and to other con-tractors who may operate in the Project Site.
    d. Notifications required of Contractor activities, and coordinating with other entities and the public as necessary.
    e. Description of the sequencing of installation and types of temporary pavement markings as it relates to planning and to paving.
    f. Description of the sequencing of installation of, and the removal of, temporary pavement patch material around exposed castings and as may be needed
    g. Description of procedures and equipment to identify hidden metal in the pavement, such as survey monumentation, monitoring wells, street car rail, and castings, before planning, see Section 5-04.3(14)B2.
    h. Description of how flaggers will be coordinated with the planing, paving, and related operations.
    i. Description of sequencing of traffic controls for the process of rigid pavement base repairs.
    j. Other items the Engineer deems necessary to address.
2. Paving – additional topics:
    a. When to start applying tack and coordinating with paving.
    b. Types of equipment and numbers of each type equipment to be used. If more pieces of equipment than personnel are proposed, describe the sequencing of the personnel operating the types of equipment. Discuss

the continuance of operator personnel for each type equipment as it relates to meeting Specification requirements.

c. Number of JMFs to be placed, and if more than one JMF how the Contractor will ensure different JMFs are distinguished, how pavers and MTVs are distinguished if more than one JMF is being placed at the time, and how pavers and MTVs are cleaned so that one JMF does not adversely influence the other JMF.
d. Description of contingency plans for that day's operations such as equipment breakdown, rain out, and Supplier shutdown of operations.
e. Number of sublots to be placed, sequencing of density testing, and other sampling and testing.

5-04.3(15) Sealing Pavement Surfaces

(July 18, 2018 APWA GSP)

Apply a fog seal where shown in the plans. Construct the fog seal in accordance with Section 5-02.3. Unless otherwise approved by the Engineer, apply the fog seal prior to opening to traffic.

5-04.3(16) HMA Road Approaches

(July 18, 2018 APWA GSP)

HMA approaches shall be constructed at the locations shown in the Plans or where staked by the Engineer. The Work shall be performed in accordance with Section 5-04.

5-04.3(17) Asphalt Cold Patch

(November 2019, City of Auburn GSP)

"Asphalt Cold Patch" for temporary pavement patching and temporary pedestrian ramps or walkways shall be placed by the Contractor immediately upon the request of Engineer as required for maintenance of traffic as specified in Section 1-07.23(1) (Construction Under Traffic) in this document. "The Asphalt Cold Patch" shall be removed in its entirety before asphalt concrete pavement is placed.

5-04.3(18) Porous HMA

(November 2019, City of Auburn GSP)

Subgrade Preparation and Permeable Ballast/Choker Course Placement

The Contractor shall prepare subgrade in conformance with Section 2-06 and in accordance to the Plans except that subgrade soil shall be compacted to 90 percent of the maximum density under the tests described in Section 2-03.3(14)D.

Protect gravel borrow subgrade to remain. Keep traffic off of the prepared subgrade during construction. Final 12-inch excavation of gravel borrow subgrade to be done at time of placement of permeable ballast/choker course in order to protect the existing subgrade infiltration capabilities. Final excavation shall proceed as machinery is pulling back and travelling on preliminary grade as final grade is excavated.

To prevent compaction when installing the permeable ballast/choker course, these materials shall be dumped onto the subgrade from the edge of the installation and pushed out onto the

subgrade. Subsequent load shall be dumped from the top of the sand filter sand and permeable ballast/choker course as the installation progresses.

Maintain flow diversion measures to prevent runoff and sediment from entering the work limits. Remove debris or sediment that has accumulated on the finished subgrade after viewing and before placing permeable ballast/choker course.

Place and compact permeable ballast/choker course aggregate to the grades indicated on the Plans in 6-inch maximum compacted lifts. Compaction shall be performed using a 10-ton vibratory drum compactor. The required compaction effort for each aggregate type shall be determined using a test strip. Compact the test strip using a predetermined number of passes with the compactor. Measure the density of the permeable ballast/choker course using a nuclear densometer gauge in backscatter mode. Perform additional passes with the roller and measure the aggregate density again. Repeat until the increase in density achieved with the additional passes of the compactor is less than or equal to 1.2 pounds per cubic foot on average. The number of passes with the compactor required to achieve this density shall be used to compact the remainder of the aggregate for the project. Compaction testing using the nuclear densometer gauge shall be used to confirm compaction at a frequency of one test per 2,000 square feet.

Protect placed aggregate from stormwater run-on and contamination from adjacent exposed soils.

Pervious Asphalt Concrete Pavement

The Contractor shall prepare and place asphalt pavement in conformance with Section 5-04.

Testing and acceptance requirements for Commercial HMA described in Section 5-04 of the Standard Specifications and of these Special Provisions shall apply to pervious asphalt concrete.

Transport the mix to the job site in clean vehicles with smooth dump beds that have been sprayed with a non-petroleum release agent. Limit the time of haul to avoid drainage of the asphalt to the bottom of the truck bed. The mix should be covered during transportation to prevent cooling and the formation of lumps.

Pavement shall be laid utilizing a self-propelled paving machine of 5-foot-minimum width and laser plane control or unit with an activated screed or strike-off assembly, capable of being heated if necessary, and capable of spreading and finishing the mixture without segregation for the widths and thicknesses required.

Roller shall be steel tandem drum-type, static-type of a 5 to 10 ton size. Maximum loading shall be 265 lbs. per linear inch of drum. The asphalt pavement shall be rolled a minimum of two rollings. The surface shall receive a final rolling utilizing a one-ton roller to remove all roller marks and imperfections in the surface.

Compaction shall be commenced when the asphalt mix temperature mix is at a range of 200 degrees to 240 degrees F.

Compacted depth of pervious asphalt pavement of any layer shall not exceed 0.25 foot.

Allow the pervious pavement to cure for 24 hours before applying any vehicular traffic loading.

5-04.4 Measurement

(City Contracts, November 2019 City of Auburn GSP)

HMA Cl. ___ PG ___, HMA for ___ Cl. ___ PG ___, and Commercial HMA will be measured by the ton in accordance with Section 1-09.2, with no deduction being made for the weight of asphalt binder, mineral filler, or any other component of the mixture. If the Contractor elects to remove and replace mix as allowed by Section 5-04.3(11), the material removed will not be measured.

Roadway cores will be measured per each for the number of cores taken.

Preparation of untreated roadway will be measured by the mile once along the centerline of the main line Roadway. No additional measurement will be made for ramps, Auxiliary Lanes, service roads, Frontage Roads, or Shoulders. Measurement will be to the nearest 0.01 mile.

Pavement repair excavation will be measured by the square yard of surface marked prior to excavation.

Asphalt for prime coat will be measured by the ton in accordance with Section 1-09.2.

Prime coat aggregate will be measured by the cubic yard, truck measure, or by the ton, whichever is designated in the Proposal.

Asphalt for fog seal will be measured by the ton, as provided in Section 5-02.4.

Planing bituminous pavement will be measured by the square yard.

Temporary pavement marking will be measured by the linear foot as provided in Section 8-23.4.

No measurement for Water will be made.

Asphalt Cold Patch will be measured by the ton of cold patch furnished and installed.

Rubberized Asphalt for Crack Sealing" will be measured by the ton.

Porous HMA will be measured by the ton.

No measurement for Soil Residual Herbicide will be made.

No measurement for Longitudinal Joint Seals will be made.

5-04.5 Payment

(City Contracts, July 18, 2018 APWA GSP)

Payment will be made for each of the following Bid items that are included in the Proposal:

"HMA Cl. ___ PG ___", per ton.

"HMA for Approach Cl. ___ PG ___", per ton.

"HMA for Preleveling Cl. ___ PG ___", per ton.

"HMA for Pavement Repair Cl. ___ PG ___", per ton.

"Commercial HMA", per ton.

The unit Contract price per ton for "HMA Cl. ___ PG ___", "HMA for Approach Cl. ___ PG ___", "HMA for Preleveling Cl. ___ PG ___", "HMA for Pavement Repair Cl. ___ PG ___", and "Commercial HMA" shall be full compensation for all costs, including anti-stripping additive, incurred to carry out the requirements of Section 5-04 except for those costs included in other items which are included in this Subsection and which are included in the Proposal.

"Preparation of Untreated Roadway", per mile.

The unit Contract price per mile for "Preparation of Untreated Roadway" shall be full pay for all Work described under 5-04.3(4) , with the exception, however, that all costs involved in patching the Roadway prior to placement of HMA shall be included in the unit Contract price per ton for "HMA Cl. ___ PG ___" which was used for patching. If the Proposal does not include a Bid item for "Preparation of Untreated Roadway", the Roadway shall be prepared as specified, but the Work shall be included in the Contract prices of the other items of Work.

"Preparation of Existing Paved Surfaces", per mile.

The unit Contract Price for "Preparation of Existing Paved Surfaces" shall be full pay for all Work described under Section 5-04.3(4) with the exception, however, that all costs involved in patching the Roadway prior to placement of HMA shall be included in the unit Contract price per ton for "HMA Cl. ___ PG ___" which was used for patching. If the Proposal does not include a Bid item for "Preparation of Untreated Roadway", the Roadway shall be prepared as specified, but the Work shall be included in the Contract prices of the other items of Work.

"Crack Sealing", by force account.

"Crack Sealing" will be paid for by force account as specified in Section 1-09.6. For the purpose of providing a common Proposal for all Bidders, the Contracting Agency has entered an amount in the Proposal to become a part of the total Bid by the Contractor.

"Pavement Repair Excavation Incl. Haul", per square yard.

The unit Contract price per square yard for "Pavement Repair Excavation Incl. Haul" shall be full payment for all costs incurred to perform the Work described in Section 5-04.3(4) with the exception, however, that all costs involved in the placement of HMA shall be included in the unit Contract price per ton for "HMA for Pavement Repair Cl. ___ PG ___", per ton.

"Asphalt for Prime Coat", per ton.

The unit Contract price per ton for "Asphalt for Prime Coat" shall be full payment for all costs incurred to obtain, provide and install the material in accordance with Section 5-04.3(4).

"Prime Coat Agg.", per cubic yard, or per ton.

The unit Contract price per cubic yard or per ton for "Prime Coat Agg." shall be full pay for furnishing, loading, and hauling aggregate to the place of deposit and spreading the aggregate in the quantities required by the Engineer.

"Asphalt for Fog Seal", per ton.

Payment for "Asphalt for Fog Seal" is described in Section 5-02.5.

"Longitudinal Joint Seal", per linear foot.

The unit Contract price per linear foot for "Longitudinal Joint Seal" shall be full payment for all costs incurred to perform the Work described in Section 5-04.3(12).

"Planing Bituminous Pavement", per square yard.

The unit Contract price per square yard for "Planing Bituminous Pavement" shall be full payment for all costs incurred to perform the Work described in Section 5-04.3(14).

"Temporary Pavement Marking", per linear foot.

Payment for "Temporary Pavement Marking" is described in Section 8-23.5.

"Water", per M gallon.

Payment for "Water" is described in Section 2-07.5.

"Job Mix Compliance Price Adjustment", by calculation.

"Job Mix Compliance Price Adjustment" will be calculated and paid for as described in Section 5-04.3(9)C6.

"Compaction Price Adjustment", by calculation.

"Compaction Price Adjustment" will be calculated and paid for as described in Section 5-04..3(10)D3.

"Roadway Core", per each.

The Contractor's costs for all other Work associated with the coring (e.g., traffic control) shall be incidental and included within the unit Bid price per each and no additional payments will be made.

"Cyclic Density Price Adjustment", by calculation.

"Cyclic Density Price Adjustment" will be calculated and paid for as described in Section 5-04.3(10)B.

(City Contracts, April 2020, City of Auburn GSP)

Supplement this section with the following:

Payment will be made for each of the following Bid items that are included in the Proposal:

"Asphalt Cold Patch", Per Ton

The unit contract price per ton for "Asphalt Cold Patch," shall be full compensation for all costs incurred to carry out the requirements of Section 5-04.3(17) (Asphalt Cold Patch) except for those costs included in other items which are included in this sub-section and which are included in the proposal.

"Rubberized Asphalt for Crack Sealing", Per Ton

The unit contract price for "Rubberized Asphalt for Crack Sealing" shall be full pay for all costs of material, labor, tools, and equipment necessary for the application of the crack sealant as specified including all costs associated with preparation, placing, blotting, and spreading sand.

"Porous HMA", Per Ton

If HMA can be installed with a paving machine, it will not be paid for as "Commercial HMA", but instead will be paid for as "HMA Cl. ___ PG ___.

All costs associated with providing, placing, and sealing new joints in the asphalt concrete shall be included in the unit Contract price for "HMA Cl. ___ PG ___".

All cost incurred to obtain, provide and install herbicide for "Soil Residual Herbicide" in accordance with Section 5-04.3(4)B shall be included in the unit contract price per ton for HMA.

Longitudinal Joint Seals between the HMA and cement concrete pavement shall be included in the unit contract price per ton of the HMA.

Hot or cold mix asphalt concrete for temporary patches shall not be measured for separate payment. All costs associated with temporary patches shall be included in the appropriate unit bid prices for the work involved.

5-05 Cement Concrete Pavement

5-05.3 Construction Requirements

5-05.3(1) Concrete Mix Design for Paving

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Proportioning of Concrete

A. The Contractor shall design the concrete mix determining the proportions of Portland cement, coarse and fine aggregate, and water necessary to produce a workable concrete meeting the following requirements:
   (1) A compressive strength of 4,000 psi at 28 calendar days.
   (2) A maximum slump of 3 inches for fixed form paving and 2 ½ inches for slip form paving.
   (3) If air-entrained concrete is used, the mix shall contain no more than 6 percent entrained air as determined by AASHTO T 152.

B. The Contractor shall design the mix on the basis of an absolute volume method such as outlined in the American Concrete Institute (ACI) Standard 211.1, “Recommended Practice for Selecting Proportions for Normal Weight Concrete”.

C. Water reducing, set retarding or superplasticizer chemical admixtures may be used at the option of the Contractor but subject to approval by the Engineer. The Contractor shall indicate in advance the particular type and name product of admixtures that they proposes to use and only such admixtures approved by the Engineer may be incorporated into the concrete mix. Admixtures selected for use shall be compatible with all other components of the concrete. The use of calcium chloride as an admixture will not be permitted.

D. The Contractor shall submit for the record, not later than 15 calendar days prior to the start of paving operations, the proposed mix design including the aggregates grading to be used. The submission shall be accompanied with certified laboratory reports on the tests performed on the trial mixes. In the event that the concrete mix designed by the Contractor does not produce concrete of the specified strength and workability, the Contractor shall adjust the mix as required to meet the specified requirements at no additional cost to the City and shall submit new certified test results.

E. In the event the Contractor elects to use an air-entraining admixture, they shall determine by trials the amount of the selected admixture that will produce

concrete having the desired air content and the amount shall not be varied except as approved by the Engineer. The admixture shall be added during batching at the plant in accordance with the admixture manufacturer's recommendations.

F. The Contractor shall determine the proportions and batch weights for air-entrained concrete in the same manner as for regular concrete provided, however, that in making such adjustments as may be necessary by reason of air-entrainment, the minimum quantity of fine aggregate and the minimum quantity of water shall be used which will provide concrete of the required workability.

G. Whenever the Contractor modifies the concrete mix, other than minor adjustments in the relative quantities of fine and coarse aggregates, they shall submit a copy of the new mix design, together with certified copies of tests results, to the Engineer.

H. No change in the sources or character of the materials shall be made without due notice to the Engineer. No new materials shall be used until approved by the Engineer and until new trial mixes have been designed, tested and accepted.

5-05.3(8) Joints

(August 2016, City of Auburn GSP)

The first paragraph is revised to read:

The Contractor shall submit for approval to the Engineer a Joint Plan at least 10 working days prior to the commencement of any pavement construction. Transverse and longitudinal joints shall be contraction or through joints (including construction joints). Joints shall be constructed in accordance with the detail shown in the Contract Plans and shall be of the type and at the locations indicated on the Contract Plans. The faces of all joints shall be constructed perpendicular to the surface of the cement concrete pavement.

5-05.3(8)D Isolation Joints

(January 2017, City of Auburn GSP)

Delete this section and replace it with the following:

Isolation joints are placed only where shown on the Plans. The joint alignment shall be at right angles to the Pavement Structure centerline unless otherwise specified in the Contract.

Longitudinal isolation joints shall be constructed with premolded material, ½-inch in thickness and conform to Section 9-04.1(2) (Premolded Joint Filler for Expansion Joints). They shall extend from 1 inch below the bottom of pavement to ¾ inch below the top of pavement.

The joint material shall be held accurately in place during the placing and finishing of the concrete by a bulkhead, a holder, metal cap or any other approved method. The joint shall be perpendicular to the paved surface and the holder shall be in place long enough to prevent sagging of the joint material.

A wood filler strip or metal cap shall be placed on the top of the premolded joint filler to form the groove ¾ inch deep, and shall remain in place until after the finishing and the concrete is sufficiently set to resist sloughing in the groove. The joint filler shall be stapled together at the ends to preserve continuity.

Immediately after removal of side forms, the edges of the pavement shall be carefully inspected and wherever the joint filler is not fully exposed, the concrete shall be chipped down until the edge of the filler is fully exposed for the entire depth.

(August 2016, City of Auburn GSP)

Add the following new section:

5-05.3(8)E Sealing through Joints

After the pavement is cured and before carrying any traffic, the space left by the removal of the wood filler strip or the metal cap above the top of the expansion joint filler strip shall be thoroughly cleaned of all loose material. The ¾ inch wide groove shall be completely free of any projecting concrete from the sides and the groove shall be continuous across the slab to each edge. It shall then be filled level with the pavement surface with joint sealant meeting the requirements of Section 9-04.2 (Joint Sealants).

The joint sealant material shall be heated and placed in accordance with the manufacturer's instructions. Burned material will be rejected. The through joint groove shall be dry at the time of pouring the sealing compound.

Add the following new section:

5-05.3(9) Integral Cement Concrete Curb on New Pavement

(August 2016, City of Auburn GSP)

Integral doweled curb on new pavement shall be constructed as shown in the Contract Plans.

The pavement width shall be extended to the back of the curb. The pavement where the curb is to be placed shall be roughened or otherwise treated so that a permanent bond can be secured between the curb and the pavement. Curing compound shall not be used on the pavement where the curb is to be constructed.

Curb shall be constructed in accordance with Section 8-04.3(1) (Cement Concrete Curbs, Gutters and Spillways) and the Contract Plans.

5-05.3(10) Tie Bars and Corrosion Resistant Dowel Bars

(August 2016, City of Auburn GSP)

The first paragraph is revised to read:

Epoxy-coated tie bars shall be placed at all longitudinal contraction and construction joints, in accordance with the requirements shown in the Contract Plans. In addition, epoxy-coated dowel bars shall be installed when concrete curbs are constructed on top of concrete pavement in accordance with the requirements shown in the Contract Plans.

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Curb dowels shall be placed at 28 inches on center in the fresh concrete pavement. Curb dowels shall be placed in all segments of curbing that is full depth and shall be placed in transition areas for curb cuts in which a minimum of 1 inch of cover from the top of the finished curb can be achieved.

Dowel bars shall be set while the concrete is still plastic enough to not require hammering them into place.

(September 2016, City of Auburn GSP)

Add the following new section including subsections:

5-05.3(23) Cement Concrete Pavement for Alley

(September 2016, City of Auburn GSP)

This work consists of placing Cement concrete pavement for alleyways.

5-05.3(23)A Pavement and Alley Requirements

(August 2016, City of Auburn GSP)

Cement concrete pavement for alleys shall meet the requirements of Section 5-05 (Cement Concrete Pavement). Alleys shall meet the requirements for driveways in Section 8-06 (Cement Concrete Driveway Entrances).

5-05.3(23)B Extra Concrete for Alley Approach Ramp

(August 2016, City of Auburn GSP)

When constructing and finishing cement concrete Alley pavement, the Engineer may in some cases require the Contractor to place additional concrete over the surface of the Alley pavement to serve as an integral ramp or vehicular access to abutting private property. Additional thickness for such ramps shall not exceed 6 inches above the original planned concrete surface at any point, and will be addressed in accordance with Section 1-04.4 (Changes).

5-05.4 Measurement

(City Contracts, January 2017, City of Auburn GSP)

Supplement this section with the following:

Measurement for “Cement Concrete Pavement – Crosswalk” will be by the square yard.

Measurement for Cement Concrete Pavement – Including Dowels will be by the square yard of concrete in place, including the area placed underneath curbs. No deduction will be made for castings in pavement.

5-05.5 Payment

(City Contracts, April 2017, City of Auburn GSP)

Supplement this section with the following:

Payment will be made for each of the following Bid items that are included in the Proposal:

“Cement Concrete Pavement – Including Dowels”, Per Square Yard

"Cement Concrete Pavement – Crosswalk", Per Square Yard

The unit contract price per square yard for "Cement Concrete Pavement – Including Dowels," shall be full compensation for all costs incurred to carry out the requirements of

The unit contract price for "Cement Conc. Pavement – Crosswalk" shall be full pay for all costs of labor, tools, materials, and equipment necessary to complete the cement concrete pavement to the lines, grades, and depths specified on the Plans including the saw cutting of the grid pattern and other finishing requirements.

Section 5-05 (Cement Concrete Pavement) at the thickness required in the Plans including furnishing and installing epoxy coated dowel bars and tie bars, block outs, joints, thickened edges, and integral curbs on concrete pavement in accordance to the Standard Details and Contract Plans.

(February 2023, City of Auburn GSP)

Supplement Division 5 with the following section, including subsections:

5-06 Pervious Concrete Pavement

5-06.1 Description

This work shall consist of constructing a pervious cementitious pavement composed of 66nclude66 cement concrete on a prepared subgrade or subbase in accordance with these Specifications and in conformity with the lines grades, thicknesses, and typical cross-sections shown in the Plans or established by the Engineer.

5-06.2 Materials

Materials shall meet the requirements of the following sections:

Portland Cement	9-01
Aggregates for Portland Cement Concrete	9-03.1
Premolded Joint Filler for Expansion Joints	9-04.1(2)
Curing Materials and Admixtures	9-23
Water	9-25

Hydration stabilizing admixtures shall conform to the requirements of Section 9-23.6(3) or 9-23.6(5).

Synthetic Fibers for Concrete

When specified synthetic fibers to be included in the mix for 66nclude66 cement concrete shall conform to the requirements of ASTM D 7508/7508M.

5-06.3 Construction Requirements

5-06.3(1) Pervious Concrete Construction Meeting

Prior to the start of construction of the pervious concrete pavement section, including excavation of the pavement section, the Contractor shall coordinate, schedule and attend a

preconstruction meeting for the pervious concrete pavement. The following are required to attend the meeting:

1. Contracting Agency representative.
2. General Contractor's representative(s).
3. Engineer of Record for the pervious concrete pavement.
4. Concrete placement lead person(s).
5. Associated Subcontractor's representative.
6. Pervious concrete Supplier's representative.
7. Material Testing Laboratory's representative.

The meeting shall cover all aspects of the work including, but not limited to:

1. Submittals.
2. Short and long term schedule.
3. Inspection of the Work.
4. Protection of the Work.
5. Pervious concrete placement.
6. Curing.
7. Materials.
8. Specifications.
9. Testing.
10. Test panel and JMF.
11. Acceptance criteria.

5-06.3(2) Pervious Concrete Mix Design

The Contractor shall provide a mix design for pervious concrete and shall submit the mix design to the Engineer in writing. Pervious concrete shall not be placed in the test panels without a mix design that has been reviewed and accepted by the Engineer.

5-06.3(2)A Mix Design Criteria

The Contractor shall include the following elements and results of the described procedures in the proposed mix design:

1. A unique identification number for the mix design that is approved for the Job Mix Formula (JMF).
2. Portland cement shall be Type I, Type II, Type I-II Type IP, or Type IS.
3. The cementitious content, including pozzolans if used, shall be a minimum of 480 pounds per cubic yard.
4. The mix shall incorporate a hydration stabilizing admixture.

5. Synthetic microfibers may be utilized at the manufacturer's recommended dosage rate.
6. The water / cement ratio shall not exceed 0.35.
7. No more than 25 percent of 68nclude68 cement in the mix, by weight, may be replaced by fly ash, ground granulated blast furnace slag, or a combination of both.
8. Coarse aggregate shall conform to Section 9-03.1(4), AASHTO Grading No.8.

5-06.3(2)B Job Mix Formula (JMF)

The approved mix design established through the approved test panel becomes the JMF.

5-06.3(3) Submittals

In accordance to Section 1-05.3, the Contractor shall submit the following items to the Engineer for acceptance prior to placing any pervious concrete pavement:

1. The source of all materials proposed for use in constructing pervious concrete pavement.
2. Batch weights for all constituents of one (1) cubic yard of the proposed pervious concrete mix.
3. The specific gravity (SSD) of all aggregates to be used in the proposed pervious concrete mix.
4. The proposed gradation of coarse aggregates used in pervious concrete.
5. The designed volume in cubic feet of all proposed components for 1(one) cubic yard of the proposed pervious concrete mix.
6. The design water / cement ratio of the proposed mix design.
7. The fresh density of the proposed pervious concrete mixture as determined by ASTM C1688.
8. Catalogue cuts and Certificates of Compliance for all proposed admixtures.
9. Mill Certification of the 68nclude68 cement and pozzolans, if used, for the current lot to be used in the production of the proposed pervious concrete mix. The Contractor shall maintain this submittal throughout the duration of the project as lots change.
10. Current certification by the National Ready Mix Concrete Association (NRMCA) for the batch plant(s) to be used in the production of pervious concrete.
11. Current certifications by the NRMCA for the trucks to be used in transporting pervious concrete from the batch plant to the point of placement.
12. Qualification documentation for current certifications by the NRMCA for the Contractor's personnel who will be installing pervious concrete. See Section 5-06.3(10)A. Valid acceptable documentation is the NRMCA issued wallet card or certification certificate.
13. At the time of delivery of the material to the site, the Contractor shall provide an original Certificate of Compliance for each truckload of pervious concrete. The Certificate of Compliance shall include information noted in Section 6-02.3(5)B. If the Certificate of Compliance from the concrete producer is not provided to the Engineer upon delivery, the truckload shall not be placed.

5-06.3(4) Equipment

Equipment necessary for handling materials, mixing, delivering, and performing all parts of the Work, shall be in good repair, designed for the task, and operated by trained and qualified personnel.

5-06.3(4)A Batching Plant and Equipment

Pervious concrete shall be centrally mixed in a plant with a current NRMCA certification.

5-06.3(4)B Mixer Trucks

Pervious concrete shall be transported to the location by truck mixers, non-agitating trucks shall not be used for the transport of pervious concrete. The drums on mixer trucks used to transport pervious concrete shall have fins that are not excessively worn, damaged or have excessive concrete buildup. Mixer trucks shall have a current NRMCA certification.

5-06.3(4)C Side Forms

Pervious concrete shall be placed in stationary forms. If pervious concrete is to be placed against a curb, previously placed concrete, or other existing structure, they may be used as a side form for the pervious concrete paving. Forms for pervious concrete shall be made of steel or wood and shall be in good condition, and shall be capable of being anchored in place so that they will be true to grade, line and slope. Forms shall be sufficiently rigid to maintain specified tolerances and capable of supporting concrete and mechanical concrete placing equipment. Forms shall be in good condition, straight, clean, free of debris, non-adherent rust and hardened concrete.

Set, align, and brace forms so that they hardened pavement meets the lines, grades and slopes as shown in the drawings. Apply form-release agent to the form face, which will be in contact with concrete, immediately before placing concrete. Form release agent shall not be applied to previously placed concrete. Previously placed pavement shall be protected from damage.

The Contractor shall inspect all forms for line, grade and slope. No pervious concrete shall be placed until the forms have been inspected by the Engineer.

5-06.3(4)D Finishing Equipment

Finishing equipment for pervious concrete paving shall be designed for the intended work, shall be clean and in good operating condition.

Equipment used for striking off the pervious concrete shall leave a smooth surface at the planned grades and shall not cause excess paste to be left on, or drawn to, the surface. If rollers or spinning screeds are used to compact, they shall be of sufficient weight and width to compact the pervious concrete uniformly through its depth and to grade without marring the surface. Equipment used for compacting pervious concrete shall not cause the surface to close or otherwise clog and shall produce a surface that is free of ridges or other imperfections. Tools used for producing joints shall be designed and manufactured for the purpose and shall not otherwise damage or mar the surface.

Vibrating equipment shall not be used for placement or compaction of pervious concrete.

5-06.3(5) Measuring and Batching Materials

Measuring and batching materials for pervious concrete pavement shall conform to the requirements of Section 5-05.3(4).

5-06.3(6) Acceptance

For acceptance, pervious concrete pavement will be divided into lots as follows: A single lot (lot) is represented by the lesser of: one (1) day's production or 360 square yards of pervious concrete in place. Where the Contractor has more than one crew placing pervious concrete, lots will be associated with each crew. Representative lot size will be determined to the nearest square yard. If no sample is taken on a Day, that Day's quantities may be included in the next or previous Day's lot(s). The Engineer may isolate an area of pervious concrete within a lot that is deemed to be defective in any way and such an area will be considered to be a new lot for purposes of acceptance. New lots determined in this manner shall be extended as necessary such that they are bounded by planned joints. Acceptance of a lot of pervious concrete pavement will be based on the following criteria:

1. Grade: Conform to the dimensions, lines, slopes and grades specified on the plans. Pervious concrete pavement shall be true to planned grades and shall not deviate from grade more than ¼ inch in ten (10) feet. Where abutting existing facilities such as sidewalks, walkways, curbs, driveways or other pavements, the pervious concrete shall be flush.
2. Conformance to JMF: The pervious concrete pavement used shall conform to the mix design for the JMF within the limits as set forth in Section 6-02.3(5)C and as determined from the accepted test panel.
3. Compacted Thickness and Average Hardened Density: After a minimum of seven (7) calendar days of curing, remove and measure three (3) cores from each lot. Remove cores in accordance with ASTM C42/C42M. Measure the length of each core in accordance with ASTM C1542/1542M. No single core shall be less than 3/4 inch of the design depth on the drawings. The average of all cores from a lot shall be within minus 3/8 inch of the design depth on the plans. After length is measured, measure hardened density of each core in the lot in accordance with ASTM C1754/C1754M. The hardened density from a lot must be within +/- 5 percent of the average hardened density of the JMF (approved test panel).
4. Infiltration Rate: The infiltration rate at any single test point shall not be less than 100 inches per hour.
5. Fresh Density: The fresh density of each lot will be measured by ASTM C1688 at the point of placement shall be within +/- five (5) pounds per cubic foot of the fresh density determined from the JMF (approved test panel).
6. Appearance: The appearance of each lot shall be consistent with the JMF (approved test panel). The pervious concrete pavement shall have a consistent surface texture, shall not be raveled, shall be free of ridges or other surface imperfections, shall have joints that are in the specified location and are constructed per specification, and shall be free of cracks.

Testing for acceptance will be performed by the Engineer.

5-06.3(6)A Infiltration Rate of Placed Pavement

The infiltration rate of the pervious concrete shall be determined at four (4) random locations within each lot. The locations for conducting infiltration tests will be determined by the Engineer. The Contractor shall coordinate and schedule testing with the Engineer a minimum of five (5) Working Days in advance. The infiltration rate on the finished surface will be determined in accordance with ASTM C1701, except the infiltration ring diameter may be 12-inches to 24-inches in diameter. The infiltration test will be conducted after a minimum of seven (7) calendar days of curing has occurred.

If the measured infiltration rate is less than 100 inches/hour at any test location, the Contractor may request in writing that the Engineer perform additional infiltration tests for the purpose of assessing overall infiltration performance and/or determining a defective lot in accordance with Section 5-06.3(6). The determination of a defective lot, or lots, and the extent(s), will be by the Engineer. The cost of additional testing shall borne by the Contractor.

5-06.3(7) Rejection

Pervious concrete may be rejected by the Contractor for any reason.

A truckload of pervious concrete will be rejected if the Certificate of Compliance is not provided at the time of delivery of the material to the site. See Section 5-06.3(4)B.

Pervious concrete that is improperly cured or is allowed to freeze during the initial seven (7) day curing period will be rejected.

Pervious concrete pavement that does not meet the acceptance criteria put forth in Section 5-06.3(6) will be rejected by the Engineer on a lot by lot basis.

During the removal process of the rejected pavement, The Contractor shall implement measures to protect the adjacent pervious concrete pavement to remain. If pervious concrete pavement becomes damaged by the Contractor during removal of the rejected pavement then additional pavement areas may be rejected by the Engineer to the next planned joint.

Fresh pervious concrete that has been rejected by the Engineer, or the Contractor, shall not be placed, or shall be removed and replaced, at no additional cost.

5-06.3(8) Mixing Pervious Concrete

Batch, mix and deliver pervious concrete in compliance with ASTM C94/C94M except that pervious concrete shall not be transit mixed or shrink mixed. If water is added to the mix after it is delivered on site, the fresh density for the pervious concrete shall meet the requirements of the approved JMF referenced in this section.

5-06.3(8)A Limitations of Mixing Pervious Concrete

Mixing and placing concrete shall be discontinued when a descending air temperature in the shade away from artificial heat reaches 40º F and shall not be resumed until an ascending air temperature in the shade and away from artificial heat reaches 40º F.

The temperature of fresh pervious concrete shall not be less than 55° F, nor more than 90° F when placed.

Pervious concrete shall not be mixed with aggregates at less than 32° F.

5-06.3(9) Subgrade Preparation And Base

Prepare and protect subgrade in accordance with Section 2-06.

Prepare and protect subbase in accordance with Section 4-04.

5-06.3(10) Placing, Spreading, Finishing, Edging, Tolerances, and Curing

Pervious concrete shall not be placed, compacted or finished when the natural light is inadequate, unless an adequate lighting system is in operation. The adequacy of light will be determined by the Engineer.

Wet the surface of the subbase with water immediately before placing pervious concrete. Deposit concrete either directly from the transporting equipment or by conveyor on the subbase, unless otherwise specified. Pervious concrete shall not be placed on frozen subbase. Deposit concrete between the forms to an approximately uniform height. Spread the concrete using mechanized equipment or hand tools. Vibrating equipment shall not be used for spreading pervious concrete.

Strike off concrete between forms using a form-riding paving machine, roller screed, or spinning screed.

Compact concrete to a uniformly dense structure without clogging the surface with paste.

Finish the pervious concrete to a uniform, open-textured surface to match the appearance of the approved JMF test panel.

Edges shall be hand tooled to a radius of ¼ inch.

Curing materials for pervious concrete shall be in place no more than 20 minutes of discharge onto the subbase. The pavement surface and all exposed edges shall be completely covered with sheet curing materials conforming to Section 9-23.1. The curing material shall secured at all exterior edges and interior laps without damaging the pervious concrete. The method of securing the curing material shall prevent wind from removing the sheet and from blowing under the sheet across the surface of the concrete. Cure the pavement for a minimum of seven (7) uninterrupted days.

All traffic (foot and vehicular), staging, stockpiling or other work shall be kept off of the pervious concrete pavement during the curing period. Any testing for acceptance shall not occur until the end of the curing period.

Protect concrete from freezing and cold weather in accordance with 5-06.3(12).

5-06.3(10)A Contractor's Qualifications

The contractor shall employ no less than one (1) National Ready Mixed Concrete Association (NRMCA) certified Pervious Concrete Craftsman for each crew, who must be on site, over-seeing the work during all pervious concrete placement; or employ no less than three (3) NRMCA Certified Pervious Concrete Installers per crew, who must be on site working during each pervious concrete placement. The minimum number of certified individuals must be present on each crew for every pervious concrete placement, including the test panel placements, and a certified individual must be in charge of the placement crew and procedures.

If, in the opinion of the Engineer, personnel used for installing pervious concrete are unqualified, inattentive to quality, or unsafe, they shall be removed or reassigned from installation of pervious concrete at the written request of the Engineer.

5-06.3(10)B Test Panel

Production placement of pervious concrete shall not occur until the Contractor has completed a test panel of pervious concrete pavement that meets all of the acceptance criteria described herein and is accepted by the Engineer.

The Contractor shall construct a test panel utilizing a minimum of seven (7) cubic yards of pervious concrete. If multiple pavement section depths are shown on the plans, a test panel shall be constructed for each pavement section depth/thickness. The width of the test panel shall have a width no smaller than the greatest width to be used during the construction and installation of the pervious concrete onsite. The test panel(s) shall include at least one joint and at the spacing specified on the plans and specifications. Test panels may be placed non-contiguously. The test panel(s) shall be equivalent and representative of the production pervious concrete pavement in all aspects including subbase, depth, joints, method of placement, curing, and preparation. Construction and evaluation of the test panel shall occur as follows:

1. Notify the Engineer at least ten (10) Working Days before installing pervious concrete test panels.
2. Coordinate the location of the test panel with the Engineer.
3. Install the test panel in accordance with the Specifications and Drawings.
4. Notify the Engineer when the test panel is ready for inspection and acceptance testing.
5. Acceptance testing will be conducted in accordance with Section 5-03.3(6).
6. Remove, replace, and dispose of any unsatisfactory portions of test panels as determined by the Engineer, at no additional cost to the Contracting Agency.

Failure to install acceptable test panel(s) of pervious concrete will indicate an unapproved test panel(s) and require new test panel(s) for review.

The completed and approved test panel(s) shall establish the JMF.

The approved test panel shall meet the requirements of Section 5-03.3(6).

Upon successful completion of the infiltration test, unless otherwise determined by the Engineer, three (3), cores will be cut in accordance with ASTM C42 and will be used to validate the mix design under the acceptance criteria of Section 5-06.3(6). Cores shall be taken at the same location where the infiltration test was conducted. The average hardened density of the cores shall be the hardened density used for the JMF. The hardened density of each core used for determining the JMF shall be within five (5) percent of the mean value of the three cores. Core holes shall be filled by the Contractor with pervious concrete meeting the proposed JMF and shall match adjacent pavement color, texture and grade.

The completed and accepted test panels shall be maintained and protected throughout the duration of the Work and may not be demolished and disposed of without written permission from the Engineer. If the test panel(s) is incorporated into the Work, it shall remain in place accepted as a single lot.

5-06.3(11) Joints

Construct joints at the locations, depths and with horizontal dimensions indicated on plans unless noted otherwise in this section. Joints shall be of three (3) types: construction, contraction, isolation. Construction joints shall be formed at the end of a day's work or when

necessary to stop production for any reason. Contraction joints shall be used to control random cracking. Isolation joints shall be used where the pervious concrete abuts existing facilities or where shown on the Plans.

5-06.3(11)A Construction Joints

Construction joints shall be located at the location of a planned contraction or isolation joint. Construction joints are to be formed by placing a header between the forms, at right angles, to the full depth of the finished pervious concrete, and set to the height of the forms. Pervious concrete shall be placed against the header and compacted and finished as normal, including edging. The header shall remain in place until paving resumes.

5-06.3(11)B Contraction Joints

Contraction joints (transverse and longitudinal) shall be constructed at the locations and intervals shown in the Contract. Contraction joints shall be a depth of 1/3 the thickness of the pervious concrete pavement section and have a width of no more than 1/4 inch. Contraction joints shall not be saw cut unless specifically noted on the Plans. Saw cut joints shall have a minimum width of 1/8 inch. Plastic formed contraction joints shall be tooled on both sides of the joint with a radius of ½ inch. Tool joint to the depth and width in fresh concrete immediately after the concrete is compacted.

5-06.3(11)C Isolation Joints

Isolation joints shall be placed where the pervious concrete abuts existing structures or where shown on the Plans. Isolation joints shall continue through the depth of the pervious concrete using a 3/8 inch premolded joint filler meeting the requirements of Section 9-04.1(2). Isolation joints may be formed by forming a construction joint and affixing the premolded joint filler against one side of the joint and placing fresh pervious concrete against it. Isolation joints and filler shall be flush with the surrounding pervious concrete and shall not deviate from the acceptance criteria for smoothness as shown in Section 5-06.3(6). The edge of the pervious concrete adjacent the premolded joint filler shall be hand tooled with a ½ inch radius.

5-06.3(12) Cold Weather Work

When concrete is being placed and the ambient air temperature is expected to drop below 35° F during the day or night, the Contractor shall protect the concrete from freezing. The Contractor shall submit for approval a Cold Weather Plan prior to placing concrete when ambient air temperature below 35° F is anticipated, or when requested by the Engineer. When a Cold Weather Plan is required, pervious concrete shall not be placed without an approved Cold Weather Plan.

Under the Cold Weather Plan, the Contractor shall, provide a sufficient supply of straw, hay, blankets, or other suitable blanketing material and spread it over the pavement to a sufficient depth to prevent freezing of the concrete. The blanket material shall be placed on top of the sheet curing materials and covered with a layer of burlap or plastic sheeting, weighted or anchored to prevent the wind from displacing the insulation. At no time during the curing period shall the temperature of the pervious concrete be allowed to drop below 55° F. The Engineer may require recording thermometers if daytime temperature is below 50°. The curing period may be extended by the Engineer if the pervious concrete temperature has been allowed to drop below 55° F.

The cold weather protection shall be maintained for seven (7) days. Pervious concrete that has frozen during this period will be rejected.

5-06.3(13) Protection of Pervious Concrete Pavement

As part of the Construction Stormwater Pollution Prevention plan (SWPPP), rain runoff, surface water of any kind and sediment shall be prevented from entering the area of pervious concrete construction, including excavation, until the pervious concrete application has cured, testing is completed and determined to meet specifications and the adjacent areas that sheet flow/drain onto the pervious concrete are permanently stabilized from erosion and plantings are established. Once pavement is placed, flow diversion measures and protective covers shall continually be maintained until adjacent areas are permanently stabilized and concrete has been accepted. Construction vehicular traffic shall not be allowed onto the pervious concrete pavement.

Do not open the pavement to vehicular traffic until the concrete has cured for at least seven (7) uninterrupted days, testing has been completed, and the pavement has been accepted by the Engineer.

The Contractor shall take every precaution to protect the pervious concrete pavement from damage, including the introduction of foreign materials to the surface, throughout the course of the work. Pervious concrete pavement that is damaged or has been adversely impacted by the introduction of foreign materials shall be remediated to the satisfaction of the Engineer or rejected and replaced to the nearest joint.

(City Contracts, February 2023, City of Auburn GSP)

Supplement this section with the following subsections:

5-06.4 Measurement

Measurement for “Pervious Concrete Pavement – Sidewalk” will be by the square yard of finished surface of pervious concrete walk. No measurement will be made for blocked out areas, castings or other discontinuities in the sidewalk nine (9) square feet or larger.

Measurement for “Pervious Concrete Pavement-Vehicular” will be by the square yard for the finished surface of pervious concrete pavement. No Measurement will be made for blocked out areas, castings or other discontinuities in the pavement nine (9) square feet or larger.

5-06.5 Payment

Payment will be made in accordance with Section 1-04.1, for each of the following Bid Items that are included in the Proposal:

“Pervious Concrete Pavement – Sidewalk”, Per Square Yard

“Pervious Concrete Pavement – Vehicular”, Per Square Yard

The Unit contract price per square yard for “Pervious Concrete Pavement – Sidewalk” shall be full pay for furnishing all labor, tools, equipment and materials required to construct the pervious concrete sidewalk as specified in this Section, including but not limited to; performing mix designs, and placing pervious concrete.

The Unit contract price for “Pervious Concrete Pavement-Vehicular” shall be full pay for furnishing all labor, tools, equipment and materials required to construct the pervious concrete pavement as specified in this Section, including but not limited to; performing mix designs, and placing pervious concrete.

(February 2023, City of Auburn GSP)

Supplement Division 5 with the following section, including subsections:

5-07 Textured Asphalt

5-07.1 Description

This work consists of texturing and coloring asphalt concrete pavement in areas indicated on the Contract Drawings. Work includes imprinting the hot mix asphalt surface with a textured finish, and coating the finish surface with a colored epoxy material. All imprinting work shall be performed by an Authorized Street Print Applicator or substituted in its entirety with an approved equivalent described here in accordance with 1-06.7(4) (Proposed Equivalents).

5-07.2 Materials

The following specifications and methods are referenced as part of these Special Provisions.

American Society for Testing and Materials

1) ASTM D-4541 Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Tester
2) ASTM D-4060 Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser
3) ASTM D-2697 Standard Test Method for Volume of Nonvolatile Matter in Clear or Pigmented Coatings

5-07.2(1) Coating Material

The coating material shall be a premium high performance material consisting of epoxy modified acrylic polymers blended with sand and aggregate, “StreetBond SP150E,” or an approved equivalent.

5-07.2(2) Colorant

The colorant shall be a highly concentrated, high quality, UV stable pigment blend designed to be added to coating material to provide color to the coating. The colorant shall be StreetBond Colorant, with the color “Bedrock,” and the same colorant shall be used in each coating layer applied to the asphalt surface. One pint of StreetBond Colorant shall be used with one 5-gallon pail of StreetBond SP150E Coating Material.

5-07.3 Construction Requirements

The Contractor shall follow the latest StreetPrint Application Procedures as issued by Integrated Paving Concepts Inc.

5-07.3(1) Textured Asphalt Terms

Textured Asphalt Pavement shall be described as “StreetPrint Pavement Texturing”, “StreetPrint”, or approved equivalent pavement on the Contract Plans and documents related to the project.

Pavement Texturing is defined as a finishing system, which treats the surface of Hot Mix Asphalt (HMA) by imprinting fully compacted asphalt pavement with “grid style” or other

styles of depressions to replicate, in relief, the concrete grout depressions common to hand-laid brick or cobblestone, or any other design as shown on the Plans or described in the specifications, and coating the imprinted asphalt surface using an approved surfacing system. This system shall be the "StreetPrint" system utilizing the "StreetBond HW Surfacing System" or an approved equivalent.

Imprinting Asphalt Concrete Pavement is defined as pressing flexible templates into hot, ***fully-compacted***, Asphalt Concrete Pavement to create the appearance of grout lines or patterns in the asphalt surface.

Surfacing System is defined as multiple applications of premium coating material, and shall be StreetBond HW Surfacing System applying StreetBond SP150E.

"Authorized StreetPrint Applicator" is a contractor licensed by Integrated Paving Concepts Inc., (Tel. 800-688-5652), and shall have a foreman, supervisor or lead hand on site who has successfully completed a StreetPrint Level 1 or Level II Accreditation Training Program.

5-07.3(2) Certification

The contractor shall furnish certification of test results showing that surfacing materials has the following properties:

1. Adhesion (PLI) To an Asphalt substrate (ASTM D-4541) Result: Cohesive failure of asphalt prior to adhesive failure.
2. Taber Abrasion H-10(Dry Wear Index) (ASTM D-4060). Maximum of 0.98 grams/1000 cycles after 7 calendar days cure.
3. Solids by Volume (%) (ASTM D-2697). Minimum = 24 +/-2%.

5-07.3(3) Equipment

All equipment, tools, and machines used to perform the work shall be maintained in satisfactory working order at all times. Descriptive information on the surfacing application equipment shall be submitted to the Engineer for approval not less than 5 working days before the work starts.

5-07.3(3)A Templates

Templates shall be manufactured from flexible, woven wire rope cut and welded into the patterns used for imprinting Asphalt Concrete Pavement.

5-07.3(3)B Reciprocating Infra-Red Heater

Reciprocating Infra-Red Heater shall be used to apply heat to the asphalt surface in designated areas for imprinting. The heating equipment used shall allow continuous monitoring of the surface temperature to ensure the asphalt does not over heat and burn. Equipment that is specifically excluded from this section shall not be used for reheating of the asphalt in any form, including direct flame heaters.

5-07.3(3)C Vibratory Plate Compactor

Vibratory Plate Compactor shall be used for pressing the wire templates into the heated asphalt to create the specified pattern.

5-07.3(3)D Spray Equipment

Spray Equipment shall be capable of applying the coating material to the asphalt surface in a controlled thin film.

5-07.3(4) Construction

5-07.3(4)A Surface Preparation Prior to Coating

The asphalt surface shall be free of dirt, debris, oil or anything that will adversely affect the adhesion of the new coating system. All loose material on the asphalt surface shall be removed and prior to applying the coatings, the asphalt surface shall be completely dry.

5-07.3(4)B Layout and Imprinting

Layout and imprinting of the pattern into the surface of the HMA is shown in the Plans.

5-07.3(4)C Heating of Asphalt

Direct flame heaters shall not be allowed for the purpose of heating the asphalt. Hot air portable heaters may only be used for heating isolated areas. The temperature of the asphalt surface shall be regularly monitored during the reheating process. The asphalt pavement shall be adequately heat soaked (softened) to a depth of at least 1/2 inch, without burning the asphalt. If during the re-heating process the surface is overheated and begins to emit black smoke, the contractor shall stop work immediately. The damaged surface area shall be removed by milling the upper 1-1/2 inch and replaced by a partial depth patch with the topmost layer matching the existing surface layer mix and binder. Patching and all work associated with the repair effort shall be at no cost to the City.

5-07.3(4)D Sample Area

Prior to installing the Surfacing System to the entire project, a sample area shall be completed. Upon approval from the Engineer for appearance of color, the Contractor may proceed with completing the Surfacing System installation.

5-07.3(4)E Coating Installation

The Contractor shall apply the Surfacing System only when the air temperature is at least 50°F and rising, and will not drop below 50°F within 8 hours of application of the coating material. There should be no precipitation expected within 2 hours after applying the final layer of coating material.

5-07.3(5) Quality Control

5-07.3(5)A General

At all times the Contractor shall have a representative familiar with all manufacturer's recommendations for products used on site, or if the StreetPrint process is utilized then a foreman, supervisor or lead hand who is registered with Integrated Paving Concepts, Inc., as a Level 1 or Level II Accredited StreetPrint Installer shall be onsite at all times during installation; certification must be submitted for approval 5 working days prior to commencing construction.

5-07.3(5)B Stamping Depth

Upon completion, the patterned area shall be checked for proper depth of print. 98% of the stamped area shall have an imprint depth of 1/4 inch. If any sample areas have an imprint depth that is less than 1/4 inch, those areas shall be re-heated and re-stamped prior to applying the coatings.

5-07.3(5)C Coating Thickness

The total thickness shall be monitored by measuring the volume of material used per unit area. For this project an average coverage area for the combined coating layers shall be per manufacturer's recommendation or 150 square feet coated per 5-gallon pail of StreetBond SP150E material used. The Contractor shall provide proof of material usage.

5-07.3(5)D Protection of Existing Pavement Markings

The Contractor shall protect all existing pavement markings from contamination from the asphalt sealant including any existing markings on curbing. All disturbed pavement markings shall be returned to their original condition, at no additional cost to the City as specified in Section 8-22 (Pavement Markings).

(City Contracts, February 2023, City of Auburn GSP)

Supplement this section with these subsections:

5-07.4 Measurement

Measurement for "Textured Asphalt" shall be by the square yard of surface area completed.

5-07.5 Payment

Payment will be made for each of the following Bid items that are included in the Proposal:

"Textured Asphalt", Per Square Yard

The unit contract price for "Textured Asphalt" shall be full pay for all costs of labor, tools, and equipment necessary to install the asphalt texturing, including heating, imprinting, and coloring the asphalt.

Costs for placing and compacting the HMA Cl. ½ inch pavement receiving the texturing shall be paid for as indicated in Section 5-04 (Hot Mix Asphalt) of these Special Provisions.

(February 2023, City of Auburn GSP)

Supplement Division 5 with the following section, including subsections:

5-08 Stamped Colored Cement Concrete

5-08.1 Description

This work shall be for the completion of stamped concrete medians as indicated on the Plans.

5-08.2 Materials

Stamped concrete shall be air entrained concrete Class 4000 in accordance with the requirements of Section 6-02.

Solomon Liquid Colors Inc. colorant (Solomon Colors, PO Box 8288, Springfield, Illinois 62791. Phone (800) 624-0261 / (217) 522-3112. Fax (800) 624-3147 / (217) 522-3145. Web Site www.solomoncolors.com. E-Mail sgs@solomoncolors.com.), or approved equivalent, shall be added to the concrete mixture per the following specifications:

Colorant Material Specifications:

- Color: ColorFlo Liquid Color
- Name: Dark Redwood
- Number: 489
- Compliance: ASTM C 979.
- Material: Predispersed iron oxide pigments containing high pigment solids in aqueous base liquid.

Produce uniform and consistent color.

- Permanent, inert, stable to atmospheric conditions, sunfast, weather resistant, alkali resistant, water insoluble, lime proof, and nonbleeding.
- Free of deleterious fillers and extenders.
- Particle Size: 95 to 99 percent minus 325 mesh.
- Specific Gravity: 1.9 to 2.0.

Color Mixing Specifications:

- Mixer shall be loaded to a minimum of 40% capacity to ensure good color suspension.
- The mix design shall be consistent and the water cement ratio shall be maintained with a maximum 4 inch slump.
- The Contractor shall reverse the drum, bringing the concrete to the back of the truck, prior to adding color to the ready mix truck.
- The Contractor shall mix the concrete at high speed for a minimum of 5 minutes before pouring concrete.

5-08.3 Construction Requirements

Construction Requirements for Stamped Colored Concrete:

- Measuring, Batching, Mixing, and Delivering Concrete: As specified in Section 6-02, except as specified in this section.
    1. Measure, batch, mix, and deliver concrete with pigments in accordance with manufacturer's instructions.
    2. Ensure mixer is clean and free of washout water before loading.
    3. Load mixer to a minimum of 40 percent capacity.
    4. Do not load mixer beyond recommended capacity.
    5. Add concrete materials to mixer in same order for each batch.
    6. Do not add pigment to mixer as first concrete material.
    7. Maintain consistent amounts of batch water in each batch.
- Placing, Finishing, and Curing Concrete: As specified in Section 6-02, except as specified in this section.
    1. Place, finish, and cure concrete with pigments in accordance with manufacturer's instructions.
    2. Allow excess surface water to evaporate before finishing.
    3. Do not over-finish surface. Avoid burning surface.
    4. Do not fog with water or cover surface of colored concrete during initial curing process for a minimum of 48 hours.
- Add liquid pigments to concrete batch automatically by use of metering, volumetric, or weight measuring system or manually by weight or volume in accordance with manufacturer's instructions.
- Recycle liquid pigments while in their container before use to ensure uniformity and proper viscosity.
- Add liquid pigments to concrete batch after prewetted aggregate and before cement addition.

Calcium chloride shall not be permitted in the concrete mix, as it causes discoloration.

Forms shall be as specified in Section 8-14.3(2).

Cleaning:

- Clean concrete of efflorescence in accordance with manufacturer's instructions.
- Ensure concrete has sufficiently cured before cleaning.
- Use concrete cleaner approved by pigment manufacturer. Do not use cleaners containing acid.
- Apply cleaner in accordance with cleaner manufacturer's instructions.

5-08.3(1) Stamping

The Contractor shall apply a Brickform, or approved equivalent, Antique Release agent, to the concrete as soon as all standing water has disappeared from the concrete surface and prior to beginning the stamping process.

The Contractor shall apply a Brickform, or approved equivalent, concrete sealer to the finished concrete after it has cured for 28 calendar days.

While the initially finished concrete is plastic, the Contractor shall accurately align and place stamp "skins" or semi rigid mats in sequence and changing direction of patterns as necessary to produce the pattern shown in the Plans. The Contractor shall uniformly load mats and press into concrete to produce the required imprint pattern and depth of imprint on the concrete surface. The Contractor shall remove the stamp mats immediately. The Contractor shall hand stamp edges and surfaces unable to be imprinted by stamp mats.

The Contractor shall utilize a stamping template that matches the pattern specified in the Plans. Upon completion, the patterned area shall be checked for proper depth of print. 98% of the stamped area shall have an imprint depth of 1/4 inch. If any sample areas have an imprint depth that is less than 1/4 inch, those areas shall be re-stamped prior to applying the coatings. The stamped pattern shall be neat, with clean lines and intersections.

(City Contracts, February 2023, City of Auburn GSP)

Supplement this section with these subsections:

5-08.4 Measurement

Measurement for "Colored Stamped Cement Concrete" shall be per Square Yard.

5-08.5 Payment

Payment will be made for each of the following Bid items that are included in the Proposal:

"Colored Stamped Cement Concrete", Per Square Yard

The unit contract price for "Colored Stamped Cement Concrete" shall be full pay for all costs of labor, tools, materials, and equipment necessary to mix, pour, grade, finish, stamp, apply the colored release agent, apply the concrete sealer, and color the stamped concrete.

(February 2023, City of Auburn GSP)

Supplement Division 5 with the following section, including subsections:

5-09 Slurry Seal Surface Treatment

5-09.1 Description

This work consists of applying an emulsified asphalt slurry seal to prepared designated street surfaces in complete and strict accordance with these Special Provisions.

The slurry seal surface shall consist of a mixture of emulsified asphalt, mineral aggregate, and water, properly proportioned, mixed, and spread evenly on the surface as specified in this document. The cured slurry shall have a homogenous appearance, fill all cracks, adhere firmly to the surface, and have a skid resistant texture.

5-09.1(1) Applicable Specifications

The following specifications and methods are referenced as part of these Special Provisions:

AASHTO __ American Association of State Highway Testing Officials;
ASTM __ American Society for Testing and Materials;
ISSA __ International Slurry Seal Association.

5-09.2 Materials

5-09.2(1) Asphalt Emulsion

Emulsified asphalt shall conform to the requirement of ASTM or ISSA Specification for type SS1h, CSS1h, or Quick Setting Mixing Grade Emulsion.

5-09.2(2) Aggregate

The mineral aggregate shall consist of natural or manufactured sand, slag, crusher fines, and others or a combination thereof. Smooth-textured sand of less than 1.25% water absorption shall not exceed 50% of the total combined aggregate. The aggregate shall be clean and free of vegetable matter and other deleterious substances. When tested by AASHTO T176 or ASTM D2419, the aggregate blend shall have a sand equivalent of not less than 45. When tested according to AASHTO T104 or ASTM C88 the aggregate shall show a loss of not more than 15%. When tested according to AASHTO T-96 or ASTM C131 the aggregate shall show a loss of not more than 35. Mineral fillers such as Portland Cement, limestone dust, fly ash, and others shall be considered part of the blended aggregate and shall be used in minimum required amounts and must meet the gradation requirements of ASTM D242. Mineral fillers shall only be used if needed to improve the workability of the mix or gradation of the aggregate.

The combined mineral aggregate shall conform to the following gradation:

Sieve Size	Percent Passing (Type III)
½ inch – (12.5mm)	
3/8 inch – (9.5mm)	100
No. 4 (4.75mm)	70-90
No. 8 (2.36mm)	45-70
No. 16 (1.18mm)	28-50
No. 30 (0.600mm)	19-34
No. 50 (0.300mm)	12-25
No. 100 (0.150mm)	7-18
No. 200 (0.75mm)	5-15
Theoretical Asphalt **Content % Dry**	
Aggregate	6.5-12

5-09.2(3) Water

All water used with the slurry mixture shall be potable and free from harmful soluble salts.

5-09.2(4) Laboratory Testing

Sources for all materials shall be identified before they are required for use on the project. All samples must be taken according to previously mentioned procedures. All

materials shall be pretested in a qualified laboratory to determine their suitability for use in slurry. The theoretical asphalt content shall be determined. The laboratory shall also determine if mineral filler is required, and if so, how much should be used. Test samples shall be made and tested on a Wet Track Abrasion Machine.

The Contractor must submit the complete laboratory analysis and test report with abraded and unabraded slurry test samples, to the Engineer before application of the slurry seal can begin.

5-09.2(5) Stockpiling Of Aggregates

Precautions shall be taken to insure that stockpiles do not become contaminated with oversized rock, clay, silt, or excessive amounts of moisture. The stockpile shall be kept in areas that drain readily. Segregation of the aggregate will not be permitted.

5-09.2(6) Storage

The Contractor shall provide suitable storage facilities for the asphalt emulsion. The container shall be equipped to prevent water from entering the emulsion. Suitable heat shall be provided, if necessary, to prevent freezing.

5-09.2(7) Sampling

The Contractor shall furnish samples of materials and of the finished slurry surface during progress of the work. The Contractor may be requested to supply test reports as additional materials arrive.

5-09.2(8) Verification

Each machine will make test strips after calibration and before construction. Test strips shall be a portion of the project. Samples of the Slurry Seal will be taken and verification made as to mix consistency and proportioning. Verification of the rate of application will also be made. If any of the tests fail to meet minimum standards, additional test strips will be required until the Engineer approves each unit. These additional test strips will be performed at no additional cost to the City. Any unit failing to pass the tests after the third trial will not be permitted to work on the project. Test strips must be accepted or rejected within 24 hours after application.

5-09.3 Construction Requirements

5-09.3(1) Equipment

All equipment, tools, and machines used to perform this work shall be maintained in satisfactory working order at all times. Descriptive information on the slurry mixing and application equipment shall be submitted to the Engineer for approval not less than 5 working days before the work starts.

5-09.3(1)A Slurry Mixing Equipment

The slurry-mixing machine shall be a continuous flow-mixing unit and shall be capable of accurately delivering a predetermined proportion of aggregate, water, and asphalt emulsion to the mixing chamber and to discharge the thoroughly mixed product on a continuous basis. The aggregate shall be pre-wetted immediately before mixing with the emulsion. The mixing unit of the mixing chamber shall be capable of thoroughly blending all ingredients. No violent mixing is permitted. The mixing machine shall be equipped with an

approved fines feeder that provides an accurate metering device or method to introduce a predetermined proportion of mineral filler into the mixer at the same time and location as the aggregate. The fines feeder shall be used whenever added mineral filler is a part of the aggregate blend.

5-09.3(1)B Slurry Spreading Equipment

A mechanical type squeegee distributor shall be attached to the mixing machine. It shall be equipped with flexible material in contact with the pavement and shall be maintained to prevent loss of slurry from the distributor. It shall also be adjustable to ensure uniform spread. There shall be a steering device and a flexible strike-off. The spreader box shall have an adjustable width. The box shall be kept clean, and build-up of asphalt and aggregate on the box will not be permitted. The Engineer shall approve the use of burlap drags or other drags.

5-09.3(1)C Cleaning Equipment

Power brooms, power blowers, air compressors, water flushing equipment, and hand brooms shall be suitable for cleaning the surface and cracks of the old surface.

5-09.3(1)D Auxiliary Equipment

The Contractor shall provide hand squeegees, shovels, and other equipment as necessary to perform the required work.

5-09.3(1)E Calibration

Each slurry-mixing unit used to perform the work shall be calibrated in the presence of the Engineer, before construction. Documentation of previous calibration that covers the exact materials being used may be an acceptable substitute provided they were made during the same calendar year. The documentation shall include an individual calibration of each material at various settings that can be related to the machine's metering device(s). No machine will be allowed to work on the project until calibration has been completed and accepted.

5-09.3(2) Preparation of Surface

Immediately before applying the slurry, the surface shall be cleaned of all loose material, silt spots, vegetation, and other objectionable material. Any standard cleaning method to clean pavements is acceptable, except water flushing which is not permitted in areas where there are numerous cracks present in the pavement surface. The Engineer shall give final approval of the surface preparation.

5-09.3(3) Composition and Rate of Application of the Slurry Mix

The amount of asphalt emulsion to be blended with the aggregate shall be as determined by the laboratory report after final adjustment in the field. A minimum amount of water shall be added as necessary to obtain a fluid and homogeneous mixture. The rate of application shall be at least 15 pounds per square yard but not greater than 20 pounds per square yard.

Adjustment may be required during construction based on field conditions. The Engineer will give final approval for all such adjustments.

5-09.3(4) Weather Limitations

The slurry seal surface shall not be applied if either the pavement or air temperatures are 55 degrees F or below and falling, but may be applied when both the air and pavement temperatures are 45 degrees F or above and rising. The mixture should not be applied if high relative humidity prolongs curing beyond a reasonable time.

5-09.3(5) Traffic Control

The Contractor is responsible for all Traffic Control. Suitable methods such as barricades, flaggers, pilot cars, etc., shall be used to protect the uncured slurry surface from all types of traffic. Any damage caused by the Contractor's negligence to the uncured slurry will be the responsibility of the Contractor. The Engineer shall give final approval to the traffic control methods used.

5-09.3(6) Application of Slurry Surfaces

5-09.3(6)A General

The surface may be pre-wetted by fogging ahead of the slurry box if required by local conditions. Water used in pre-wetting the surface shall be applied at a rate so that the entire surface is damp with no apparent flowing water in front of the slurry box. The slurry mixture shall be of the desired consistency when deposited on the surface and no additional elements shall be added. Total time of mixing shall not exceed 4 minutes. A sufficient amount of slurry shall be carried in all parts of the spreader at all times so that complete coverage is obtained. No lumping, balling or unmixed aggregate shall be permitted. If the coarse aggregate settles to the bottom of the mix, the slurry will be removed from the pavement. No excessive breaking of the emulsion will be allowed in the spreader box. No streaks, such as those caused by oversized aggregate, will be left in the finished pavement.

5-09.3(6)B Joints

Neither excessive build-up nor unsightly appearance shall be permitted on longitudinal or transverse joints.

5-09.3(6)C Hand Work

Approved squeegees shall be used to spread slurry in areas not accessible to the slurry mixer. Care shall be exercised so that no unsightly appearance results from handwork.

5-09.3(6)D Curing

Treated areas will be allowed to cure until the Engineer permits their opening to traffic.

Rolling is normally not required on slurry surfaces. However, in areas of slow turning traffic the paved surface should be rolled by a five-ton roller. The paved area should be subjected to a minimum of five coverages. If a pneumatic roller is used, it should be operated at a tire pressure of 50 pounds per square inch.

5-09.3(6)E Protection of Existing Monuments and Utility Covers

The Contractor shall protect all existing survey monuments and utility covers during the resurfacing operation by placing a paper plate or similar material over them. Following the resurfacing operation, paper plates or similar materials shall then be removed to leave the monuments clean and exposed.

(City Contracts, February 2023, City of Auburn GSP)

Supplement this section with these subsections:

5-09.4 Measurement

"Slurry Seal Surface Treatment" will be measured by the square yard of work completed and accepted.

5-09.5 Payment

Payment will be made for each of the following Bid items that are included in the Proposal:

"Slurry Seal Surface Treatment", Per Square Yard

Payment for "Slurry Seal Surface Treatment" shall include all costs to complete the work, including, but not limited to surface preparation, calibration, furnishing and applying slurry treatment, and curing.

(February 2023, City of Auburn GSP)

Supplement Division 5 with the following section, including subsections:

5-10 Non-Woven Fabric for Pavement Overlays

(January 2018, City of Auburn GSP)

5-10.1 Description

(January 2018, City of Auburn GSP)

This work consists of placing Non-woven Fabric for pavement overlays as shown in the Plans.

5-10.2 Materials

(April 2020, City of Auburn GSP)

Asphalt Binder PG 58H-22 per Section 9-02 (Bituminous Materials).

Fabric: Non-woven polypropylene material.

Elastic Recovery, at 15 pounds wet or dry	**100%**
Weight	**3 to 5 oz./square yard**
Tensile Strength, either direction	**80 pounds minimum**
Elongation	**50% minimum**
Asphalt Retention	**0.2 gallons/square yard minimum**
Melting Point	**300 degrees or greater**
Minimum Width	**75 inches**

5-10.3 Construction Requirements

(January 2018, City of Auburn GSP)

Equipment Requirements

All equipment, tools, and machines are subject to the approval of the Engineer.

Surface cleaning equipment shall be capable of removing oil, grease, and other objectionable materials from the pavement surface.

Application equipment shall consist of brooms and distributor. The distributor shall have a capacity of not less than 1,000 gallons. Asphalt shall be uniformly applied at the specified rate.

The distributor shall be equipped with a 10-foot spray bar and extensions, pressure pump and gauge, volume gauge located to be easily read by an inspector from the ground, a tachometer to accurately control the speed and spread of the asphalt, and two thermometers indicating continuous asphalt temperatures, (one of which is permanently installed).

An independent power unit developing a minimum of 25-psi pressure at the spray bar shall supply power for the pressure pump.

Surface Preparation

The pavement surface shall be dry and free of all foreign materials such as dirt, grease, oil, etc. Cracks shall be filled per Section 5-04.3(4)A (Crack Sealing). Holes shall be repaired per Section 5-04.3(4)C (Pavement Repair).

Where existing Asphalt Concrete Pavement depths are 2 inches or less, soil residual herbicide shall be applied to the roadway surface per Section 5-04.3(4)B (Soil Residual Herbicide).

Asphalt Application

The asphalt, with a minimum temperature of 290 degrees F, shall be sprayed uniformly at the rate of 0.25 to 0.30 gallons per square yard over the area to be fabric covered. The Contractor shall shield the preceding application to avoid laps and ridges where separate applications of asphalt meet. In inaccessible areas asphalt application may be provided by a suitable hand sprayer.

Fabric Application

The Contractor shall not begin fabric application until the Engineer has determined that all materials, equipment, and labor are ready.

Fabric cannot be moved once placed, therefore, the initial alignment is very important. If alignment is to be changed, the fabric shall be cut and realigned with an overlapping joint a minimum of 6 inches in the direction of traffic. Fabric shall be also lapped a minimum of 6 inches at transverse and longitudinal fabric joints. The lapped top 6 inches of fabric shall be folded back and asphalt shall be applied to the bottom fabric at the rate of 0.05 gallons per square yard. The top fabric shall be immediately replaced and the joint shall be broomed and squeegeed to form a smooth, tight lapjoint.

The fabric shall be broomed into the asphalt eliminating all air bubbles. Air bubble removal can be best accomplished by brooming from the center of the fabric toward the outer edges.

Membrane Curing

The entire surface of the fabric shall be pneumatically rolled until the fabric is well embedded into the asphalt.

Asphalt Concrete Overlay

The asphalt concrete overlay shall immediately follow the fabric installation in accordance with Section 5-04 (Hot Mix Asphalt (HMA)).

The fabric manufacturer's recommendations and requirements regarding asphalt temperature, protection of fabric, rolling temperature and techniques, etc., shall be followed.

A representative of the manufacturer shall be on the project at the beginning of fabric placement. The representative shall remain on the site until the Contractor has demonstrated to the Engineer an understanding required to satisfactorily perform the work.

The Contractor shall not place more fabric than can be overlaid in the same day.

No fabric, except that which is required for normal lapped joints, shall be exposed to traffic. If traffic must drive on the fabric, the fabric shall be dusted with sand to prevent vehicles from picking up the asphalt. Before resuming asphalt overlay, the sand shall be swept clean from the fabric.

(City Contracts, February 2023, City of Auburn GSP)

Supplement this section with these subsections:

5-10.4 Measurement

(City Contracts, January 2018, City of Auburn GSP)

"Non-Woven Fabric" will be measured by the square yard of area actually covered.

5-10.5 Payment

(City Contracts, January 2018, City of Auburn GSP)

Payment will be made for each of the following Bid items that are included in the Proposal:

"Non-Woven Fabric", Per Square Yard

Payment for "Non-Woven Fabric" shall include all costs to complete the work, including, but not limited to surface preparation, furnishing and applying asphalt, furnishing and applying fabric, and curing.

(February 2023, City of Auburn GSP)

Supplement Division 5 with the following section, including subsections:

5-11 High Friction Surface Treatment

5-11.1 Description

This work consists of applying a High Friction Surface Treatment (HFST) consisting of one application of a single layer of a binder resin system covered with a single layer of calcined bauxite aggregate as shown.

5-11.1(1) Definitions

High Friction Surface Treatment (HFST) – A product composed of calcined bauxite bound with a polymeric resin.

5-11.2 Materials

5-11.2(1) Aggregate

Furnish calcined bauxite aggregate meeting the requirements listed below. Deliver the aggregate to the construction site in super sacks labeled clearly for identification. Provide aggregate that is virgin, clean, dry, and free from foreign matter. A sample of the aggregate lot/batch shall be supplied upon request.
Aggregate Requirements

Property	Test Method	Requirement
Aggregate Gradation: % Passing the #4 sieve Minimum % Passing the #6 sieve Maximum % Passing the #16 sieve	AASHTO T27 & T11	 100 95 5
Los Angeles Abrasion, % Max (Loss after 100 Revolutions)	AASHTO T96	10
Moisture Content, % Maximum	AASHTO T 255 (note 1)	0.2
Aluminum Oxide Content, % Minimum	ASTM C-25	87

Notes 1: For each application, perform AASHTO T 255 within 3 hours of and prior to placement of the HFST material.

5-11.2(2) Binder Resin System

Provide a modified binder resin system, meeting the requirements below, recommended by the manufacturer as suitable for use on the intended pavement surface and for the potential range of atmospheric exposure. A sample of the resin binder system for each lot/batch shall be supplied upon request.

Epoxy Resin Binder Material Properties Requirements

Property	Test Method	Requirements Polymeric Resin
Viscosity, Poises	ASTM D 2556 (note 1)	Class C: 7 – 30
Gel Time	AASHTO M 235 (note 2)	Class C: 10 minute: min.
Ultimate Tensile Strength, psi	AASHTO M 235 (note 3)	2,000 – 5,000
Elongation at Break	AASHTO M 235 (note 4)	30 – 70%
Water Absorption, %	AASHTO M 235 (note 5)	1 max.

Durometer Hardness (Shore D)	AASHTO D2240 (note 6)	60 – 80
Compressive Strength, psi	ASTM C 579 (note 7)	1,000 min. (3 hours) 5,000 min. (7 days)
Cure Rate (Dry through time), hours	ASTM D 1640, 55 mil wet thickness @ 75 °F (note 8)	3 max.
Mixing Ratio	Provide manufacturer's recommendations a minimum of 60 days prior to construction.	Per Manufacturer
Adhesion Strength, psi @ 24 hrs	ASTM D 7234 (note 9)	250 min. or 100% substrate failure
Infrared Spectrum	AASHTO T 237	Note 10

Notes:

1. Prepare a one pint sample per manufacturer's recommendation and mix for 2 to 3 minutes before testing. Use X1.1 for Spindle Selection. Perform testing at a temperature of 73 ± 2°F [23 ± 1°C].
2. Prepare a 60g sample per manufacturer's recommendation. Perform testing at a temperature of 73 ± 2°F [23 ± 1 °C].
3. Prepare sample as per manufacturer's recommendation. Prepare Type I specimens in accordance with ASTM D638. Cure specimens for 7 days at 73 ± 2°F [23 ± 1 °C] and 50 ± 2°F [10 ± 1 °C]. Test specimens at 73 ± 2°F [23 ± 1°C] without delay.
4. Prepare sample as per manufacturer's recommendation. Prepare Type I specimens in accordance with ASTM D638. Cure specimens for 7 days at 73 ± 2°F [23 ± 1 °C] and 50 ± 2°F [10 ± 1 °C]. Test specimens at 73 ± 2°F [23 ± 1°C] without delay
5. Prepare sample as per manufacturer's recommendation. Cure specimens for 7 days at 73 ± 2°F [23 ± 1°C] and 50± 2°F [10 ± 1°C]. Test specimens at 73 ± 2°F [23 ± 1°C] without delay after immersion.
6. Prepare sample as per manufacturer's recommendation. Use the Type 1 Precision-Type D Durometer Method. Cure specimens for 7 days at 73 ± 2°F [23 ± 1°C] and 50 ± 2°F [10 ± 1°C]. Test specimens at 73 ± 2°F [23 ± 1°C] without delay.
7. Prepare sample as per manufacturer's recommendation. Prepare specimen according to Method "B", 2" x 2" cube, using 2.75 parts of sand to one part of mixed polymer resin binder by volume. Sand shall meet ASTM C778, 20-30 sand. Cure specimens at 73 ± 2°F [23 ± 1°C] and 50 ± 2°F [10 ± 1°C]. Test specimens at 73 ± 2°F [23 ± 1°C] without delay.
8. Prepare sample as per manufacturer's recommendation. Prepare a specimen of 50-55 wet mil thickness. Cure specimens for 3 hours max at 73 ± 2°F [23 ± 1°C] and 50± 2°F [10 ± 1°C]. Test specimens at 73 ± 2°F [23 ± 1°C] without delay.
9. Prepare sample as per manufacturer's recommendation. Use method D, E, or F with a 2 inch loading fixture. Cure specimens for 24 hours at 73 ± 2°F [23 ± 1°C] and 50± 2°F [10 ± 1°C]. Test specimens at 73 ± 2°F [23 ± 1°C] without delay.

10. To be established by each manufacturer for each individual component and combination of components.

5-11.2(3) Manufacturer's Certificate of Compliance

Submit a Manufacturer's Certificate of Compliance and supporting tests for the Binder Resin System and HFST aggregate demonstrating compliance with these specification requirements a minimum of 14 calendar days prior to the start of HFST Work.

5-11.2(4) Quality Control (QC) Plan

Submit a QC Plan to the Project Manager for approval at least 30 days prior to the placement. The QC Plan shall show proposed methods to control the equipment, materials, mixing, and paving operations to ensure conformance with these specifications. Discuss the QC Plan requirements at the pre-construction, pre-placement, and progress meetings. The QC Plan shall contain at a minimum the following information.

(a) Key Personnel and contact information.
(b) Moisture control methods of aggregate.
l List of manufacturer recommendations for the following:
Method of Surface Preparation and required surface condition for adequate bonding;
Crack Repair and slurry requirements;
Weather, moisture and temperature requirements and a plan for the chance/or occurrence of a rain event;
Mixing ratio and application rates for polymer resin and aggregate;
Application methods; and
Curing time and requirements for opening to traffic.
(d) Cleaning and maintenance schedule for truck mounted application machine, including metering and monitoring devicel(e) Corrective actions that will be taken for unsatisfactory construction practices and d eviations from specifications.

The QC Plan shall designate a QC Manager, who shall have full authority to institute any action necessary for the successful operation of the QC Plan. The QC Manager shall be on the jobsite at all times during placement of the HFST.

A field technician shall be present at the job site unless otherwise approved in the QC Plan. The field technician shall be responsible for the required field quality control sampling and testing in conformance with the approved quality control plan and contract documents. All sampling shall be performed in the presence of and in locations as directed by the Engineer. Maintain and make available upon request complete records of sampling, testing, actions taken to correct problems, and quality control inspection results. Any deviation from the approved QC Plan shall be cause for immediate suspension of operations.

5-11.3 Construction Requirements

5-11.3(1) Equipment

Provide a Truck Mounted Application Machine, air compressor, portable shot blast equipment, regenerative air sweeper and other necessary equipment to insure efficient

operation and construction to meet specified results. Provide equipment in sufficient number and capacities that will provide coordinated and uniform progress of the work. .

5-11.3(1)A Truck Mounted Application Machine

The HFST application machine shall be an HFST system manufacturer approved self-propelled, fully automated truck mounted application machine capable of continuously applying resin and aggregate at a uniform thickness and rate, respectively, in varying widths of up to 12 ft.

The application machine shall be capable of continuously and thoroughly mixing epoxy resin binder components to the ratio recommended by the epoxy resin binder manufacturer (±2 percent by volume). The epoxy resin binder shall be uniformly applied to the pavement surface at a minimum coverage rate of 12 gals/min with a uniform application thickness of 55-65 mils.

The aggregate shall be applied by the same application machine which includes an aggregate drop spreader capable of mechanically continuously spreading bauxite aggregate at a rate of 12-15 lb/sqyd, with a maximum height from spreader to pavement surface of 12 in. to achieve proper spread of aggregate. The use of chip spreaders, vehicle tires, rollers, vibratory compactors or devices that throw loose aggregate onto any part of the live roadway lanes will not be allowed to apply the aggregate onto the wet uncured resin.

The HFST application machine shall be capable of the uniform application of the epoxy resin binder and aggregate at a minimum continuous application rate of 2,300 sq yd/hour.

5-11.3(1)B Air Compressor

The air compressor shall be capable of producing a minimum pressure of 90 psi at the end of the discharge hose. The air stream shall discharge onto the pavement through an appropriate air lance. The tool lubricator shall be bypassed and a filter installed on the discharge valve to keep water and oil out of the line.

5-11.3(1)C Shot Blasting Equipment

Furnish mono-directional or bi-directional electric powered shot blast machines with single or multiple blast wheels that cover a width of at least 2.5 feet per pass, and conform to EPA air pollution requirements by containing dust and steel abrasive media. If the equipment is not equipped for simultaneous bi-directional blasting, make separate passes in opposite direction to ensure equal cleaning on all side of exposed aggregate.

5-11.3(1)D Regenerative Air Sweeper (RAS)

The Regenerative Air Sweeper (RAS) shall be self-propelled with power brooms capable of cleaning the existing pavement and removing loose aggregate without dislodging the bonded HFST aggregate. The regenerative air vacuum sweeper shall blast re-circulated, filtered air through a vacuum head having a minimum width of 6.0 feet at a minimum rate of 10,000 cubic feet per minute. The RAS shall be capable of being used without water for dust suppression to ensure a dry surface will be maintained.

5-11.3(2) Labor

5-11.3(2)A Manufa'turer's Representative

The manufacturer of the binder resin system is required to have a representative at the pre-construction or pre-placement meeting and at the construction site to provide technical assistance to the Engineer and Contractor personnel before placement of the high friction surface treatment and as necessary during the surface preparation, material placement and during any necessary corrective actions. Follow the recommendations of the manufa'turer's representative when installing the HFST. Instruct the manufa'turer's representative to alert the Contractor and the Engineer of anything that could affect the performance of 'he HFST.

5-11.3(2)B Applicator Qualifications

A minimum of 10 calendar days prior to the pre-placement meeting, the Contractor shall submit these following qualifications: a minimum of 3 projects with the'owner's contact information on which the HFST Contractor has installed a cumulative minimum of 10,000 square yards of HFST using applicator vehicle equipped with an automated continuous application device within the past three years demonstrating a friction reading of 65 FN40R or higher when tested in accordance to ASTM E 274, or 0.80 when tested according to ASTM E 1911. An installer who does not meet this minimum shall be allowed if they are certified by the manufacturer to install and a manufa'turer's representative is onsite during all installations.

5-11.3(2)C Quality Control Personnel

QC Manager, Field Technician

5-11.3(3) Construction

5-11.3(3)A General

Do not begin HFST installation until all materials and equipment necessary to perform the installation and all required repairs are at the job site.

(a) Season, Weather & Temperature Limitations – Apply the epoxy resin binder material on dry surfaces (including no condensation moisture from construction vehicles in front of binder application), when the ambient temperature is within the following range.

Minimum Temperature (surface and ambient): The minimum temperature at time of placement shall be 55 ˚F and rising, unless the epoxy resin manufacturer can provide test data to support installations at lower temperatures.

Maximum Temperature (surface and ambient): The maximum temperature at time of placement shall be 105 ˚F or when the anticipated weather conditions or pavement surface temperature would prevent the proper application of the surface treatment in accordance with the manufacturer's recommendations.

Ensure the epoxy resin components are capable of being mixed at lower than ambient temperatures in the event that the components are stored outdoors.

Do not place HFST within 72 hours of a rain event, and when rain is forecast within 24 hours of application. When there is a 40% or greater chance of rain forecasted within 24 hours of application the Contractor will discuss a plan of action as required by 5-06.2(4), Quality Control (QC) Plan. Do not place the high friction surface treatment if the material can't be applied, cured and open to traffic prior to the ambient temperature decreasing to 40ºF, surface temperature decreasing to 50ºF and/or it begins to rain; or the contractor will remove and replace said section of treatment.

There shall be no visible, or near surface moisture present in or on the pavement surface at the time of application of the HFST. A plastic sheet left taped in place for a minimum of two hours, according to ASTM D 4263, shall be used to identify moisture in the pavement.

(b) Handling of Mate–ials - Deliver aggregate to the construction site in clearly labeled bags or sacks that are uniquely identifiable and shall include the following: manufactures batch #, lot # and date. Protect materials from moisture and contaminants. Protect the epoxy resin binder materials from temperatures according to the manufacturer's requirements.

Pre-Placement Me–ting - Five (5) working days prior to the Contractor beginning the work, a pre-activity meeting will be held between the Contractor, resin binder system manufa'turer's representative, the Engineer and such other interested parties as may be invited. The purpose of the pre-activity meeting wil

(c) l be:

1. To review the initial progress schedule;
2. To establish a working understanding among the various parties associated or affected by the work;
3. To establish and review procedures for progress payment, notifications, approvals, submittals, etc.
4. To establish working hours for the work;
5. To review safety standards and traffic control; and
6. To discuss such other related items as may be pertinent to the work.

5-11.3(3)B Surface Preparation:

Prior to placement of the HFST remove, or protect as shown all reflective markers, durable pavement markings, and legends from pavement surfaces by hydro, sand or shot blasting. Cover or otherwise protect all drainage structures, utility covers, expansion joints, curbs, and any other structure within the enclosed surface area of HFST prior to HFST placement.

Temporarily block all drains and catch basins while preparing the surface and placing the HFST. Do not allow any sawing, sandblasting, shot-blasting, sweeping, water blasting, cleaning, flushing, or HFST material to enter drains, or catch basins.

The surface to receive the HFST shall be thoroughly clean, dry and free of all dust, oil, debris and other deleterious materials. Pavement surfaces contaminated with oils, greases, or other deleterious materials not removed by the surface preparation shall be washed with a detergent solution, rinsed with clean water, and dried using a hot compressed air lance.

Where HFST will be applied on either new ACP or new concrete surface or patches in a project, construct the HFST a minimum of 30 days after placement of underlying and adjacent pavement.

Clean asphalt pavement surfaces using mechanical sweepers and high pressure air wash with sufficient oil traps. Mechanically sweep all surfaces to remove dirt, loose aggregate, debris, and deleterious material. Vacuum sweep or air wash using a minimum of 180 cfm of clean and dry compressed air, all surfaces to remove all dust, debris, and deleterious material. Maintain the tip of the air lance within 12 inches of the surface.

Clean concrete pavement surfaces by shot blasting and vacuum sweeping. Shot blast all surfaces to remove all curing compounds, loosely bonded mortar, surface carbonation, and deleterious material. The prepared surface shall comply with the International Concrete Repair Institute (ICRI) standard for surface roughness CSP 5. After shot blasting, vacuum sweep or air wash, with a minimum of 180 cfm of clean and dry compressed air, all surfaces to remove all dust, debris, and deleterious material. Maintain air lance perpendicular to the surface and the tip of the air lance within 12 in. of the surface.

Do not allow HFST materials to cover or penetrate joints in concrete pavements.

Clean and fill all cracks greater than ¼ inch in width and/or depth. Fill cracks with a slurry created with the epoxy resin binder and aggregate specified herein. Once the slurry in the pretreated areas has gelled proceed with the installation of the high friction surface treatment.

Do not allow general traffic on the prepared pavement surfaces.

A prime coat shall be applied if required by the epoxy resin binder system manufacturer. The prime coat shall be applied in accordance with the epoxy resin binder system manufa’turer's recommended application procedures.

Do not place HFST on new ACP or concrete pavements prior to the elapse of a 30 calendar day cure period.

5-11.3(3)C Installation

The binder resin system shall be mixed and placed onto the pavement using a Truck Mounted Application Machine at a uniform application thickness of 50-65 mils (25-32 sf /gal). If recommended by the Binder manufacturer, use a heated metering pump. The binder resin system shall be blended and mixed within 2% of the ratio recommended by the manufacturer and shall be continuously applied once blended. Flow meter readings shall be recorded and supplied to the Engineer.

Immediately and prior to the epoxy resin system gelling, apply the calcined bauxite aggregate using the same integrated application truck and at a uniform rate of 12-15 lbs. per square yard. Completely cover the Binder Resin System with the aggregate to achieve a uniform surface with no exposed resin binder visible on the surface.

It is the responsibility of the HFST installer to ensure full embedment of the calcined bauxite aggregate.

Irregular areas or areas outside the travel lane of less than 250 square yards in area that are inaccessible to truck mounted application machine may be placed by hand methods in accordance with the epoxy resin binder system manufa'turer's recommendations.

Cover wet spots with the aggregate prior to the gelling of the epoxy resin binder system. Equipment and traffic shall not be allowed on the HFST until cured to the epoxy resin binder system manufacturer's recommendations.

A new continuous section of HFST placement shall be delineated whenever the following occur:

- Installation process stops for a period of time exceeding the curing time of the resin binder, resulting in a cold joint in the HFST.

  Any time there is a change in the installation process, such as a switch from machine applied to hand applied or hand applied to machine ap

- plied

Place the calcined bauxite fully covering the polymer binder such that none of the binder is exposed. Do not allow the mixed material to separate, cure, dry, be exposed or otherwise harden in such a way as to impair retention and bonding of the high friction surfacing aggregate. Remove and replace any section of wet, uncured resin that is contacted by foreign material or becomes contaminated at the contractor's expense.

Recovered, uncontaminated, clean and dry calcined bauxite aggregate may only be reused once. Recovered aggregate must be blended with new aggregate at a rate of 3:1 (three parts of new calcined bauxite to one part recovered bauxite). Provide a written record of the recovered aggregate and mark containers holding the recovered aggregate as "Recovered Calcined Bauxite" with the project number.

5-11.3(3)D Clean up

Remove excess and loose aggregate from the traveled way and shoulders using the Regenerative Air Sweeper following initial installation once the application has cured. Sweep an application of HFST on highway ramps a second time 24-48 hours after application. Sweep the entire HFST application area a final time 3-5 days after installation and as directed by the Engineer.

5-11.3(3) E- Post-installation Dynamic Friction Testing

The agency will use Dynamic Friction Testing (DFT) to measure the friction characteristics of the high friction surface treatment in accordance with ASTM E 1911 within five days after the placement (once the surface is deemed cured) of each continuous section and again 90 days after the initial test of each continuous section. The initial test of the surface may be conducted as early as the same day and as late as the 5th day. The earliest the Agency may conduct the second round of testing on each continuous section shall be a minimum of 90 days after the installation. A minimum DFT result of 0.90 is required within 5 days after placement of the high friction surface treatment and a minimum of 0.80 is required 90 days after completion of the high friction surface treatment for each reading.

a) The DFT testing will be conducted on each continuous section as stated below.

The first test location should be within the first 25 LF of the continuous section, and the second test should be at least 200 LF beyond the first test, unless the continuous section is less than 225 LF, in which case it should be located at the approximate midpoint of the continuous section. Each subsequent test should be conducted 200 LF beyond the last test for each continuous section. If the first four DFT testing results are satisfactory, the frequency of testing may be decreased to one DFT test for every 1000 LF as approved by the Engi

b) neer.

Each test location shall contain 3 separate tests. Each test shall report the DFT values for 12, 24, and 36

c) mph.

Testing will be conducted in right or left wheel path of a lane, approximately 3 LF from the centerline or shoulder stripe or in the apparent wheel

d) path.

Additional DFT tests will be conducted at the location of any surface anomalies or deficiencies, at the discretion of the Engineer. Anomalies which may require an additional test from the agency include but are not limite

e) d to:

1) Locations where the resin shows through the aggregate.

Locations of surface defects/impressions from construction operations (e.g. wheel and foot tra

2) cks).

Locations of manual patching after completion of installa

3) tion.

Test locations where the friction values are as described in item (g) b

4) elow.

f) Note the location of any continuous sections where any friction values fall below the specification limit of 0.90 at 35 mph.

Note any continuous sections where the friction values from the two DFT tests differ by more than 10 percent, regardless of whether the friction value was above the

specification limit. Note any continuous sections with a single DFT test where the friction value differs by more than 10 percent from the previous continuous sec

g) tion.

5-11.3(3)F Post-installation Bond Strength Test

Before opening to traffic, perform a minimum of two bond strength tests and no less than two bond tests per 500 feet of each HFST placement per ASTM D 7234 for each complete placement in the presence of and at locations designated by the Engineer. Cut 2 or 3 inch diameter cores and conduct bond tests on the cores.

The bond tests consist of:

- Coring through the HFST and approximately 1 inch into the existing pavement surface.
- Attaching a device to the top of the core.
- Exerting a tensile load to the core sufficient to cause failure or achieve 250 psi, whichever occurs first.

Perform bond tests when the pavement surface temperature is less than 80 °F.

A successful test is the failure of the substrate, or 250 psi loading without failure of the HFST-substrate bond.

After coring and testing, restore the area voided by the cores by blowing with compressed air and filling with HFST material.

Additional bond strength tests may be required by the Engineer. Additional bond strength tests, performed by the Contractor when required by the Engineer that show successful results will be paid in accordance with Section 1-09.6. The Engineer may self-perform bond strength tests, in addition to those performed by the Contractor to the same limits shown above.

5-11.3(4) Maintenance

5-11.3(4)A Correction of Defects

Correct all defects in material and work, as directed, at no additional cost to the Agency, according to the following:

Remove and replace high friction surface treatment that the Engineer determines has any raveling, delamination, streaking, bond test failure or failure to meet the DFT friction values following initial testing and the testing done after a minimum of 90 days following placement. Ensure the minimum replacement is the full lane width and no less than ten feet long and as approved by the Engineer. Replace with acceptable high friction surface treatment at the Contractor’s expense. Replaced areas will be retested and evaluated according to 5-06.3(3)E and 5-06.3(3)F for acceptance or further corrective action.

Any roadway features disturbed by the work or the Contractor's operations shall be restored in like kind materials and design as directed by the Engineer at no additional cost to the agency.

(City Contracts, February 2023, City of Auburn GSP)

Supplement this section with these subsections:

5-11.4 Measurement

The quantities of high friction surface treatment will be measured on a square yard basis, and will be the sealed surface area, and will be limited to the neat lines and dimensions shown or directed.

5-11.5 Payment

Payment will be made for each of the following Bid items that are included in the Proposal:

"High Friction Surface Treatment", per Square Yard

The unit Contract price per square yard for "High Friction Surface Treatment" shall be full compensation for all costs incurred to carry out the requirements of Section 5-06 including but not limited to furnishing and placing all materials and equipment, labor, testing, retesting, road surface preparation and incidentals necessary to complete the work as specified.
Payment for work done under this section will be limited to 90% upon passing 5-day DFT testing and 100% following passing 90 day DFT testing

No separate or additional payment will be made for reinstallation and retesting of HFST where the initial installation was determined to be defective.

END OF DIVISION 5

DIVISION 6 Structures

6-02 Concrete Structures

6-02.1 Description

(January 2017 City of Auburn GSP)

Supplement this section with the following:

This work shall consist of constructing cast-in-place cement concrete walls as shown on the Plans.

6-02.4 Measurement

(City Contracts, January 2017 City of Auburn GSP)

Supplement this section with the following:

"Cement Concrete Wall" shall be measured by the square foot, from the bottom of the concrete footing to the top of the finished wall.

6-02.5 Payment

(City Contracts, April 2017 City of Auburn GSP)

Supplement this section with the following:

Payment will be made for each of the following Bid items that are included in the Proposal:

"Cement Concrete Wall", Per Square Foot

The Unit contract price per square foot for "Cement Concrete Wall" shall be full pay for all labor, tools, equipment and materials required to construct the wall, including all costs for formwork, weep holes, reinforcement and other integral items to the construction and function of the wall structure.

6-07 PAINTING

6-07.1 Description

(February 2024 City of Auburn GSP)

Supplement this section with the following:

This work shall consist of painting and applying painting systems to metal roadway luminaires and metal luminaire parts to downtown decorative lighting and traffic signals.

6-07.2 Materials

(January 2018 City of Auburn GSP)

Supplement this section with the following:

Paint materials shall comply with the requirements in Section 9-08 unless described in this section.

The Contractor shall submit 3 samples of the color specified, textures, and gloss for approval. Metal coupon samples shall be 3 inches by 5 inches. Paint color and paint system shall be as shown in the following table for the following items:

Specification Section	Item	Paint Color	Paint system
9-29.6(1)A	New Decorative Traffic Signal Poles and Mast arms, Luminaire Arms	RAL #9004 "Signal Black"	Polyester TGIC Powder Coating by Tiger Drylac (or approved alternate))
9-29.10(2)	New Decorative Roadway Luminaires	RAL #9004 "Signal Black"	Polyester TGIC Powder Coating by Tiger Drylac (or approved alternate)

All steel hardware components and materials shall be galvanized to meet ASTM 153 requirements.

6-07.3(10)H Paint System

(January 2018 City of Auburn GSP)

Delete this section and replace it with the following:

The paint system applied to new steel surfaces shall consist of the following five-coat system:

Primer Stripe Coat:	Section 9-08.1(2)F
Primer Coat:	Section 9-08.1(2)F
Intermediate Stripe Coat:	Section 9-08.1(2)G
Intermediate Coat:	Section 9-08.1(2)G
Top Coat:	Section 9-08.1(2)H

The powder coat system shall be factory primed and powder coat to a minimum of 3.0-mils in accordance to the manufacturer's recommendation and shall meet the following performance requirements when performed at a minimum film thickness of 3.0 mils:

Property	Specification	Performance Requirement
Salt Spray Resistance	ASTM B117	Minimum required by the Specification
Humidity Resistance	ASTM D2247	Minimum required by the Specification
Weatherability	ASTM 336	Minimum required by the Specification

Chemical and Solvent Resistance	-	Polyester family of powder coatings shall have a good resistance to most chemicals and solvents except alkalis and ketones. Verification should be made for each chemical or solvent proposed for use with the coating.

The paint system shall be approved for exterior application and UV-resistant.

Surface finish shall be of consistent and uniform color, texture, and gloss to match the approved sample.

6-07.3(10)I Paint Color

(January 2018 City of Auburn GSP)

Supplement this section with the following:

Surface finish shall be of consistent and uniform color, texture, and gloss to match the approved sample.

Prepare surfaces and touch-up damaged, missed and discolored areas to bring coating system to full dry film thickness, in color and gloss matching that of adjacent coated areas.

(January 2018 City of Auburn GSP)

Add the following new section:

6-07.3(15) Painting of Aluminum Surfaces

All aluminum items specified herein to be powder coated shall be factory primed and powder coated in accordance with the manufacturer's recommendations.

The paint color of aluminum surfaces shall be per 6-07.2

6-07.5 Payment

(City Contracts, January 2018 City of Auburn GSP)

Supplement this section with the following:

Measurement and payment for all painting and finishes shall be included in the lump sum bid item price for "Traffic Signal System_____" including all labor, equipment, materials and tools necessary to complete the work required by the Specifications.

END OF DIVISION 6

DIVISION 7 Drainage Structures, Storm Sewers, Sanitary Sewers, Water Mains and Conduits

7-01 Drains

7-01.2 Materials

(August 2016 City of Auburn GSP)

Replace the first two paragraphs after the list of materials with the following:

Non-perforated drainpipe shall be manufactured of polyvinyl chloride (PVC) and shall meet the requirements of Section 9-05.12 and perforated drain pipe shall be manufactured of PVC and meet the requirements of Section 9-05.2(6). Trench drains shall be Polydrain Part No. 420 with stainless steel grates Polydrain Part No. 440 or approved equivalent placed on cement concrete Class 4000 per Section 6-02 (Concrete Structures).

7-01.3 Construction Requirements

(January 2018 City of Auburn GSP)

Supplement this section with the following:

PVC drain pipe shall be used to connect existing roof drains and downspouts to the roadway drainage system. The amount of pipe shown in the proposal is approximate and provided for bidding purposes only.

The trench drain shall be installed per the manufacturer's recommendations and shall be flush with the cement concrete surface to provide the proper surface drainage control. The trench drain shall be connected to the nearest catch basin with drain pipe as shown on the Plans.

7-01.5 Payment

(City Contracts, April 2017, City of Auburn GSP)

Supplement this section with the following:

Payment will be made for each of the following Bid items that are included in the Proposal:

"Trench Drain", Per Linear Foot

(City Contracts, August 2016, City of Auburn GSP)

Revise reference to payment for Drain Pipe to the following:

The unit contract price for "Drain Pipe - ___In. Diam." Per linear foot shall be full pay for all work to complete the installation, including structure excavation and installation of bedding and backfill.

The unit contract price for "Trench Drain" per linear foot shall be full pay for all work to complete the installation, including structure excavation and installation of bedding and backfill.

7-04 Storm Sewers

7-04.2 Materials

(October 2021 City of Auburn GSP)

Replace the first paragraph and list of materials with the following:

Only the pipe materials listed below are approved for use on City storm sewer systems. Materials shall be in accordance with all provisions of the following sections:

Solid Wall Polyvinyl Chloride (PVC) Pipe, SDR-35	9-05.12(1) (Solid Wall PVC Culvert Pipe, Solid Wall PVC Storm Sewer Pipe, and Solid Wall PVC Sanitary Sewer Pipe)
Solid Wall Polyvinyl Chloride (PVC) Pipe, SDR-21	9-05.12(1) (Solid Wall PVC Culvert Pipe, Solid Wall PVC Storm Sewer Pipe, and Solid Wall PVC Sanitary Sewer Pipe)
Solid Wall Polyvinyl Chloride (PVC) Pipe, C900	9-05.12(1) (Solid Wall PVC Culvert Pipe, Solid Wall PVC Storm Sewer Pipe, and Solid Wall PVC Sanitary Sewer Pipe)
Ductile Iron Pipe, Special Class 50	9-05.13 (Ductile Iron Sewer Pipe)
High Density Polyethylene Pipe (HDPE)	9-05.23 (High Density Polyethylene Pipe (HDPE))
Triple Wall Polypropylene Culvert and Storm Sewer Pipe	9-05.24(1) (Polypropylene Culvert Pipe and Storm Sewer Pipe)

The laying length for PVC (SDR-35) shall not exceed 14 feet.

7-04.3 Construction Requirements

7-04.3(1)F Low Pressure Air Test for Storm Sewers Constructed of Non Air-Permeable Materials

(January 2017 City of Auburn GSP)

Supplement this section with the following:

If the test shows zero leakage after a five-minute test time, the Engineer has the authority to accept and end the test immediately.

(January 2017 City of Auburn GSP)

Add the following new section:

7-04.3(1)G Television Inspection

All of the provisions of 7-17.3(2)H (Television Inspection) shall apply.

7-04.4 Measurement

(City Contracts, January 2017 City of Auburn GSP)

Supplement this section with the following:

The television inspection work will be measured per linear foot.

7-04.5 Payment

(City Contracts, April 2017 City of Auburn GSP)

Supplement this section with the following:

Payment will be made for each of the following Bid items that are included in the Proposal:

"Solid Wall PVC Storm Pipe, SDR-35, ___ In. Diam.", Per Linear Foot

"Solid Wall PVC Storm Pipe, SDR-21, ___ In. Diam.", Per Linear Foot

"Ductile Iron Pipe, Special Class 52, Storm Pipe, ___ In. Diam.", Per Linear Foot

"Storm Sewer Television Inspection", Per Linear Foot

The unit contract price per linear foot for "Storm Sewer Television Inspection" shall be full pay for all work to complete the Television Inspection including all associated cleaning and flushing.

(City Contracts, October 2021 City of Auburn GSP)

Revise references to payment for storm sewer pipe to the following:

The unit contract price per linear foot for storm sewer pipe of the kind and size specified shall be full pay for all work to complete the installation including the following:

- Furnishing and installing pipe, pipe fittings, and other pipe appurtenances.
- Adjusting inverts to manholes and catch basins
- Testing of pipes
- Sawcutting (including additional sawcutting for pavement restoration)
- Trenching
- Structure Excavation Class B (including haul)
- Installing bedding and backfill materials within the trench
- Furnishing and installing temporary patches or steel plates over unfinished portions of trenches crossing traveled ways
- Disposal of surplus trench excavation
- General pipe installation work including plugs and connections
- Plugging existing pipes for abandonment
- Temporary plugs, bypass pumping, or both
- Normal Dewatering and disposal of groundwater

7-05 Manholes, Inlets, Catch Basins, and Drywells

7-05.2 Materials

(November 2020 City of Auburn GSP)

Supplement this section with the following:

Manholes shall be complete with frames and covers. All manhole frames and covers shall be bolt-down and from East Jordan Iron Works: EJ product #00370781 (Eon #3715ZPT Frame and #3705CPT Cover) for Sanitary Sewer and EJ product #00370782 (Eon #3717ZPT

Frame and #3705CPT Cover) for Storm Drainage, or approved equivalent. Catch Basins shall be complete with frames and grates unless otherwise specified on the Plans to be provided with solid metal covers or manhole frames and covers. Castings for manhole frames shall be gray iron or ductile iron and covers and grates shall be ductile iron. All storm sewer grates shall have the words "OUTFALL TO STREAMS, DUMP NO POLLUTANTS" cast in place. Manhole and catch basin steps and handholds shall be steel-reinforced copolymer polypropylene (ASTM D4101) with ½ inch steel reinforcing bar (ASTM A615 Grade 60) and in conformance with ASTM C478.

The fabricator of all precast sanitary manholes shall seal them with Tamoseal Cement Based Waterproof Finish or approved equivalent applied to all interior and exterior surfaces in accordance with the manufacturer's recommendations. The Contractor shall have adequate product on hand to seal any field modifications to sanitary sewer manholes.

(August 2016 City of Auburn GSP)

Add the following new section:

7-05.2(1) Trash Racks

Trash racks shall be constructed in accordance with Section 6-02 (Concrete Structures), 6-03 (Steel Structures), and as detailed in the Plans.

7-05.3 Construction Requirements

(January 2017 City of Auburn GSP)

Supplement this section with the following:

All pipes entering or leaving new or existing manholes, catch basins or inlets shall be placed on firmly compacted bedding, particularly within the area of the manhole excavation, which normally is deeper than that of the pipe trench. Special care shall be taken to see that the openings through which pipes or adapters penetrate the manhole are completely and firmly rammed full of non-shrink grout to ensure water tightness.

Manhole adapters shall be provided when connecting PVC or Polyethylene pipes to any new or existing manholes, catch basins or inlets. All manhole adapters for PVC and Polyethylene pipe shall be of a style as required and manufactured for the specific application with sufficient tangent at the ends to allow for proper joint connections. Field fabricated manhole adapters will not be permitted. All manhole adapters must have approval from the Engineer in writing before being installed.

See Section 2-09.3(3)D (Shoring and Cofferdams) for "Shoring or Extra Excavation Class B" and Section 7-08 (General Pipe Installation Requirements) for foundation material and imported bedding and backfill materials.

7-05.3(1) Adjusting Manholes & Catch Basins to Grade

(November 2020 City of Auburn GSP)

Supplement this section with the following:

Manholes or catch basins shall not be adjusted to finish grade until the asphalt paving is completed, at which time the center of each structure shall be carefully relocated from references previously established by the Contractor. The pavement shall be cut in a restricted area and the base material removed to permit removal of the frame or ring. The structure shall be adjusted to finish grade. Temporary access to manholes and catch basins shall be provided as soon as practical after paving.

The frame or ring shall be placed on concrete blocks and/or wedged up to the desired grade. When the Contract Plans call for rubberized adjustment risers, they shall be the Infra-Riser manufactured by EJCO, or approved equivalent. The asphalt concrete pavement shall be cut and removed, the dimensions of which shall be equal to the inside dimensions of the opening plus 2 feet. The base materials and crushed rock shall be removed and Class 3000 cement concrete shall be placed so that the entire volume of the excavation is replaced to within, but not to exceed 6 inches of the finished pavement surface. A quick setting admixture shall be added to the cement concrete backfill. Once manholes or catch basins have been adjusted to finished grade and the cement concrete backfill has cured (the day following placing the cement concrete), HMA Class ½-inch shall be placed and compacted with hand tampers and a patching roller within 48 hours.

7-05.3(3) Connections to Existing Manholes

(January 2017 City of Auburn GSP)

Supplement this section with the following:

Where shown in the Plans, new storm drain lines shall be extended to connect to an existing manhole. The pipe extension shall be the same diameter as the existing pipe. Dissimilar pipes shall be joined per Section 7-08.3(2)G (Jointing of Dissimilar Pipe) of these Special Provisions.

(August 2016 City of Auburn GSP)

Add the following new section:

7-05.3(5) Channels for Manholes

Channels for manholes shall be made to conform accurately to the sewer grade, and shall be brought together smoothly with well-rounded junctions. Channel sides shall be carried up vertically to the crown elevation of the various pipes, and the concrete shelf between channels shall be smoothly finished and warped evenly with slopes to drain towards the manhole outflow.

Channels for manholes shall be constructed with non-shrinking mortar. Mortar shall be composed of approximately one part Type II Portland Cement, 1½ to 2 parts sand, and 2 to 3 fluid ounces of water-reducing retarder per sack of cement. Sand, cement, and water shall be as specified for concrete. Water-reducing retarder shall meet ASTM C494 specification for chemical admixture for concrete.

(August 2016 City of Auburn GSP)

Add the following new section:

7-05.3(6) New Castings

Where new castings are indicated to be installed on existing structures in the Plans, the Contractor shall furnish and install new castings of the type specified. Casting shall include frame and grate, or ring and cover and new adjustment section(s) as necessary to set the casting to final grade. Install to the finished grade as shown.

Salvaged castings shall be cleaned and delivered to the City of Auburn as specified in Section 2-02.3(5) (Salvage).

7-05.4 Measurement

(City Contracts, August 2016 City of Auburn GSP)

Replace the first paragraph with the following:

Manholes, catch basins, and other structures listed in this section will be measured per each complete structure installed without adjustment for height.

(City Contracts, April 2019 City of Auburn GSP)

Replace the third paragraph with the following:

No measurement will be made for adjustment of new structures. Adjustment of existing manholes and catch basins will be measured per each.

(City Contracts, August 2016 City of Auburn GSP)

Replace the fourth paragraph with the following:

No measurement for structure excavation class B or structure excavation class B including haul will be made.

7-05.5 Payment

(City Contracts, April 2017 City of Auburn GSP)

Supplement this section with the following:

Payment will be made in accordance with Section 1-04.1 (Intent of the Contract) for the following bid items:

"Manhole Ring and Solid Cover", Per Each

"Trash Rack", Per Each

"Connect to Existing Catch Basin", Per Each

"Connect to Existing Manhole", Per Each

The unit contract prices per each for "Connect to Existing Catch Basin" and "Connect to Existing Manhole" shall be full pay for all work to complete the connection including all materials, labor, and equipment to extend the new pipe and connect to the existing structure.

The unit contract price per each for "Manhole Ring and Solid Cover" shall be full pay for all work, equipment and materials necessary to remove the existing manhole ring and cover and furnish and install a new manhole ring and cover, and to complete final adjustment to finish grade (including asphalt concrete patches).

(City Contracts, August 2022 City of Auburn GSP)

Revise references to payment for manholes, catch basins, and other structures listed in this section to the following:

The unit contract price per each for manholes, catch basins, and other structures listed in this section shall be full pay for all work to complete the installation including the following:

- Furnishing and installing structures, and structure accessories
- Testing of structures

- Sawcutting (including additional sawcutting for pavement restoration)
- Trenching
- Structure Excavation Class B (including haul).
- Installing bedding and backfill materials
- Furnishing and installing temporary patches or steel plates over unfinished portions of trenches crossing traveled ways
- Disposal of surplus excavation
- General structure installation work
- Plugging existing pipes for abandonment
- Extending existing pipes for making connections
- Connecting both new and existing pipes to the new drainage structure
- Temporary plugs, bypass pumping, or both
- Normal Dewatering and disposal of groundwater
- Protection of the structures during other work including construction of the roadway subgrade.
- Adjustment of the castings to final grade, including the castings and the surface restoration (including HMA pavement patching)

7-07 Cleaning Existing Drainage Structures

7-07.5 Payment

(City Contracts, November 2019 City of Auburn GSP)

Delete this section and replace it with the following:

Costs for the cleaning of facilities installed by the Contractor are included in the costs for those facilities and no separate payment for cleaning those facilities shall be made. Costs for cleaning existing facilities that accumulate debris, obstruction due to the Contractor's activities or due to inadequate temporary erosion and sedimentation control measures are the sole responsibility of the Contractor and no payment shall be made.

7-08 General Pipe Installation Requirements

7-08.1 Description

(January 2017 City of Auburn GSP)

Delete this section and replace it with the following:

This information shall cover the general requirements for installing culverts, storm sewers, sanitary sewers, and water mains. The Contractor shall also follow all provisions of Sections 7-02 (Culverts), 7-04 (Storm Sewers), 7-09 (Water Mains), 7-17 (Sanitary Sewers), and 1-07.23 (Public Convenience and Safety) as it applies to the specific kind of work. In case of conflicting specifications between Section 7-08 and 7-09, the specifications of Section 7-09 shall take precedence for the installation of water mains and appurtenances.

7-08.2 Materials

(January 2018 City of Auburn GSP)

Delete this section and replace it with the following:

Imported bedding, backfill and foundation material shall meet the requirements of the following sections:

Pipe Zone Bedding and Select Trench Backfill	9-03.9(3) (Crushed Surfacing)
Pipe Foundation Material	9-03.10 (Aggregate for Gravel base)
Imported Pipe Trench Backfill	9-03.14(1) (Gravel Borrow)
Controlled Density Fill for Trench Backfill	2-09.3(1)E (Backfilling)

7-08.3 Construction Requirements

7-08.3(1) Excavation and Preparation of Trench

7-08.3(1)A Trenches

(April 2017 City of Auburn GSP)

The second sentence of the third paragraph is deleted.

(January 2018 City of Auburn GSP)

The first sentence of the eighth paragraph is deleted and replaced with the following:

If any of the excavated (also referred to as native) material meets the specifications of material listed in Section 7-08.2 (Materials), the Engineer may require that native material, in the quantity required, be selectively removed, stockpiled separately, and used as pipe zone bedding, foundation material, or trench backfill instead of the quantities of pipe zone bedding, foundation material, or trench backfill respectively.

7-08.3(1)B Shoring

(January 2017 City of Auburn GSP)

Supplement this section with the following:

Shoring shall meet the requirements of Section 2-09.3(3)D (Shoring and Cofferdams), the Occupational Safety and Health Act (OSHA), and the Washington Industrial Safety and Health Act of 1973 (WISHA), Chapter 296-155 WAC, and RCW Chapter 49.17, shall apply to all excavation, trenching and ditching operations on this project. All trenches four (4) feet and over in depth shall be shored in compliance with applicable Federal and State regulations. Extra Excavation Class B will be allowed only with the approval of the Engineer.

7-08.3(2)B Pipe Laying – General

(January 2017 City of Auburn GSP)

Supplement this section with the following:

The Contractor shall use neat, vertical full-depth saw cuts for trenching through existing asphalt or cement concrete pavement surfaced areas.

All pipe shall be neatly cut using an approved mechanical cutter without causing damage to the pipe.

7-08.3(2)G Jointing of Dissimilar Pipe

(January 2017 City of Auburn GSP)

Supplement this section with the following:

Where new pipe is connected to existing pipe, the Contractor shall verify the type of existing pipe and join pipes with a pipe adapter specifically manufactured for joining the pipes involved.

(August 2016 City of Auburn GSP)

Add the following new section:

7-08.3(2)J Joining High Density Polyethylene Pipe (HDPE) Pipe

Sections of HDPE shall be joined into continuous lengths on the job site above ground. The joining shall be the butt fusion method and shall be performed in strict accordance with the pipe manufacturer's recommendations. The butt fusion equipment used in the joining procedures shall be capable of meeting all conditions recommended by the pipe manufacturer, including but not limited to, temperature requirements of 400 degrees F, alignment, and 75 psi interfacial fusion pressure.

(August 2016 City of Auburn GSP)

Add the following new section:

7-08.3(2)K Packaging, Handling, Storage High Density Polyethylene Pipe (HDPE) Pipe

The manufacturer shall package the pipe in a manner designed to deliver the pipe to the project neatly, intact, and without physical damage. The transportation carrier shall use appropriate methods and intermittent checks to insure the pipe is properly supported, stacked, and restrained during transport such that the pipe is not nicked, gouged, or physically damaged. Pipe shall be stored on clean, level ground to prevent undue scratching or gouging of the pipe. If the pipe must be stacked for storage, such stacking shall be done in accordance with the pipe manufacturer's recommendations. The handling of the pipe shall be done in such a manner that it is not damaged by dragging over sharp objects or cut by chokers or lifting equipment.

Sections of pipe having been discovered with cuts or gouges in excess of 10% of the wall thickness of the pipe shall be cut out and removed. The undamaged portions of the pipe shall be rejoined using butt fusion joining method.

Fused segments of pipe shall be handled so as to avoid damage to the pipe. When lifting fused sections of pipe, chains or cable type chokers must be avoided. Nylon slings are preferred. Spreader bars are recommended when lifting long fused sections. Care must be exercised to avoid cutting or gouging the pipe.

(August 2016 City of Auburn GSP)

Add the following new section:

7-08.3(2)L Dewatering Trenches

Where water is encountered in the trench, it shall be removed during pipe-laying operations and the trench so maintained until the ends of the pipe are sealed and provisions are made to prevent floating of the pipe. Trench water or other deleterious materials shall not be allowed to enter the pipe at any time.

"Normal Trench Dewatering" is defined as dewatering methods occurring in, or directly adjacent to, the trench, including trash pumps, sump pumps, or other methods in the excavated areas. "Normal Trench Dewatering" does not include a dewatering system such as well points, well screens, or deep wells. All "Normal Trench Dewatering" work associated with maintaining a trench suitable for pipeline construction will be included in the cost of the pipes or other facilities being installed.

Where groundwater cannot be removed using "Normal Trench Dewatering" methods, the Contractor shall provide a dewatering system that will be used to lower the water table 2 feet below the depth of excavation. See Section 8-05 (Dewatering System) for dewatering system requirements. The dewatering plan must be received 10 calendar days prior to dewatering operations and approved by the Engineer before underground utility installation begins.

7-08.3(3) Backfilling

(January 2017 City of Auburn GSP)

Supplement this section with the following:

The Engineer may require "Controlled Density Fill" where uniform compaction around other utilities, foundations or other fixed objects is not possible.

7-08.3(4) Plugging Existing Pipe

(January 2018 City of Auburn GSP)

Delete this section and replace it with the following:

All existing sanitary sewer, storm, and drain pipes shown on the Plans to be abandoned and plugged, shall be plugged on the inlet and outlet ends for a distance of three times the diameter with Class 3000 cement concrete. Care shall be used in placing the concrete in the pipe to ensure that the openings are completely filled and thoroughly plugged.

All existing water pipes shown on the Plans to be abandoned and plugged, shall be plugged on the ends with Mechanical Joint plugs.

All existing sanitary sewer, storm, and water pipes shown on the Plans to be abandoned and filled, shall be filled with concrete that has a compressive strength of 1,500 psi or less for the entire length of pipe specified.

The Contractor shall seal abandoned or filled pipe connections at manholes or catch basins with Class 3000 cement concrete and grout to provide a smooth, watertight seal.

(November 2019 City of Auburn GSP)

Add the following new section:

7-08.3(5) Pipe Trench Restoration

Trenches excavated as part of a new street construction shall be completed to subgrade before placing surfacing materials and sidewalks. Final restoration will be completed with the street surfacing.

In existing streets, sidewalks and other native or landscaped areas, the restoration shall be to a minimum of the existing adjacent surfaces. Asphalt and cement concrete pavement, sidewalks, etc., shall be replaced upon a firm unyielding base to match existing

surface thickness. Unless otherwise shown on the plans, the minimum asphalt concrete pavement replacement section shall be 2 inches thick.

7-08.4 Measurement

(City Contracts, January 2017 City of Auburn GSP)

Supplement this section with the following:

Measurement for "Imported Pipe Trench Backfill", "Select Pipe Trench Backfill", "Pipe Zone Bedding" and "Pipe Foundation Material" will be by the ton.

"Controlled Density Fill (CDF) for Trench Backfill" and "Controlled Density Fill (CDF) for Filling Pipe" will be measured by the cubic yard.

7-08.5 Payment

(City Contracts, April 2017 City of Auburn GSP)

Delete this section and replace it with the following:

Payment will be made for each of the following Bid items that are included in the Proposal:

"Pipe Foundation Material", Per Ton

"Pipe Zone Bedding", Per Ton

"Select Pipe Trench Backfill", Per Ton

"Imported Pipe Trench Backfill", Per Ton

"Controlled Density Fill (CDF) for Trench Backfill", Per Cubic Yard

"Controlled Density Fill (CDF) for Filling Pipe", Per Cubic Yard

The unit contract price for "Pipe Foundation Material", "Pipe Zone Bedding", "Select Pipe Trench Backfill," "Imported Pipe Trench Backfill", "Controlled Density Fill (CDF) for Trench Backfill" shall include all costs associated furnishing the material and all costs associated with the over-excavation and disposal of the surplus and unsuitable trench excavation replaced by these items.

The unit contract price for "Controlled Density Fill (CDF) for Filling Pipe" shall include all costs associated with furnishing and placing the material, including labor and equipment.

All costs associated with trenching, installing bedding and backfill materials within a trench, disposal of surplus trench excavation, general pipe installation work including "Normal Trench Dewatering," plugs and connections, and plugging existing pipes for abandonment shall be included in the unit contract price for the type and size of pipe installed.

"Structure Excavation Class B" and "Structure Excavation Class B Including Haul" for pipe trenching in accordance with all provisions of Section 2-09 (Structure Excavation) shall be included in the unit contract price for the type and size of pipe installed.

Payment for pipe trench restoration will be made under the applicable items listed in the Proposal Form. If no pay items for the materials required for the trench restoration are included in the bid proposal, pipe trench restoration shall be included in the unit contract price for the type and size of pipe installed.

7-09 Water Mains

7-09.1 Description

(January 2017 City of Auburn GSP)

Supplement this section with the following:

The Contractor shall also follow the requirements of Section 7-08 (General Pipe Installation Requirements). In case of conflicting specifications between Section 7-08 and 7-09, the specifications of Section 7-09 shall take precedence for the installation of water mains and appurtenances.

7-09.2 Materials

(January 2018 City of Auburn GSP)

Delete 'Aggregates' and the reference sections pertaining to Foundation Material, Gravel Backfill for Pipe Zone Bedding, Pipe Zone Bedding, and Trench backfill, from the list in the first paragraph.

Supplement this section with the following:

Ductile Iron Pipe per Section 9-30.1(1) with Ductile Iron Fittings per Section 9-30.2(1) shall be the only pipe and fitting materials allowed for water systems owned by the City of Auburn.

7-09.3(10) Backfilling Trenches

(January 2017 City of Auburn GSP)

Supplement this section with the following:

Water mains shall be installed with 42-inch minimum finished pipe cover, unless the Engineer determines less cover is adequate where existing facilities, not to be relocated, might interfere with the pipe laying operation.

7-09.3(13) Handling of Pipe

(January 2017 City of Auburn GSP)

Supplement this section with the following:

Strict adherence to the requirements preventing debris from entering the pipe will be required, including plugging of pipe during transport, storage, and placement. If, in the opinion of the Engineer, any pipe or fitting has been installed with dirt, foreign material, or diesel residue in it, it shall be removed, cleaned, and re-laid at Contractor expense.

7-09.3(19) Connections

7-09.3(19)A Connections to Existing Mains

(January 2017 City of Auburn GSP)

Supplement this section with the following:

The Contractor shall field verify all existing piping, dimensions, and elevations to ensure proper fit prior to any connections being made to existing mains.

7-09.3(19)B Maintaining Service

(January 2017 City of Auburn GSP)

Supplement this section with the following:

Water main shut-offs shall be in accordance with Section 1-07.17(1) (Disruption to City Water Services).

7-09.3(21) Concrete Thrust Blocking

(January 2018 City of Auburn GSP)

Supplement this section with the following:

Where trench conditions are such that thrust restraint is not accomplishable with concrete, the Contractor shall provide restrained joints in accordance with Section 9-30.2(6) (Restrained Joints) to replace or supplement concrete blocking or anchors. Supplement and replacement restrained joints shall be provided as recommended by the manufacturer and approved by the Engineer.

7-09.3(23) Hydrostatic Pressure Test

(January 2017 City of Auburn GSP)

Supplement this section with the following:

Add the following sentence at the beginning of the first paragraph:

Hydrostatic tests shall be made on all new pipeline in accordance with the applicable portions of this Standard Specification and ANSI/AWWA C600, except as modified in this document.

Add the following sentence between the first and second sentence of the first paragraph:

Test pressures shall not exceed the rated pressure of the valves when the pressure boundary of the test section includes closed, resilient-seated gate valves or butterfly valves.

Add the following sentence at the end of the second paragraph:

Sections of pipe between valves shall be pressure tested immediately upon completion of each section. Each section shall be immediately backfilled upon the Engineer approving the hydrostatic pressure test results.

7-09.3(24) Disinfection of Water Mains

(December 2021 City of Auburn GSP)

Supplement this section with the following:

The City will take bacteriological test samples. If no appropriate appurtenance is available, the Contractor may be required to install corporation stops in the main at all locations required to take bacteriological test samples. If original test samples prove unsatisfactory, a charge of $100.00 will be made for processing each additional sample.

7-09.3(24)J Preventing Reverse Flow

(November 2019 City of Auburn GSP)

Supplement this section with the following:

Prior to beginning the water main installation, the Contractor shall prepare a Prevention of Reverse Flow Plan per Section 1-06 (Control of Material), showing the intended method, in detail, which will be incorporated to insure the prevention of reverse flows from entering the existing distribution system. The plan shall meet the requirement of WAC 246-902-490.

The Contractor shall consider this plan as a submittal, and submit it per the specifications in Section 9-38 (Submittal Approval). The Engineer must approve this plan prior to the Contractor starting work on the water main.

7-09.3(24)N Final Flushing and Testing

(January 2017 City of Auburn GSP)

Supplement this section with the following:

Accomplish line flushing in accordance with the latest provisions of AWWA C601. Flush all dead end mains with a temporary blow off. The Contractor is responsible for disposal of water flushed from the line. An approved bacteriological test is required before connection to the existing system. The City will measure water consumed for flushing.

The Contractor shall submit a de-chlorination plan per Section 1-06 (Control of Material) indicating how chlorine concentration and pH adjustment will be achieved per this Section. All costs to submit the plan shall be included in the unit contract price per linear foot of pipe.

(July 2021 City of Auburn GSP)

Add the following section:

7-09.3(25) Pipe Casing

Steel casing pipe shall meet ASTM A-53, having a minimum tensile strength of 60,000 psi and a minimum yield strength of 35,000 psi. Minimum wall thicknesses for casing diameter 14” shall be 0.25”. All joints shall be welded. Provide shop applied polyamide epoxy-coal tar anticorrosive coating on casing exterior conforming to AWWA C210. Minimum coating thickness of 16 mils dry film thickness (DFT), do not exceed manufacturer’s maximum thickness. A ductile iron casing meeting the requirements of water pipe may be used in lieu of steel.

The carrier pipe shall be installed with casing spacers as shown on the plans. Spacers shall be designed for center restraint and provide a maximum space of 1-inch between the upper runners and the inside of the steel casing. The spacers shall prevent the pipe bells from touching the inside of the casing. Metal components of casing spacers shall be Type 304 (18-8) 14-gauge (minimum) stainless steel. The liner shall be neoprene rubber or PVC, and the runners shall be polyethylene.

Where casing spacers must be custom designed to account for a specific grade of the carrier pipe inside the casing, submittals must be provided which include drawings and dimensions for each of the casing spacers and the respective location of each of the spacers relative to the casing and carrier pipe.

Casing end seals shall be 1/8-inch thick synthetic rubber, pull on type, with stainless steel bands and clamps.

7-09.4 Measurement

(City Contracts, January 2017 City of Auburn GSP)

Supplement this section with the following:

Measurement for payment of "Connect to Existing Water Main" will be per each.

(City Contracts, July 2021 City of Auburn GSP)

Supplement this section with the following:

Cased crossings will be measured by the linear foot of casing installed.

7-09.5 Payment

(City Contracts, April 2017 City of Auburn GSP)

Supplement this section with the following:

Payment will be made for each of the following Bid items that are included in the Proposal:

"Connect to Existing Water Main", Per Each

"2-In. Blowoff Assembly", Per Each

The unit contract price per each for "Connection to Existing Water Main" shall include all costs for furnishing labor, materials, and equipment necessary to cut into the main and make the connection complete in place including verification of existing condition, temporary blocking, capping, temporary blow offs and other items required for testing including all required notifications to water users of disruptions to their service.

The unit contract price per each for "2-Inch Blow Off Assembly" shall be full pay for all work to install the blow off assembly, including but not limited to excavating, backfilling, laying and jointing pipe, tapping the main, corporation stop, pipe and fittings, gate valve, meter box, and cover and cleanup.

The cost of valve assemblies shall be paid for under separate bid items.

Where bolted flanged joint pipe is used on this project, the flange shall be attached to "Special Class 53 D.I. Pipe" and payment will be at the same rate as the unit contract price for "Special Class 52 D.I. Pipe", unless otherwise specified.

(July 2021 City of Auburn GSP)

Supplement this section with the following:

"Cased Crossing" Per LF

The unit contract price per linear foot for "Cased Crossing" shall include all costs for furnishing labor, materials, and equipment necessary to construct a cased crossing in accordance with the detail shown on the Plans, where designated on the Plans or by the Engineer.

(City Contracts, October 2021 City of Auburn GSP)

All references to payment for water pipe is revised to the following:

The unit contract price per linear foot for water main pipe listed in this section shall be full pay for all work to complete the installation including the following:

- Furnishing and installing pipe, pipe accessories, and other appurtenances.
- Sawcutting (including additional sawcutting for pavement restoration)
- Trenching
- Structure Excavation Class B (including haul).
- Installing bedding and backfill materials
- Furnishing and installing temporary patches or steel plates over unfinished portions of trenches crossing traveled ways
- Disposal of surplus excavation
- General pipe installation work
- Plugging existing pipes for abandonment
- Extending existing pipes for making connections
- Preparation and implementation of reverse flow prevention plan
- Preparation and implementation of a de-chlorination plan
- Normal Dewatering and disposal of groundwater
- Disinfection, flushing and testing of pipe
- Protection of the pipe during other work including construction of the roadway subgrade.

7-12 Valves for Water Mains

7-12.3 Construction Requirements

(January 2018 City of Auburn GSP)

Add the following new section:

7-12.3(2) Adjust Valve Boxes

The Contractor shall adjust water valve boxes to finish grade as specified in the Plans and in accordance with the applicable City of Auburn Standard Details. Water valve boxes shall be accessible at all times.

Valve boxes shall not be adjusted to finish grade until the asphalt paving is completed, at which time, each valve box shall be carefully relocated from references previously established by the Contractor. The pavement shall be cut in a restricted area and the base material removed to permit adjustment.

The base materials and crushed rock shall be removed and Class 3000 cement concrete shall be placed so that the entire volume of the excavation is replaced to within, but not to exceed 6 inches of the finished pavement surface. A quick setting admixture shall be added to the cement concrete backfill. Once the valve boxes have been adjusted to finished grade and the cement concrete backfill has cured (the day following placing the cement concrete), HMA Class ½-inch shall be placed and compacted with hand tampers and a patching roller within 48 hours.

(August 2016 City of Auburn GSP)

Add the following new section:

7-12.3(3) Combination Air Release/Air Vacuum Valve Assembly

"Combination Air Release/Air Vacuum Valve Assembly" shall be constructed at locations shown on the Plans and shall be a minimum of 1 inch diameter in accordance with the applicable City of Auburn Standard Detail(s).

(August 2016 City of Auburn GSP)

Add the following new section:

7-12.3(4) Valve Wrench Extension Box

The Contractor shall furnish and install valve wrench extension boxes where the valve nut will exceed 48 inches below the top of the finished valve box and finish grade, where shown on the Plans, in accordance with the applicable City of Auburn Standard Detail(s) for deep buried valves.

7-12.5 Payment

(City Contracts, April 2017 City of Auburn GSP)

Supplement this section with the following:

Payment will be made for each of the following Bid items that are included in the Proposal:

"Adjust Valve Box", Per Each

The unit contract prices for "Adjust Valve Box" shall be full pay for all work including providing all materials, equipment and labor to lower the structure b120nclude120laning and adjust structures to finish grade after the overlay is complete (including asphalt concrete patches).

(January 2017 City of Auburn GSP)

The second paragraph is revised to read:

The unit contract price per each for the valves specified shall be full pay for all work, equipment, and materials to furnish and install each valve complete in place on the water main, including trenching, jointing, blocking of valve, painting, disinfecting, hydrostatic testing, valve box, valve wrench extension box, marker post, and final adjustment to finish grade (including asphalt concrete patches).

7-14 Hydrants

7-14.3 Construction Requirements

(January 2017 City of Auburn GSP)

Supplement this section with the following:

A type 2BB Blue Raised Pavement Marker(s) is required at each hydrant location. Location of the blue marker shall be 1-foot offset of centerline in the direction of the hydrant at each hydrant location. Hydrants located within 50-feet of the curb face of an intersection shall be marked on both streets. The reflective surfaces of the raised pavement markers shall

be perpendicular to the flow of traffic. The Raised Pavement Markers shall be installed in accordance with Section 8-09 (Raised Pavement Markers).

7-14.3(1) Setting Hydrants

(February 2024 City of Auburn GSP)

Delete this section and replace it with the following:

Where shown in the Plans, the "Hydrant Assembly" shall be installed perpendicular to the supply main. A 6-inch resilient-wedge gate valve with valve box in accordance with Section 7-12 (Valves for Water Mains) shall be installed on each hydrant supply line.

All hydrants shall be inspected upon delivery in the field to ensure proper working order. After installation, fire hydrants, auxiliary gate valves, and other appurtenances thereto shall be subjected to a hydrostatic test and disinfection procedures as specified in Section 7-09 (Water Mains).

After installation each hydrant shall receive 2 field-coats of paint. The first coat shall be Formula B-1-57 iron oxide, and the second coat shall be:

For Public Fire Hydrants: Safety Yellow conforming to Sherwin Williams Industrial Enamel B54 Y 37, or approved equivalent.

For Private Fire Hydrants: Safety Red conforming to Sherwin Williams Industrial Enamel B54 R 38, or approved equivalent.

During the chlorination process for the newly laid pipe, all valves associated with each hydrant assembly shall be operated while the pipeline is filled with the chlorinating agent and under normal operating pressure.

Any hydrant not in service shall be identified by covering with a burlap or plastic bag properly secured.

7-14.3(4) Moving Existing Hydrants

(January 2018 City of Auburn GSP)

Supplement this section with the following:

Existing hydrants shall be moved where shown in the Plans. Moving existing hydrants shall include removal of all component parts from the water main to the hydrant.

The Contractor shall provide and install the following new components at the new hydrant location shown on the Plans:

- Special Class 52 Ductile Iron pipe;
- 6 inch tee or tapping tee and gate valve with box;
- Restraint system;
- Blocking.

7-14.5 Payment

(City Contracts, January 2018 City of Auburn GSP)

References to payment for "Hydrant Assembly" are revised to the following:

The unit contract price per each for "Hydrant Assembly" shall be full pay for all work to furnish and install fire hydrant assemblies, including all costs for valves, restrain systems, tees, tie rods, storz adapter, concrete blocks, gravel, painting, type 2BB pavement marker(s),

connecting to the water main, and all pipe required for the complete installation- of the hydrant assembly.

References to payment for “Resetting Existing Hydrant” are revised to the following:

The unit contract price per each for “Resetting Existing Hydrant” shall be full pay for all work to reset the existing hydrant, including restrain system, painting, type 2BB pavement marker(s), reconnecting to the main, and all pipe and other materials required.

References to payment for “Moving Existing Hydrant” are revised to the following:

The unit contract price per each for “Moving Existing Hydrant” shall be full pay for all work to move the existing hydrant, including new hydrant lateral tee, restraint system, painting, 2BB pavement marker(s), connecting to the main, and all pipe and other materials required.

References to payment for “Hydrant Extension” are revised to the following:

The unit contract price per each for “Extensions” shall be full pay for all work including materials, labor, and equipment required to extend the hydrant vertically.

7-15 Service Connections

7-15.2 Materials

(September 2021 City of Auburn GSP)

Replace the reference to Service pipe from the list of materials and replace with the following:

Service Pipe & Tail Piece	9-30.6(3)A (Copper Tubing), 9-30.6(3)B (Polyethylene Tubing)

All water service materials shall be low lead brass CDA89833 or CDA89520, and shall meet ANSI/AWWA C800 and NSF 61 Annex G maximum lead requirements.

7-15.3 Construction Requirements

(January 2017 City of Auburn GSP)

Supplement this section with the following:

Water service connections shall be installed where shown on the drawings in accordance with these documents and the applicable Standard Details. Multiple service connections to the same main must be made with a 2 foot minimum separation at the main and be staggered horizontally, so that adjacent services are at differing elevations along the pipe. Meter box and water meters shall not be placed in locations which are subjected to vehicular traffic (including driveways, etc.) unless approved by the Engineer and a traffic bearing meter box is provided. Tail pieces (that portion of the service line between the meter and the property line) shall be furnished and installed and shall be of the same material and size as the service line. Connection of the tail piece to the service line from the building shall be made with compression couplings or capped as appropriate. Service pipes shall be installed without joints from the water main to the curb valve near or within the meter box. Tailpieces shall also be installed without joints from the water meter outlet to its termination (18 inches minimum beyond the meter but not beyond the right-of-way line). The existing ¾-inch water meter shall be reinstalled to the new meter setter once the new 1-inch service line,

meter setter, and tailpiece, have been installed and the new meter box has been adjusted to grade.

All new materials (service line, meter setter, tailpiece, and meter box) shall be used for water meter relocations. Materials shall match existing size unless otherwise shown on the Plans.

When removing existing meters, the Contractor shall protect all automated meter reading equipment including radios, receivers/transmitters, and other equipment. The removed meters/equipment will be stored in such a manner to prevent damage to the equipment. The Contractor will request and complete training from City staff on proper measures and techniques required to protect the equipment prior to removing any equipped meters.

7-15.5 Payment

(City Contracts, April 2017 City of Auburn GSP)

Supplement this section with the following:

Payment will be made for each of the following Bid items that are included in the Proposal:

"Water Service Connection ¾ In. Meter with 1 In. Diam. Service Line", Per Each

"Water Service Connection ___In. Diam.", Per Each

"Dual Water Service Connection Renewal ¾ In. Diam.", Per Each

"Water Service Connection Renewal ____ In. Diam.", Per Each

The unit contract price for each size of "Water Service Connection ¾ In. Meter with 1 In. Diam. Service Line " shall be per each, in place, and shall be full compensation for all labor, equipment, and materials necessary to furnish and install the new water service including tap and corporation stop, 1-inch service line from the main to the meter, 1-inch to ¾ inch Mueller adaptors, 1 inch curb valve, 1 inch meter yoke with angle check valve and angle valve, traffic bearing meter box and lid, tailpiece, shutoff valve assembly, reconnecting the existing service or capping the end as appropriate, and reconnecting the old meter to the new service line. The City will provide and set ¾ inch meters for new 1 inch diameter service connections.

The unit contract price for each size of "Water Service Connection, ____In. Diam." Shall be per each, in place, and shall be full compensation for all labor, equipment, and materials necessary to furnish and install the new water service including tap and corporation stop, service line from the main to the meter, adaptor, curb valve, meter yoke with angle check valve and angle valve, meter box, tailpiece, and reconnecting the existing service or capping the end as appropriate. The City will provide and set ¾ inch diam. Meters for new 1 inch diam. Service connections.

The unit contract price for each size of "Water Service Connection Renewal ___ In, Diam." Shall be per each, in place, and shall be full compensation for all labor, equipment and materials necessary to renew existing water services, including new service line, from the main to the meter, curb valve, meter yoke with angle check valve and angle valve, meter box, tailpiece, and reconnecting the existing service.

7-17 Sanitary Sewers

7-17.2 Materials

(October 2021 City of Auburn GSP)

Delete this section and replace it with the following:

Only the pipe materials listed below are approved for use on City sanitary sewer systems.

Materials shall be in accordance with following Sections:

Solid Wall Polyvinyl Chloride (PVC) Pipe, SDR-35	9-05.12(1) (Solid Wall PVC Culvert Pipe, Solid Wall PVC Storm Sewer Pipe, and Solid Wall PVC Sanitary Sewer Pipe)
Polyvinyl Chloride (PVC) Pipe, SDR-21	9-05.12(1) (Solid Wall PVC Culvert Pipe, Solid Wall PVC Storm Sewer Pipe, and Solid Wall PVC Sanitary Sewer Pipe)
Solid Wall Polyvinyl Chloride (PVC) Pipe, C900	9-05.12(1) (Solid Wall PVC Culvert Pipe, Solid Wall PVC Storm Sewer Pipe, and Solid Wall PVC Sanitary Sewer Pipe)
Ductile Iron, Special Class 50	9-05.13 (Ductile Iron Sewer Pipe)
High Density Polyethylene Pipe (HDPE)	9-05.23 (High Density Polyethylene Pipe (HDPE))

The laying length for PVC (SDR-35) shall not exceed 14 feet.

7-17.3 Construction Requirements

7-17.3(1) Protection of Existing Sewage Facilities

(January 2017 City of Auburn GSP)

Supplement this section with the following:

Connections to the existing system shall be plugged during the entire period of sewer construction to prevent dirt, water, and debris from entering the existing system

7-17.3(2) Cleaning and Testing

7-17.3(2)A General

(August 2016 City of Auburn GSP)

Delete the first paragraph and replace with the following:

Sewers and appurtenances, where required in the Plans, shall be cleaned and tested after backfilling by the low pressure air method except if the Engineer approves hydrostatic testing of short sections of small diameter pipe.

(January 2017 City of Auburn GSP)

Supplement this section with the following:

Before final acceptance, the Contractor shall have all sewer lines inspected by the use of a television camera per Section 7-17.3(2)H (Television Inspection). Manholes and

other structures shall be cleaned and tested per Section 7-07 (Cleaning Existing Drainage Structures).

Special sealants shall not be used to seal leaks and the use of any such materials will be cause for rejection of the sewer lines.

7-17.3(2)C Infiltration Test

(January 2017 City of Auburn GSP)

Revise the second sentence of the second paragraph to read:

"Maximum leakage (in gallons per hour)" = $0.16 \times \frac{\sqrt{H}}{\sqrt{6}} \times D \times \frac{L}{100}$

7-17.3(2)F Low Pressure Air Test for Sanitary Sewers Constructed of Non Air-Permeable Materials

(January 2017 City of Auburn GSP)

Supplement this section with the following:

If the test shows zero leakage after a five minute test time, the Engineer has the authority to accept and end the test immediately.

Cleaning and testing of pipes and structures shall be included in the unit contract prices for those items installed.

7-17.3(2)H Television Inspection

(May 2019 City of Auburn GSP)

Delete this section and replace it with the following:

The Contractor shall be responsible for having all sewer lines installed by the Contractor inspected by City approved private inspection services that includes the use of a television camera. An approved list of inspection services may be obtained from the Engineer.

After completion of the following, authorization from the City shall be required before the Contractor can perform the initial television camera work:

1. The acceptable placement of applicable pipe, ballast, bedding, and backfill material.

The acceptable completion of all applicable channels and grout

2. work.

The acceptable debris removal, cleaning, and flushing of all applicable pipes and struct

3. ures.

The television inspection requirements shall include the provisions of:

1. The television camera shall be a pan and tilt camera system specifically designed and constructed for sewer environments.

A dye solution to be introduced in sufficient quantity to travel from the structure that is the highest point of inspection to the downstream terminus of the inspection limits. Red or purple dye shall be used for PVC pipe and green dye for ductile iron and concrete

2. pipe.

A one-inch reference ball to be mounted to the camera in order to drag along the bottom of the pipe during the entire inspection proce

3. dure.

Linear measure references to be measured from the center of the beginning structure to the center of the next inline structure and include the direction of flow. The locations of lateral pipes and all distinctive pipe conditions shall be referenced to the centerline of the beginning structure. All structure references shall utilize the designated structure reference numbers shown on the P

4. lans.

The following television inspection information shall be provided to the y:

8. 1. A clear color DVD or USB Flash Drive which encompasses the limits of the inspection area and including all reference data as described herein. The recorded reference time and date for the start of each run shall also be indica.

8. 2. A written report shall be provided corresponding to the recorded inspection and including all reference data as described herein. The report shall consist of a written narrative of all distinctive pipe conditions including ponding areas in excess of ¼ inch.

7-17.4 Measurement

(City Contracts, January 2017 City of Auburn GSP)

Supplement this section with the following:

Television inspection work will be measured per linear foot.

7-17.5 Payment

(City Contracts, April 2017 City of Auburn GSP)

Supplement this section with the following:

Payment will be made for each of the following Bid items that are included in the Proposal:

"PVC Sanitary Sewer Pipe, SDR-35, ___ In. Diam.", Per Linear Foot

"PVC Sanitary Sewer Pipe, SDR-21, ___ In. Diam.", Per Linear Foot

"Ductile Iron Pipe, Special Class 52 Sanitary Sewer Pipe, ___ In. Diam.", Per Linear Foot

"HDPE Sanitary Sewer Pipe, ____ In. Diam.", Per Linear Foot

"Sanitary Sewer Television Inspection", Per Linear Foot

The unit contract price per linear foot for "Sanitary Sewer Television Inspection" shall be full pay for all work to complete the Television Inspection including all associated cleaning and flushing.

(City Contracts, August 2018 City of Auburn GSP)

Revise references to payment for sanitary sewer pipe to the following:

The unit contract price per linear foot for sanitary sewer pipe of the kind and size specified shall be full pay for all work to complete the installation including the following:

- Furnishing and installing pipe, pipe fittings, and other pipe appurtenances.
- Adjusting inverts to manholes
- Testing of pipes
- Sawcutting (including additional sawcutting for pavement restoration)
- Trenching
- Structure Excavation Class B (including haul).
- Installing bedding and backfill materials within the trench
- Furnishing and installing temporary patches or steel plates over unfinished portions of trenches crossing traveled ways
- Disposal of surplus trench excavation
- General pipe installation work including plugs and connections
- Plugging existing pipes for abandonment
- Temporary plugs, bypass pumping, or both
- Normal Dewatering and disposal of groundwater

7-18 Side Sewers

7-18.3 Construction Requirements

7-18.3(1) General

(January 2017 City of Auburn GSP)

Supplement this section with the following:

All joints shall be approved rubber-gasket joints except the joint between the new and existing pipe that shall be made with approved flexible transition couplings. Side sewers shall be installed to a minimum slope of two percent or as shown on the Plans unless otherwise directed by the Engineer and shall be 6-inches diameter from the street sewer to the private property line.

Existing side sewers to be connected shall be trimmed to the limit of the right-of-way except where otherwise shown on the Plans and connected to the new sewer with PVC SDR-35 with a diameter to match the existing side sewer or 6 inches, whichever is greater.

(August 2016 City of Auburn GSP)

The third paragraph is replaced with the following:

No joint deflections shall be allowed on side sewers. No horizontal bends shall be allowed in the right-of-way. Vertical bends require Engineer approval.

7-18.3(3) Testing

(January 2017 City of Auburn GSP)

Supplement this section with the following:

During construction in areas with more than one side sewer per structure, the Contractor shall test each connected structure to verify which side sewer is used by that structure. The test shall involve flushing every toilet or running every sink or tub on each floor of each structure and directly observing which side sewer the effluent discharges from. Only these side sewers shall be connected. All others are to be abandoned in place per Section 7-08.3(4) (Plugging Existing Pipe).

The Contractor shall be responsible for verifying all City customers originally connected to the sanitary sewer conveyance line are connected to the new sanitary sewer conveyance line. Prior to project completion the Contractor shall document to the City that all City customers have had their services re-established.

All pipes for side sewer and sewer stubs (pipes not ending in a manhole) shall be adequately plugged or capped.

7-19 Sewer Cleanouts

7-19.3 Construction Requirements

(January 2018 City of Auburn GSP)

Delete this section and replace it with the following:

Sewer cleanouts shall be installed as indicated in the applicable Standard Details.

END OF DIVISION 7

DIVISION 8 Miscellaneous Construction

8-01 Erosion Control and Water Pollution Control

8-01.3 Construction Requirements

(February 2018 City of Auburn GSP)

Supplement this section with the following:

The Contractor shall comply with the requirements of the Construction Stormwater General Permit (CSWGP), when the Contract is covered by a CSWGP. When the Contract does not identify CSWGP coverage, then the requirements identified in this section, that would only be required in the event of permit coverage, are not applicable. All other requirements identified in this section are applicable regardless if the Contract has a CSWGP or not.

8-01.3(1) General

(November 2019 City of Auburn GSP)

The second to last paragraph is revised to read:

> When applicable, the Contractor shall be responsible for all Work required for compliance with the CSWGP.

8-01.3(1)A Submittals

(November 2019 City of Auburn GSP)

Supplement this section with the following:

The Contractor's TESC plan shall be submitted to the Engineer for approval per Section 9-38 (Submittal Approval) prior to beginning construction.

The TESC plan shall also cover dewatering and the Contractor's proposed method of treating and disposing of dewatering effluent and other impacts of caused by dewatering activities.

Modifications to the temporary erosion and sediment control (TESC) Plans included in the Contract Plans, shall meet all requirements of the City of Auburn Surface Water Management Manual (SWMM).

Prior to beginning any concrete or grinding work, the Contractor shall submit a plan, for the Engineer's review and approval, outlining the procedures to be used to prevent high pH stormwater or dewatering water from entering surface waters. The plan shall include how the pH of the water will be maintained between pH 6.5 and pH 8.5 prior to being discharged from the project or entering surface waters.

The Contractor shall allow at least 5-working days for the Engineer to review any original or revised TESC Plan. Failure to approve all or part of any such Plan shall not make the Contracting Agency liable to the Contractor for any Work delays.

8-01.3(1)C Water Management

8-01.3(1)C1 Disposal of Dewatering Water

(September 2019 City of Auburn GSP)

The first paragraph is revised to read:

When uncontaminated groundwater is encountered in an excavation on a project, when approved by the Engineer, it may be infiltrated within vegetated areas of the right of way not designated as Sensitive Areas or incorporated into an existing stormwater conveyance system at a rate that will not cause erosion or flooding in any receiving surface water.

(November 2019 City of Auburn GSP)

Add the following new section:

8-01.3(1)F SWPPP Preparation and General Permit Compliance

The Contractor shall amend, revise, or replace the City provided Draft Storm Water Pollution Prevention Plan, (Draft SWPPP), see Appendix to these Special Provisions, to address the Contractors specific means and methods of completing the work and to comply with both the Construction Stormwater General Permit (CSWGP) included as an Appendix to these Special Provisions, and the City's Surface Water Management Manual (SWMM). The resulting document is the Storm Water Pollution Prevention Plan (SWPPP).

The Contractor shall prepare and submit the SWPPP for City approval per Section 9-38 (Submittal Approval). Approval of the SWPPP document is required prior to the beginning of any ground disturbing activities. The Contractor shall allow a minimum of 5 working days for the Engineer's review of the SWPPP. Failure to approve all or part of any such plan shall not make the Contracting Agency liable to the Contractor for any work delays.

The Contractor shall use, implement, modify, and document the approved SWPPP in compliance with the CSWGP. This work shall include, but is not be limited to, the following:

- Preparing, revising, maintaining the SWPPP in compliance with the CSWGP;
- Designing and planning, sediment control/erosion control measures, (BMPs), needed to meet CSWGP requirements;
- Planning, performing and reporting of storm water monitoring;
- Preparing and maintaining documentation required by the CSWGP.

During construction, the Contractor shall modify the SWPPP to address specific site conditions. The SWPPP and Contractor's revisions shall consist of the Contractor's complete strategy to meet the requirements of the CSWGP. The Contactor shall include and modify as necessary the erosion control measures provided in the Contract Plans. The Contractor shall review and modify the SWPPP as necessary to be consistent with the actual work schedule, sequencing, and construction methods that will be used on the project. The SWPPP and revisions shall meet the requirements of the CSWGP. The Contractor shall provide and maintain on-site the standby equipment and materials to comply with the CSWGP.

The S130ncludeincluding any Contractor revisions, shall document all the erosion and sediment control Best Management Practices (BMPs) proposed, whether permanent or temporary. The plan shall document installation procedures, materials, scheduling, and maintenance procedures for each erosion and sediment control BMP.

In addition, the SWPPP shall outline the procedures to be used to prevent high pH stormwater or dewatering water from entering surface waters of the state. The plan shall include how the pH of the water will be maintained in compliance with the CSWGP prior to being discharged from the project or entering surface waters.

SWPPP Contents

The SWPPP shall include narrative(s) and site plan(s) that address the following as applicable to the Work:

- Clearing Limits
- Establishment of Construction Access
- Flow Rate Controls
- Sediment Controls
- Soil Stabilization
- Slope Protection
- Drain Inlet Protection
- Channels and Outlets Stabilization
- Pollutant Controls
- De-watering Control
- Maintenance of Best Management Practices
- Project Management
- Protection of Low Impact Development Best Management Practices

The SWPPP will indicate discharge monitoring locations that shall also be clearly marked in the field by the Contractor. The SWPPP will indicate the Contractor's process for controlling, monitoring, and reporting of turbidity and pH in discharges.

On-Site Documentation

The Contractor shall collect, prepare, compile, and maintain hardcopies of the following documents on-site at all times while work is underway and shall make them available in accordance with the CSWGP requirements:

1. Bound notebook #1 with a cover labeled "SWPPP Documents", with the following contents separated by labeled tabbed dividers:
    - Permit Coverage Letter
    - Construction Stormwater General Permit
    - Stormwater Pollution Prevention Plan
    - Erosion Control Plan
2. Bound notebook #2 with a cover labeled "SWPPP Site Log Book", with the following contents separated by tabbed dividers:
    3. Erosion inspection reports.
    4. SWPPP Modifications

5. Discharge Monitoring Reports (DMR)
6. Spill Reports

Stormwater Monitoring Requirements

The Contractor shall conduct monitoring of discharges of stormwater runoff for comparisons to benchmark values for turbidity and pH as described in the CSWGP. The Contractor shall provide weekly stormwater monitoring of the project stormwater discharge locations for turbidity and pH as required in the CSWGP. The Contractor shall establish specific project sampling locations for sampling and monitoring at each discharge location to determine background, outfall, and downstream water quality conditions and provide these locations on a m132ncludeincluded in the SWPPP for approval.

The Contractor shall establish procedures that adapt to unanticipated events such as severe storms, schedule adjustments, modified construction techniques, etc. to be included in the SWPPP. Contractor shall submit any modifications to the procedures to the Engineer for approval.

Contractor shall calibrate equipment according to manufacturers' recommendations and according to their specified schedule. If data appears suspect, the Contractor shall perform additional calibrations immediately.

The Contractor shall complete all online reporting as required by the CSWGP.

Turbidity and pH Exceedances

Following any exceedances of the turbidity or pH benchmarks, the Contractor shall provide the following at no additional cost to the Contracting agency:

1. The necessary SWPPP revisions and on-site measures/revisions including additional source control, BMP maintenance, and/or additional stormwater treatment BMPs that are necessary to prevent continued exceedance of turbidly and/or pH benchmarks.
2. The regulatory notification to the Dept of Ecology and to the Engineer of any monitoring results requiring regulatory notification.
3. The additional daily sampling and reporting measures described in the CSWGP to verify when project site runoff is in compliance.

At no cost to the City, the Contractor shall be responsible for paying any fines levied against the City for any failure by the Contractor to comply with the permit requirements as listed in these specifications and as indicated in the permit(s) included in the Appendix to these Special Provisions.

(January 2018 City of Auburn GSP)

Add the following new section:

8-01.3(1)G Temporary Water Pollution /Erosion Control Installation

This work consists of furnishing and installing all temporary water pollution and erosion control items as detailed in the Contract Plans. If additional measures as approved by the City are required beyond those shown in the Contract Plans, they will be paid for under the unit cost bid item(s) determined by the Engineer to be applicable, or, if the Engineer determines additional measures are not applicable to unit cost bid item(s), the measures will be paid under the Force Account bid item for "Erosion/Water Pollution Control".

8-01.3(2) Temporary Seeding and Mulching

8-01.3(2)B Temporary Seeding

(January 2017 City of Auburn GSP)

Supplement this section with the following:

Seeding:

The following composition, proportion, and quality of grass seed shall be applied at the rate of 5 pounds per 1,000 square feet on all areas requiring roadside seeding (noted "hydroseed" on the Plans) within the project:

Kind and Variety of Seed in Mixture	Percent by Weight	Minimum Percent Pure Seed	Minimum Percent Germination
Colonial Bentgrass (Highland or Astoria)	10%	9.8%	85%
Red Fescue (Illahee, Rainier, or Pennlawn)	40%	39.20%	90%
English Perennial Rye	50%	29.40%	90%
Weed Seed (maximum %)		0.50%	
Inert and Other Crops (minimum %)		1.50%	
	TOTAL 100.00%		

Fertilizer:

The Contractor shall submit three samples of existing soil in the project area, and one of each specified type of topsoil to a soil laboratory for testing to determine fertilizer/amendment composition. Results shall be submitted to the Engineer and fertilizer and soil amendment formulation and application rates will be based on the laboratory recommendations. However, the minimum fertilizers requirements are as follows:

Total Nitrogen as N-3 1.5 pound per 1,000 square feet;

Available Phosphoric Acid as P2O5-1 2 pounds per 1,000 square feet;

Soluble Potash as K2O-2 20 pounds per 1,000 square feet;

1 pound of nitrogen applied per 1,000 square feet shall be derived from ureaform or ureaformaldehyde. The remainder may be derived from any source.

The fertilizer formulation and application rate shall be approved by the Engineer before use.

8-01.3(2)E Tackifiers

(January 2017 City of Auburn GSP)

Supplement this section with the following:

The moderate-term mulch soil binder for hydroseeding shall be a bonded fiber matrix with integral tackifier specifically manufactured for hydroseeding applications and erosion control. The moderate-term mulch shall be dyed an appropriate color to facilitate visual metering of application of the materials. The moderate-term mulch shall be 'ECO-AEGIS' as manufactured by Canfor, or approved alternate.

8-01.4 Measurement

8-01.4(1) Lump Sum Bid for Project (No Unit Items)

(City Contracts, November 2019 City of Auburn GSP)

This Section is deleted.

8-01.4(2) Item Bids

(November 2019 City of Auburn GSP)

The first paragraph is deleted.

(City Contracts, January 2018 City of Auburn GSP)

Supplement this section with the following:

"Sediment Trap" shall be measured per square yard of trap bottom surface area.

No specific unit of measurement shall apply to the lump sum contract price of CSWGP documentation compliance or TESC Plan.

8-01.4(3) Reinstating Unit Items with Lump Sum Erosion Control and Water Pollution Prevention

(City Contracts, November 2019 City of Auburn GSP)

This Section is deleted.

8-01.4(4) Items not included with Lump Sum Erosion Control and Water Pollution Prevention

(City Contracts, November 2019 City of Auburn GSP)

This Section is deleted.

8-01.5 Payment

8-01.5(1) Lump Sum Bid for Project (No Unit Items)

(City Contracts, November 2019 City of Auburn GSP)

This Section is deleted.

8-01.5(2) Item Bids

(City Contracts, April 2017 City of Auburn GSP)

Supplement this section with the following:

"TESC Plan", Per Lump Sum

"Sediment Trap", Per Square Yard

"High Visibility Fence", Per Linear Foot

"General Permit Documentation Compliance", Per Lump Sum

The lump sum price for "TESC Plan" shall be full payment for all costs to prepare, update, and modify/maintain the 'living' Temporary Erosion and Sediment Control Plan, and included Dewatering Plan elements, when needed, for the duration of the Contract.

Payment for "Sediment Traps" shall be full payment for all labor, tools, and materials to construct a sediment trap and maintain it for the duration of the Project.

The lump sum contract price for "General Permit Documentation Compliance" shall be full pay to maintain and update the SWPPP and file all electronic reports necessary to comply with the permit conditions with the Washington State Department of Ecology.

No additional payment will be made for any supplemental measures to control seepage, groundwater, or artesian head.

(City Contracts, November 2019, City of Auburn GSP)

References to payment for street cleaning is revised to the following:

Per Section 1-07.23(1)A (Dust and Mud Control and Street Cleaning), no additional payment will be made for Street Cleaning.

8-01.5(3) Reinstating Unit Items with Lump Sum Erosion Control and Water Pollution Prevention

(November 2019 City of Auburn GSP)

This Section is deleted.

8-01.5(4) Items not included with Lump Sum Erosion Control and Water Pollution Prevention

(November 2019 City of Auburn GSP)

This Section is deleted.

8-02 Roadside Restoration

8-02.1 Description

(January 2017, City of Auburn GSP)

Supplement this section with the following:

This work also involves any minor repair or replacement work to restore roadside features the Engineer discovers during construction.

8-02.3 Construction Requirements

8-02.3(1) Responsibility During Construction

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Landscape construction is anticipated to begin after all curbs, sidewalks, rockeries, utilities, and associated roadside work is completed.

The Contractor shall keep the premises clean, free of excess soils, plants, and other materials, including refuse and debris, resulting from his work throughout the planting operation. The Contractor shall maintain continuous pedestrian access and shall not stockpile materials or park equipment in any manner that may create hazards or obstacles to this access. At the end of each workday, and as each planting area is completed, it shall be neatly dressed and all surrounding walks and paved areas shall be cleaned to the satisfaction of the Engineer.

Cleaning by flushing into sewers will not be allowed. The Contractor shall remove surplus soils, materials, and debris from the construction site and shall leave the project in a clean condition at the conclusion of the work.

8-02.3(4) Topsoil

(February 2024, City of Auburn GSP)

Supplement this section with the following:

Topsoil shall be used to restore any landscape beds or planter areas disturbed by the Work.

Depths of topsoil placement shall be as shown in the plans. Where no depths are identified in the plans, the contractor shall furnish sufficient quantities of topsoil for placement in all seeding areas (4 inch depth topsoil) and planting areas (6 inch depth topsoil) and for tree and shrub planting soil requirements, plus a reserve quantity for restoring additional areas outside designated planting and seeding areas that are disturbed by the Contractor's activities.

8-02.3(4)A Topsoil Type A

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Topsoil Type A is to be used for all planting and seeding areas and shall be tested in an independent, certified soil testing lab to determine need for fertilizers, or amendments, or both, based on its intended use. The topsoil shall be modified according to the soil testing laboratory recommendations at no additional cost to the City.

8-02.3(4)C Topsoil Type C

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Native as used in this context shall mean naturally occurring material.

8-02.3(5) Roadside Seeding, Lawn and Planting Area Preparation

(February 2018, City of Auburn GSP)

Supplement this section with the following:

Upon approval of the subgrades by the engineer, a topsoil layer shall be placed with a minimum organic matter content of 10% dry weight in planting beds, and 5% organic matter content in lawn sod areas, and a pH from 6.0 to 8.0 or matching the pH of the adjacent undisturbed soil. The topsoil layer hall have a minimum depth of 8 inches, except where tree

roots limit the depth of incorporation of amendments needed to meet the criteria. The subsoils below the topsoil layer shall be cultivated to a depth of 4 inches with some incorporation of the upper material to avoid stratified layers, where feasible. Cultivation of the soil shall be done by a method approved by the Engineer. This operation should be done at right angles to the natural flow of water on slopes. Remove rocks, roots, clods, stumps and debris over 2 inches in diameter. Lightly compact soil and establish a smooth and uniform finished grade that protects against obstruction to surface drainage and ponding. For bark mulched shrub and groundcover beds, finish grade prior to placement of bark shall be 2 inches below top of adjacent finish grade.

(August 2016, City of Auburn GSP)

Add the following new section:

8-02.3(5)D Root Control Barrier

Root control material shall be CP-Series Root Barrier Panels as manufactured by Century Root Barrier, Universal Guide as manufactured by Deep Root, or Dual Purpose Panels as manufactured by Villa Root Barriers or approved alternate.

Install continuous section of root control material in all tree planting areas as shown on the Plans. Backfill with topsoil material being careful not to damage or displace root control material.

8-02.3(6) Mulch and Amendments

(January 2017, City of Auburn GSP)

Supplement this section with the following:

GroCo (GroCo Inc. tel. 206-622-5141), Tagro (City of Tacoma Tel. 253-502-2150), or Cedar Grove Compost shall be mixed with native topsoil to produce a 75/25 mix ratio (topsoil 75 percent and amendment 25 percent).

8-02.3(7) Layout of Planting, Lawn and Seeding Areas

(January 2017, City of Auburn GSP)

Supplement this section with the following:

The Contractor is responsible for determining required quantities of plant material to complete the landscape plan as shown.

It is anticipated that some minor arranging of plant material will be necessary during the progress of work.

From the centerline of the first row of shrubs or ground covers to the edge of the planting bed shall be ½ the typical dimension shown on the Plans and details.

Plant trees a minimum of 3 feet from curbs and sidewalks when the space is available; otherwise they shall be centered in the available space. Trees in tree wells shall be centered within the tree grate and frame.

8-02.3(8) Planting

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Plant trees and shrubs in planting pits and install tree frames and grates as detailed on Plans.

Do not over excavate planting pit depth, however, over excavation of planting pit width is desirable.

Trees shall be handled by the rootball, not by the trunk. Burlap and wire shall remain intact until trees are set in their positions within each planting pit. Remove all wire, twine, and burlap from the top third of the rootball before backfilling. Plant trees and shrubs upright, rotating them to give the best placement to adjacent plants, topography, and structures. Hold plant rigidly in position until topsoil has been backfilled and tamped firmly around the ball or roots.

When the planting pit is backfilled halfway, place the specified quantity of fertilizer plant tablets and stakes, if necessary, as shown on the Plans. Evenly space the fertilizer tablets around the perimeter of and immediately adjacent to the root system. Carefully place, water, and compact planting topsoil filling all voids. Do not injure the root system.

When the planting pit is three-quarters (3/4) backfilled, fill with water and allow it to soak away. Fill pits with additional topsoil and continue backfilling as detailed on Plans. Ground bark shall be placed over all tree-planting saucers to a compact depth of 2 inches. Water trees immediately after planting.

The root systems of all bare root plant material shall be dipped in a slurry of silt and water immediately prior to planting.

8-02.3(9) Seeding, Fertilizing, and Mulching

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Trees, shrubs, and groundcover shall be fertilized as follows:

Formula 4-2-2 “Transplanter” as manufactured by Pacific Agro Co., with Hercules nitroform and W.R. Grace’s “Magamp” and trace elements. Apply at a rate of:

Trees	8 ounces
Shrubs	2 ounces
Groundcover	1 ounce

Agriform Tablets: Planting tablets, 21-ram size, as manufactured by Agriform International Chemicals, Inc., 20-10-5 analysis. Apply at a rate of:

Trees	4 tablets for every foot of rootball diameter
Shrubs	3 tablets
Groundcover	1 tablet

8-02.3(10) Lawn Installation

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Except in areas where the Plans specify hydro-seed, lawn seeding will not be permitted on this project. “Lawn Sod” per Section 9-14.7(4) (Sod) shall be laid smoothly in place in accordance with the typical section(s) in the Plans.

Prior to installing “Lawn Sod” all dry soil shall be moistened by sprinkling with water. On sloped areas, the sod shall be laid with the long dimension parallel to the toe or top of slope. The “Lawn Sod” shall be rolled and heavily watered by sprinkler after placement.

8-02.3(10)C Lawn Establishment

(January 2017, City of Auburn GSP)

Supplement this section with the following:

The lawn establishment period may be extended or shortened by the Engineer based on the Engineer's opinion of whether or not the lawn has been established. Physical Completion and Final Acceptance will not be allowed until after the lawn establishment period has ended.

Lawn establishment requirements outside the City of Auburn right of way shall be subject to the applicable agreements, easements, and permit conditions for the property on which they are associated.

8-02.3(10)D Lawn Mowing

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Lawn mowing beyond the mowing required during the lawn establishment period shall only be required when indicated in the Plans. Lawn mowing will not be required beyond the Physical Completion and Final Acceptance of the project.

(August 2016, City of Auburn GSP)

Add the following new section:

8-02.3(10)E Fertilizer for Sodded Area

Prior to placing sod, a 10-2-10 fertilizer shall be rototilled into the top 3 inches of the soil at a rate of 4 pounds of available nitrogen per 1,000 square feet.

8-02.3(11) Mulch

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Ground bark shall be placed over all planting beds and over all tree-planting saucers to a compact depth of 2 inches. Ground bark shall be placed around existing trees and bushes disturbed by construction to a compact depth of 2 inches. Thoroughly water and hose down plants with a fine spray to wash the leaves of the plants immediately after bark application.

8-02.3(12) Completion of Initial Planting

(January 2017, City of Auburn GSP)

Delete this section and replace it with the following:

Upon completion of the initial planting and per the request of the Contractor the Engineer will make an inspection of all plant material and notify the Contractor, in writing, of any replacements or corrective action necessary to meet the Contract Document requirements. The Contractor shall replace all materials requested or missing and correct unsatisfactory conditions within 15 working days. The Engineer will provide the Contractor with written notification when the initial planting is accepted; at which time the plant establishment period shall begin.

Completion of initial planting includes the following:

1. Installation of root control barriers and watering systems for trees.
2. Installation of all required planting materials (trees, shrubs, and groundcovers).
3. Planting area cleanup.
4. Full operation of the irrigation system, complete bark mulch coverage, and all planting areas in a weed-free condition.
5. Approval of Plant Establishment Plan.

8-02.3(13) Plant Establishment

(August 2016, City of Auburn GSP)

Supplement this section with the following:

Plant establishment requirements outside the City of Auburn right of way shall be subject to the applicable agreements, easements, and permit conditions for the property on which they are associated.

The plant establishment period may be extended or shortened by the Engineer based on the Engineer's opinion of whether or not the plantings have been adequately established. Physical Completion and Final Acceptance will not be allowed until after the plant establishment period has begun. The Plant Establishment period may occur during the contract Guarantee Period specified in Section 1-05.10.

Plant establishment includes only those plants listed with "PSIPE _____" (Plant Selection Including Plant Establishment) in the Proposal.

(August 2016, City of Auburn GSP)

The second, third, and fourth paragraphs are replaced with the following:

The plant establishment period shall begin immediately upon written notification from the Engineer of the completion of the initial planting for the project. The Contractor shall maintain all plant materials for a period of 1-year after the Plant Establishment period has begun. During this period, the Contractor shall maintain a healthy growing condition for all plant materials and water, prune, spray, weed, and perform other necessary maintenance operations. Planting beds shall be kept free of all weeds, grass and other undesirable vegetation. Plants shall be inspected by the Contractor at least monthly from October 1st to April 30th and at least once a week from May 1st to September 30th and maintenance performed promptly. Dead or impaired plants shall be promptly replaced during the planting season specified in Section 8-02.3(8) and all soil ridges shall be removed from around the watering basins before the end of the maintenance period. At the determination of the Engineer, replacement plants may require an additional acceptance and establishment period.

After completion of the landscape establishment period, the Contractor shall request an inspection by the Engineer. The Contractor shall correct all conditions unsatisfactory to the Engineer within a 10-day period, weather permitting, immediately following the inspection.

8-02.3(14) Plant Replacement

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Completion of the Plant Establishment period will be certified, in writing, by the Engineer.

8-02.4 Measurement

(City Contracts, January 2017, City of Auburn GSP)

Supplement this section with the following:

Measurement of "Root Control Barrier" will be by the linear foot completed in place.

Measurement of "Tree Grate and Frame" will be measured per each after installation completed and accepted.

No unit of measure shall apply to "Roadside Restoration".

(City Contracts, August 2016, City of Auburn GSP)

References to measurement of topsoil and mulch in this section are revised to the following:

Topsoil Types "_" will be measured by the square yard for the surface area of the landscape areas multiplied by the specified topsoil thickness for seeded and planting areas, converted to cubic yards.

Bark mulch will be measured by the cubic yard for the surface area of the landscape area multiplied by the specified bark thickness, converted to cubic yards.

8-02.5 Payment

(City Contracts, April 2017, City of Auburn GSP)

Supplement this section with the following:

Payment will be made for each of the following Bid items that are included in the Proposal:

"Topsoil Type __", Per Cubic Yard

"Root Control Barrier", Per Lineal Foot

"Seeding, Fertilizing, and Mulching", Per Square Yard

"Bark Mulch", Per Cubic Yard

"Tree Grate and Frame", Per Each

"Roadside Restoration", by force account as provided in Section 1-09.6.

(City Contracts, September 2016, City of Auburn GSP)

References to payment for topsoil is revised to the following:

The unit contract price per cubic yard for "Topsoil Type __" shall be full pay to furnish and install Topsoil including all costs associated with preparing the Topsoil for installation, for preparing the site prior to placement of the Topsoil including removal of all excess material and debris, and for all costs associated with supplying and using required soil amendments, and for furnishing all labor, tools, equipment, and materials necessary to complete the work as specified.

The unit Contract price per cubic yard for "Bark Mulch" shall be full pay for furnishing and spreading the mulch onto the existing soil.

(City Contracts, August 2018, City of Auburn GSP)

References to partial payment for plants that include plant establishment is deleted.

8-03 Irrigation Systems

8-03.1 Description

(January 2017, City of Auburn GSP)

Supplement this section with the following:

This work also consists of the replacement and/or repair of existing irrigation systems.

8-03.2 Materials

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Irrigation conduit shall be PVC pipe and be in accordance with Section 9-15.1(2) (Polyvinyl Chloride Pipe and Fittings).

8-03.3(4) Irrigation Water Service

(January 2017, City of Auburn GSP)

Delete this section and replace it with the following:

Water meter(s) will be installed at location(s) shown on the Plans in accordance with Section 7-15 (Service Connections).

8-03.3(5) Irrigation Electrical Service

(January 2017, City of Auburn GSP)

Delete this section and replace it with the following:

Electrical service and or wires will be installed at location(s) shown on the Plans in accordance with Section 8-20.3(10) (Services transformer, Intelligent Transportation System Cabinet).

8-03.3(6) Excavation

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Backfilling shall be done when pipe is not in an expanded condition due to heat or pressure. Cooling of the pipe can be accomplished by operating the system for a short time before backfilling, or by backfilling in the early part of the morning before the heat of the day.

8-03.3(7) Piping

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Due to the nature of PVC pipe and fittings, the Contractor shall exercise care in handling, loading, unloading and storing to avoid damage. The pipe and fittings shall be stored under cover and shall be transported in a vehicle with a bed long

enough to allow the length of pipe to lay flat, so as not to be subject to undue bending or concentrated external load at any point. Any pipe that has been dented or damaged shall be set aside until such damage has been cut out and the pipe is rejoined with a coupling.

8-03.3(8) Jointing

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Solvent welded joints shall be given at least 15 minutes set-up time before moving or handling. Pipe shall be partially center loaded to prevent arching and slipping. No water shall be permitted in pipe until a period of at least 10 hours has elapsed for solvent weld setting and curing.

The Contractor shall take great care to insure that the inside of the pipe is absolutely clean. Any pipe ends not being worked on shall be protected and not left open.

No PVC pipe may be threaded or connected to a threaded fitting without an adapter.

8-03.3(9)F Cross Connection Control Device Installation

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Backflow preventer assembly shall be installed at location(s) shown on the Plans.

8-03.3(9)G Electrical Wire Installation

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Splices shall be made with a dry-splice wire connector, PVC construction body and snap-lock plug with copper crimp sleeve, three flapped openings for wires and sealer packet such as Rainbird ST-03UL/PT-55 Snap-Tite, UL Wire Connectors and PT-55 Sealer System, Glendora, California or equivalent. Install per manufacturer's specifications.

8-03.3(10) Flushing and Testing

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Before pressure testing, soluble weld joints shall be given at least 24 hours curing time. Before backfilling and installation of automatic valve, all sprinkler lines with risers installed and capped shall be flushed and pressure-tested. The final test must be performed and approved under the direction and supervision of the Engineer. The location, inspection and testing provisions of these specifications shall be strictly adhered to. Any part of the sprinkler system backfilled before location, testing, or approved inspection by the Engineer, will be completely uncovered and exposed until approved for backfilling by the Engineer.

8-03.3(11) Backfill

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Trenches under roads or paved areas shall be backfilled and tamped with a mechanical tamper in successive 6 inch lifts. Paving shall be replaced to the satisfaction of the Engineer. Jacking under paved areas will be allowed with Engineer's approval.

Unless otherwise specified, trenches shall be deep enough to allow 18 inches cover over sprinkler lines and 24 inches cover over supply lines. All trenches must be straight and not have abrupt changes in grade. Bedding for irrigation lines shall be washed sand from a minimum of 3-inches below to 3-inches above all irrigation lines. Native material may be used as backfill for the remainder of the trench when not in paved areas. Rocks larger than 3-inches in diameter shall be removed from any native material used as backfill.

8-03.3(14) System Operation

(January 2017, City of Auburn GSP)

Supplement this section with the following:

The Contractor shall perform sprinkler coverage tests to determine if coverage and operation of the system is complete and satisfactory before the sprinkler system will be accepted. If any part of the system is inadequate because of Contractor workmanship or material, repairs or replacement shall be made at Contractor expense and the test repeated until accepted by the Engineer.

(August 2016, City of Auburn GSP)

In the third paragraph, the last sentence is revised to read:

> Potable water shall not flow through the cross-connection control device to any downstream component until tested and approved for use by the City in accordance with Section 8-03.3(12) (Cross Connection Control Device Installation).

(City Contracts, August 2016, City of Auburn GSP)

Add the following new section:

8-03.4 Measurement

No measurement shall be made for "Automatic Irrigation System Complete".

Measurement for "Double Check Valve Assembly" shall be per each double check valve assembly completed.

8-03.5 Payment

(City Contracts, April 2017, City of Auburn GSP)

Delete this section and replace it with the following:

Payment will be made for each of the following Bid items that are included in the Proposal:

"Automatic Irrigation System Complete", Per Lump Sum

"Double Check Valve Assembly", Per Each

The lump sum contract price for "Automatic Irrigation System Complete" shall be full pay for the construction of the complete irrigation system, modifying existing systems, or

both, as shown in the Plans and herein specified, including excavation, backfilling, concrete foundations, piping, sprinkler heads, conduit, wiring, restoring facilities destroyed or damaged during construction, salvaging existing materials, and for making all required tests. All additional materials and labor, not shown in the Plans or called for herein and which are required to complete the irrigation system shall be included in the lump sum price. Payment for required irrigation water service connections will be paid separately as identified in Section 7-09.5 of these Special Provisions.

Payment for "Double Check Valve Assembly" shall be full pay for furnishing all material and equipment, installation, permitting, and testing, required for a double check valve assembly. Payment for the water service line, where applicable, shall be separate.

8-04 Curbs, Gutters and Spillways

8-04.3 Construction Requirements

8-04.3(1) Cement Concrete Curbs, Gutters, and Spillways

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Reinforcing shall be constructed at catch basins in accordance with the applicable Standard Detail(s).

When slip-form equipment is used to place the curb and gutter, the concrete mix design may be modified as follows: The Grade No. 2 coarse aggregate (1½ inch minus) may be replaced by Grade No. 5 coarse aggregate (1 inch minus) when required to accommodate the equipment.

(August 2016, City of Auburn GSP)

The fourth paragraph is replaced with the following:

Joints in the curb and gutter shall be spaced to match joints in the abutting driveways and sidewalks or cement concrete pavement. All expansion/through joints shall extend entirely through the curb and gutter section. Maximum joint spacing shall be as follows:

A. ¾ inch expansion/through joints at 20-foot maximum spacing, or 3/8-inch expansion/through joints at 10-foot maximum spacing;

B. 1/8 inch x 1 inch deep saw cut or scored joints per Standard Specification 8-04.3(1) (Cement Concrete Curbs, Gutters, and Spillways) at intervening 10-foot maximum spacing.

8-04.3(1)A Extruded Cement Concrete Curb

(January 2017, City of Auburn GSP)

Supplement this section with the following:

"Extruded Cement Concrete Curb" shall be type 6 as detailed in the applicable Standard Plan.

8-04.4 Measurement

(City Contracts, August 2016, City of Auburn GSP)

References to measurement of curb and gutter in this section shall be revised as follows:

Measurement for “Cement Concrete Traffic Curb and Gutter” will not include cement concrete curb and gutter which will be reinforced and poured integral with an Industrial or Commercial Driveway Apron slab.

8-04.5 Payment

(City Contracts, April 2017, City of Auburn GSP)

Supplement this section with the following:

Payment will be made in accordance with Section 1-04.1 (Intent of the Contract) for the following bid items:

“Bumper Curb”, Per Each

The unit contract price per each for ‘Bumper Curb’ shall be full pay for all labor, materials, and equipment necessary to furnish and install each bumper curb.

(City Contracts, September 2020, City of Auburn GSP)

Supplement this section with the following:

“Cement Conc. Pedestrian Curb – Variable Height”, per linear foot.

The unit contract price per each for “Cement Conc. Pedestrian Curb – Variable Height” shall be full payment for all costs to construct the varying height curb as shown in the Plans or as staked by the Engineer.

8-05 VACANT

This section, including title, is replaced with the following including subsections:

(August 2016, City of Auburn GSP)

This section, including title, is replaced with the following including subsections:

8-05 Dewatering System

8-05.1 General

(February 2023, City of Auburn GSP)

When dewatering trenches requires a dewatering system the Contractor shall design and provide a dewatering system using accepted and professional methods consistent with current industry practice to eliminate water entering the excavation under hydrostatic head from the bottom and/or sides. The Contractor shall design the system to prevent differential hydrostatic head that would result in floating out soil particles in a manner termed as a “quick” or “boiling” condition. The system shall not be dependent solely upon sumps or pumping water from within the excavation where differential head would result in a quick condition, which would continue to worsen the integrity of the excavation’s stability.

Where the Engineer determines that the Contractor cannot sufficiently dewater the trench using the “Normal Trench Dewatering” described in Section 7-08.3(2)L (Dewatering

Trenches) of these Special Provisions, the Contractor shall provide a dewatering system of sufficient size and capacity to prevent ground and surface water flow into the excavation and to allow all work to be installed in a dry condition.

The Contractor shall control, by acceptable means, all water regardless of source and be fully responsible for disposal of the water.

The Contractor shall confine discharge piping and/or ditches to available easements or to additional easements obtained by Contractor and provide necessary permits and/or additional easements at no additional cost to the City.

The Contractor shall control groundwater in a manner that preserves strength of foundation soils, does not cause instability or raveling of excavation slopes, and does not result in damage to existing structures. Where necessary to these purposes, the Contractor shall lower water levels in advance of excavation, utilizing wells, well points, jet educators, or similar positive methods. The water level as measured by piezometers shall be maintained a minimum of 2 feet below prevailing excavation level.

The Contractor shall commence dewatering prior to any appearance of water in excavation and continue until work is complete to the extent that no damage results from hydrostatic pressure, flotation, or other causes.

Open pumping with sumps and ditches shall be allowed, provided it does not result in boils, loss of fines, softening of the ground, or instability of slopes.

The Contractor shall install wells and/or well points, if required, with suitable screens and filters, so that continuous pumping of fines does not occur, arrange discharge to facilitate collection of samples by the City. During normal pumping, and upon development of well(s), levels of fine sand or silt in the discharge water shall not exceed 5 ppm. The Contractor shall install sand tester on discharge of each pump during testing to verify that levels are not exceeded.

The Contractor shall control grading around excavations to prevent surface water from flowing into excavation areas.

(City Contracts, February 2023, City of Auburn GSP)

Supplement this section with the following:

No additional payment will be made for any supplemental measures to control seepage, groundwater, or artesian head.

8-05.1(1) Design

(August 2016, City of Auburn GSP)

Contractor shall designate and obtain the services of a qualified dewatering specialist to provide a dewatering plan as may be necessary to complete the work.

Contractor shall be responsible for the accuracy of the drawings, design data, and operational records required.

Contractor shall be solely responsible for the design, installation, operation, maintenance, and any failure of any component of the system.

8-05.1(1)A Dewatering Discharge

(January 2018, City of Auburn GSP)

Discharge Limits

1. Turbidity – less than 5 NTUs above background
2. Sand Content – less than 10 ppm
3. pH between 6.5 and 8.5
4. No visible sheen in the stormwater discharge or in the receiving water

Contractor shall conduct Daily Monitoring and provide records of:

PH

TSS (NTU)

Volume Discharged (gpd)

Water levels in monitoring wells

Sand content (first 5 days after startup)

Contractor shall conduct Weekly Monitoring and provide records of:

Sand Content

Sampling and Analysis

Preliminary testing of dewatering discharge will be conducted by the Contractor during the initial dewatering activities prior to discharging water to the City's stormwater system. Contractor shall use the preliminary water testing results to evaluate what treatment components, if any, will need to be added to the dewatering system. During initial dewatering activities, water will be pumped into a series of storage containers. Water will be sampled from the last tank in the series and analyzed for the constituents specified in the table above.

Contractor shall provide monitoring records to the City on a daily basis.

The total flow quantified by the flow totalizer and water levels in monitoring wells will be recorded on the daily contractor logs and at the time effluent water samples are collected. The total flow measurements will be included in the effluent sampling summary reports.

8-05.1(1)B Temporary Dewatering Plan

(May 2017, City of Auburn GSP)

The Contractor shall submit a Temporary Dewatering Plan to the Engineer for review per Section 9-38 (Submittal Approval). The Temporary Dewatering Plan shall be prepared by a Professional Engineer or Hydrogeologist who is licensed to practice in the State of Washington, and who has a minimum of five years of experience in the design of dewatering systems for similar projects.

The Temporary Dewatering Plan shall include:

- A narrative of the Contractor's proposed dewatering system methodology,
- Working drawings showing system layout and components including number and location of dewatering wells, wellpoints, and/or eductors with a well numbering system,
- Design calculations demonstrating system and equipment adequacy,
- Specifications of proposed materials and equipment, including pump curves,
- Pumps and sumps for removal of incidental seepage, perched groundwater, etc.

- Provision for the settlement and removal of sediments prior to discharge (e.g., settling tanks),
- Number and location of temporary monitoring wells to be installed (Note that one monitoring well is present on-site. However, this well will be impacted during construction activities and therefore cannot be used as one of the temporary monitoring wells used during dewatering efforts.),
- Dewatering schedule, including mobilization, installation, development, testing, water quality analysis, start-up, monitoring, operation, shutdown, decommissioning, clean-up, and removal,
- Describe how groundwater will be treated to meet the applicable discharge limits, and
- Proposed plans of operation.

Any changes to the proposed system shall be submitted to the Engineer for review prior to implementation.

In addition to the Temporary Dewatering Plan, the submittal shall include:

- A Contingency Plan for storm events or other conditions (including failure of the dewatering system) that could raise groundwater levels and overwhelm the capacity of the dewatering system pumps or discharge facilities. In the Contingency Plan, the Contractor should:
  - Make provision to suspend dewatering operations for anticipated events (e.g., storms) and unanticipated events that may occur prior to excavation work and that would require dewatering.
  - Provide methods to secure such items as the excavation, shoring, side slopes, equipment, dewatering system components, base of excavation, and any installed facilities from the adverse effects of elevated groundwater levels.
  - A Water Quality Sampling Plan

The Engineer's review of the Temporary Dewatering Plan shall not constitute approval nor relieve the Contractor from full responsibility for errors therein nor from the entire responsibility for complete and adequate groundwater level control and volume removal in the excavated areas; formation protection; and protection of existing and proposed structures to the extent specified herein. The Contractor shall be solely responsible for control of the groundwater levels and hydrostatic pressures to the depths herein specified and for avoiding settlement outside the excavation as herein specified. The Contractor shall bear sole responsibility for proper design, installation, operation, maintenance, and any failure of any component of the temporary dewatering system for the duration of the Contract.

8-05.2 Vacant

8-05.3 Construction Requirements

8-05.3(1) Damages

(August 2016, City of Auburn GSP)

Contractor shall be responsible for and shall repair without cost to the City, any damage to work in place, or other contractor's equipment, utilities, residences, highways, roads, railroads, private and municipal well systems, adjacent structures, natural resources,

habitat, existing wells, and the excavation, including, damage to the bottom due to heave and including but not limited to, removal and pumping out of the excavated area that may result from Contractor's negligence, inadequate or improper design and operation of the dewatering system, and any mechanical or electrical failure of the dewatering system.

The Contractor shall remove subgrade materials rendered unsuitable by excessive wetting and replace with approved backfill material at no additional cost to the Owner.

8-05.3(2) Settlement Monitoring Program

(January 2018, City of Auburn GSP)

Contractor shall develop and submit to the City a Settlement Monitoring Program for review and approval prior to beginning dewatering per Section 9-38 (Submittal Approval).

Contractor shall establish a settlement monitoring program and perform all survey and inspections necessary for monitoring existing site features. All surveys shall be performed under the direction of a licensed land surveyor. Vertical and horizontal measurements shall be accurate to 0.01 feet or smaller.

Contractor shall set survey monuments on permanent structures, the roadway, and utilities. The survey monuments may consist of PK nails with a washer with an identification number. Contractor shall record the identification number, elevation, and coordinate location prior to initiating dewatering, and submit the baseline information to the Engineer. The method of installing survey monuments, and the locations and number of survey monuments shall be as approved by the Engineer. The Engineer shall be notified a minimum of one day prior to setting survey monumentation. The initial survey to record the monuments baseline horizontal and vertical location shall be completed by conducting three separate level loops for each monument. Each loop shall be run so that they start and stop at a different location each time. The intent of running multiple level loops on each monument is to catch potential survey errors.

Contractor shall perform an initial survey prior to commencement of the Work, daily for the first 5 days after the dewatering system is started up, subsequently two days per week when the dewatering system is active, and one day per week for a month after the dewatering system is turned off. If pumping or dewatering of excavations are interrupted or cannot be adequately maintained, the survey monuments and targets shall be checked a minimum of once every 24 hours for as long as the conditions exist.

Contractor shall immediately notify the Engineer of any cumulative change in elevation or location of any monument or target in excess of 1/4 inch. If the cumulative change in elevation or location exceeds 1/2 inch, the Contractor shall immediately notify the Engineer and resolve the problem using methods defined in the Contingency Plan or other reasonable methods.

The Contractor shall maintain in a log the survey data taken for each monument or target. A copy shall be sent to the Engineer after each addition of data.

Contingency Plan

Contractor shall prepare a Contingency Plan to mitigate the effects of excessive settlement or movement of existing Site features. The Contingency Plan is not to restrict the Contractor from using the best construction methods available to meet the conditions but is required to demonstrate a reasonable preparedness to mitigate the effects of excessive movement or settlement. The following are minimum requirements for a Contingency Plan:

1. The Contingency Plan shall outline steps to be taken to protect structures, buildings, and utilities and to stop excessive movement or settlement identified by the settlement monitoring program.
2. Contractor shall have all material, manpower, equipment, and other items identified in the Contingency Plan available at all times while excavations are ongoing or excavated areas are open."

8-05.3(3) Maintaining Excavation in Dewatering Condition

(August 2016, City of Auburn GSP)

Dewatering shall be a continuous operation. Interruptions due to power outages or any other reason will not be permitted.

The Contractor shall continuously maintain excavation in a dry condition with positive dewatering methods during preparation of subgrade, installation of pipe, and construction of structures until the critical period of construction and/or backfill is completed to prevent damage of subgrade support, piping, structure, side slopes, or adjacent facilities from flotation or other hydrostatic pressure imbalance.

The Contractor shall provide standby equipment on site, installed, wired, and available for immediate operation if required to maintain dewatering on a continuous basis in the event any part of the system becomes inadequate or fails. If dewatering requirements are not satisfied due to inadequacy or failure of dewatering system, perform such work as may be required to restore damaged structures and foundation soils at no additional cost to City.

System maintenance shall include but not be limited to 24-hour supervision by personnel skilled in the operation, maintenance, and replacement of system components and any other work required to maintain excavation in dewatered condition.

8-05.3(4) System Removal

(August 2016, City of Auburn GSP)

The Contractor shall abandon and remove from the site, in accordance with WAC Chapter 173-160 and RCW Chapter 18.104, all groundwater control and monitoring system elements. The Contractor shall be, or employ the services of, a water well contractor licensed in the State of Washington to abandon all wells, and/or well points. The Contractor shall assume ownership and responsibility for the disposal of all removed groundwater control pumps, pipes, and other assorted system hardware.

The Contractor shall abandon and remove the groundwater control and monitoring systems in such a manner that groundwater does not flow or seep through groundwater control or monitoring system penetrations into any structure or facility. Wells decommissioned within roadways shall be capped beneath the roadway base course with at least 24-inches of class 3000 concrete. Beneath the concrete cap, the Contractor may utilize bentonite to fill the well per Department of Ecology requirements.

8-05.4 Measurement

(City Contracts, August 2016, City of Auburn GSP)

"Dewatering System" will be measured per linear foot along the construction centerline. Only sections approved for dewatering by the Engineer will be included in the

measurements. Pipe lengths installed using "Normal Dewatering Methods," or installed using the dewatering system without approval from the Engineer will not be included in the measurement for "Dewatering System."

"Normal Trench Dewatering" as described in Section 7-08.3(2)L (Dewatering Trenches) will not be measured for payment, but instead will be included in the per linear foot price of the utility being installed.

8-05.5 Payment

(City Contracts, April 2017, City of Auburn GSP)

Payment will be made for each of the following Bid items that are included in the Proposal:

"Dewatering System", Per Linear Foot

The unit bid price in the Proposal for "Dewatering System", per linear foot shall be full compensation for the costs of all labor, tools, equipment, and materials necessary or incidental to design, install, operate, maintain, and remove a complete dewatering system. This Bid item shall also include, but not be limited to, dewatering handling, preliminary testing prior to discharge, storage, permitting, daily monitoring, weekly monitoring, and disposal of clean groundwater and sediment. Providing, installing, operating, and maintaining settling tank(s), or other equipment necessary to meet the discharge requirements, shall be included in this lump sum cost and shall not be measured for separate payment.

The unit price shall also include all costs to continuously operate the dewatering system, all power costs and connections, permits, pumps, wells, pipes, fittings, and appurtenances.

All costs for design of dewatering systems and preparation and implementation of the Temporary Dewatering Plan (including the Contingency Plan, Water Quality Sampling Plan, and Settlement Monitoring Program, including Contingency Plan) shall be included in the dewatering lump sum cost and shall not be measured for separate payment.

Dewatering" shall only be paid for when a dedicated system using well points is used for dewatering. All "normal trench dewatering" work, as defined in Section 7-08.3(2)L, will be incidental to and included in the unit cost for the pipe, structure, etc. being installed.

Restoration of property damaged due to dewatering or settlement caused by the dewatering system shall be the Contractor's responsibility.

8-06 Cement Concrete Driveway Entrances

8-06.1 Description

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Driveway approaches shall be considered to be that portion of the private driveways, which require removal and replacement to transition between the new cement concrete driveway aprons and the existing private driveway. "Cement Concrete Driveway Approaches" shall be constructed and finished as specified for driveways, except they shall be 4-inch thick slabs and not reinforced.

8-06.2 Materials

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Materials shall meet the requirements of the following sections:

Wire Mesh (Welded Wire Fabric)	9-07.7
Concrete Curing Materials and Admixtures	9-23

8-06.3 Construction Requirements

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Concrete driveways shall be cured per methods described in Section 5-05.3(13) (Curing), with the following exceptions if the curing compound method is used:

- The Contractor shall use Type I clear curing compound per Section 9-23 (Concrete Curing Materials and Admixtures).
- The Contractor shall not use white pigmented curing compound.
- The curing agent shall be applied immediately after brushing and be maintained for a period of 5 calendar days.

The Contractor shall have readily available sufficient protective covering, such as waterproof paper or plastic membrane, to cover the pour of an entire day in event of rain or other unsuitable weather.

Additional requirements for curing in hot weather shall be as follows:

In periods of low humidity, drying winds, or high temperatures, a fog spray shall be applied to concrete after placement as soon as conditions warrant to prevent the formation of shrinkage cracks. The spray shall be continued until conditions permit the application of liquid curing membrane or other curing media.

Additional requirements for curing in cold weather shall be as outlined in Section 5-05.3(14) (Cold Weather Work).

8-06.4 Measurement

(City Contracts, February 2024, City of Auburn GSP)

Supplement this section with the following:

Measurement for “Cement Concrete Driveway Approach” will be by the square yard of finished surface, excluding area measured as driveway apron.

Measurement for “Residential Driveway Apron” will be by the square yard of finished surface, excluding the cement concrete curb and gutter area.

Measurement for “Industrial or Commercial Driveway Apron” will be by the square yard of finished surface including the cement concrete curb and gutter which will be reinforced and poured integral with the driveway apron slab.

8-06.5 Payment

(City Contracts, April 2017, City of Auburn GSP)

Supplement this section with the following:

Payment will be made for each of the following Bid items that are included in the Proposal:

"Residential Driveway Apron", Per Square Yard

"Industrial or Commercial Driveway Apron", Per Square Yard

"Cement Concrete Driveway Approach", Per Square Yard

The unit contract price per square yard for "Residential Driveway Apron" shall be full pay for all work to complete the installation including subgrade preparation, thickened edges, and wings.

The unit contract price per square yard for "Industrial or Commercial Driveway Apron" shall be full pay for all work to complete the installation including subgrade preparation and integrated cement concrete curb and gutter.

Payment for "Cement Concrete Driveway Approach" shall be full pay for all costs to construct the approach.

Payment for cement concrete curb and gutter will be in accordance with the provisions of Section 8-04 (Curbs, Gutters, and Spillways), except for locations where the curb and gutter is integral with the Industrial and Commercial Driveway Apron.

Payment for water will be in accordance with the provisions of Section 2-07 (Watering).

8-07 Precast Traffic Curb

8-07.2 Materials

(February 2024, City of Auburn GSP)

Supplement this section with the following:

Materials shall meet the requirements of the following sections:

Epoxy Adhesive for Curb	9-26.2
Glass Beads	9-34.4
Raised Pavement Markers	9-21.2
Adhesive for RPMs	9-02.1(8)
36" Delineators	9-17 and COA Std Detail T-32
Adhesive for Delineators	9-02.1(8)

8-07.3 Construction Requirements

8-07.3(16) Installing Curbs

(January 2017, City of Auburn GSP)

Delete the first paragraph and replace it with the following:

The curb shall be installed in accordance with the applicable City of Auburn Standard Detail.

The second sentence is revised to read:

Before the epoxy adhesive is applied, all dirt shall be cleaned from the pavement surface by washing.

The fourth paragraph is revised to read:

All joints between adjacent pieces of curb except joints for expansion and/or drainage shall be filled with epoxy.

8-07.4 Measurement

(City Contracts, January 2017, City of Auburn GSP)

Delete this section and replace it with the following:

Precast curb shall be measured along the length of the precast curb system installed, from delineator to delineator, without deduction for gaps.

8-07.5 Payment

(City Contracts, April 2017, City of Auburn GSP)

Supplement this section with the following:

Payment will be made in accordance with Section 1-04.1 (Intent of the Contract) for the following bid items:

"Precast Curb with Delineators", Per Linear Foot

The unit contract price per linear foot for 'Precast Curb with Delineators' shall include all costs to furnish and construct the mountable curb system, including, raised pavement markers, epoxy, and delineators.

8-09 Raised Pavement Markers

8-09.3 Construction Requirements

8-09.3(2) Surface Preparation

(January 2017, City of Auburn GSP)

Supplement this section with the following:

The Contractor shall pre-mark the layout of all channelization and receive approval from the Engineer before installing "Raised Pavement Markers" (RPM's). Pre-marks shall consist of painted spot markings or other approved methods. The Contractor shall request the Engineer's approval of the pre-mark for channelization at least 2 full working days prior to installation of the RPMs.

(August 2016, City of Auburn GSP)

Add the following new section:

8-09.3(8) Remove Raised Pavement Markings

All raised pavement markings shall be removed before placing a new asphalt concrete pavement overlay. Removal of markers shall be conducted in a manner that prevents damage to existing pavement. Damage to the existing pavement caused by Contractor's negligence shall be repaired by the Contractor at the Contractor's expense. Repairs shall be to the satisfaction of the Engineer.

8-09.4 Measurement

(City Contracts, April 2019, City of Auburn GSP)

Raised Pavement Markers will be measured by the unit for each marker furnished and installed.

8-09.5 Payment

(City Contracts, February 2020, City of Auburn GSP)

Supplement this section with the following:

Payment will be made in accordance with Section 1-04.1 (Intent of the Contract) for the following bid items:

"Remove Raised Pavement Markers", Per Each

"Raised Pavement Markers", Per Each

(City Contracts, September 2016, City of Auburn GSP)

References to payment for Raised Pavement Markers are revised to the following:

The unit contract price per each for "Raised Pavement Markers Type __" shall be full pay for furnishing and installing the markers in accordance with these specifications including all cost involved with traffic control except for reimbursement for labor for traffic control in accordance with Section 1-10 (Temporary Traffic Control).

The unit contract price per each for "Remove Raised Pavement Markers" shall be full pay to remove each pavement marker.

8-12 Chain Link and Wire Fence

8-12.2 Materials

(July 2023, City of Auburn GSP)

Supplement this section with the following:

Coated Chain Link Fence

Chain link fence fabric shall be hot-dip galvanized with a minimum of 0.8 ounce per square foot of surface area.

Fencing materials shall be coated with an ultraviolet-insensitive plastic or other inert material at least 2 mils in thickness. Any pretreatment or coating shall be applied in accordance with the manufacturer's written instructions. The Contractor shall provide the Engineer with the manufacturer's written specifications detailing the product and method of fabrication. All components of the fence shall be black.

8-12.4 Measurement

(City Contracts, July 2023, City of Auburn GSP)

Supplement this section with the following:

Coated chain link fence will be measured by the linear foot of completed fence along the ground line. No separate measurement will be made for coated chain link fence end, corner, or pull posts.

8-12.5 Payment

(City Contracts, July 2023, City of Auburn GSP)

Supplement this section with the following:

Payment will be made for each of the following Bid items that are included in the Proposal:

Coated Chain Link Fence Type _____, per linear foot.

Payment for "Coated Chain Link Fence Type ___" shall include all costs to furnish and install end, corner, and pull posts as required to construct the fence. No separate measurement or payment will be made for the different types of posts.

8-13 Monument Cases

8-13.1 Description

(January 2017, City of Auburn GSP)

Supplement this section with the following:

This work consists of constructing, or adjusting, monuments, to proper grade, and the furnishing and placing of materials and other related work for monuments.

8-13.2 Materials

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Monument cases and covers shall be in accordance with the applicable City of Auburn Standard Details. Concrete used for setting the monuments shall be Class 3000. Bronze plug markers will be furnished by the City and provided to the Contractor.

8-13.3 Construction Requirements

(January 2018, City of Auburn GSP)

The second sentence of the second paragraph is revised to read:

After the monument or monument case has been in place for a minimum of 3 calendar days, the roadway surface shall be patched in a workman like manner with Class ½ inch asphalt concrete pavement.

(January 2017, City of Auburn GSP)

Supplement this section with the following:

The bronze plug marker shall be inserted in the concrete mix to the required line and grade. The concrete base shall be placed on a well-compacted foundation. When Type B

monuments are installed, the monument case shall be placed in such a manner that will not disturb the bronze plug markers.

Where called for on the Plans, the Contractor shall adjust existing monuments to the grade as staked. The existing cast iron case and cover shall first be removed and thoroughly cleaned for reinstalling at the new grade.

(August 2016, City of Auburn GSP)

Add the following new section:

8-13.3(3) Reference Points

(August 2016, City of Auburn GSP)

The Engineer shall reference all monuments in advance of construction and shall reset the points and grades at the proper time.

It shall be the responsibility of the Contractor to furnish materials and install required castings in accordance with the Plans. The Contractor shall carefully protect all reference points to the monuments and shall give the Engineer reasonable notice of the schedule for monument work in order to avoid destruction of the points.

8-13.4 Measurement

(City Contracts, January 2017, City of Auburn GSP)

Supplement this section with the following:

Monument adjustment shall be measured by each monument adjusted to final grade.

8-13.5 Payment

(City Contracts, December 2020, City of Auburn GSP)

Supplement this section with the following:

Payment will be made for each of the following Bid items that are included in the Proposal:

"Monument Type A (Modified)", Per Each

"Monument Type B (Modified)", Per Each

"Adjust Existing Monument", Per Each

Payment for "Monument Type B (Modified)" shall be full pay for the materials, labor, survey work, recording, adjustments to finish grade (including asphalt concrete patches), and other costs to install each monument.

Payment for "Adjust Existing Monument" shall be full pay for the materials, labor, survey work, recording, asphalt concrete patches, and other costs to adjust each monument to final grade.

8-14 Cement Concrete Sidewalks

8-14.1 Description

(January 2017, City of Auburn GSP)

Delete this section and replace it with the following:

This work shall consist of construction of cement concrete sidewalks, including curb ramps with detectable warning strips.

8-14.3 Construction Requirements

8-14.3(1) Excavation

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Excavation for sidewalk and for curb ramps shall be in accordance with Section 2-03, (Roadway Excavation and Embankment).

Embankments shall be compacted by Method B as specified in Section 2-03.3(14)C (Compacting Earth Embankments). Approved tampers shall be used in areas inaccessible to normal compaction equipment.

The subgrade shall be graded to within 1 inch of established grade and the area between the sidewalk and the adjacent private property line shall be shaped to line, grade, and section shown on the Plans before the forms are set.

8-14.3(2) Forms

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Low areas in the subgrade shall be backfilled and compacted to the satisfaction of the Engineer. All high areas in the subgrade shall be cut down to meet the subgrade requirements.

8-14.3(3) Placing and Finishing Concrete

(February 2023, City of Auburn GSP)

The fourth paragraph is revised to read:

Curb Ramps shall be constructed in accordance with the Plans. If any slope exceeds a maximum slope specified on the Standard Plans or Contract Plans or if any dimension is less than a minimum dimension specified on the Standard Plans or Contract Plans, the Contractor shall replace the curb ramp or a portion of the curb ramp as necessary and approved by the Engineer to bring the curb ramp into compliance. This work will be at the Contractor's cost.

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Expansion and contraction (dummy) joints shall be located and constructed in accordance with the Standard Details.

Expansion joints shall be formed by first cutting a groove in the concrete with a tee bar of a depth equal to, but not greater than the joint filler material, and then working the pre-molded joint filler into the groove. Pre-molded joint filler used for expansion joints shall be normal to and flush with the surface of the sidewalk. All joints, expansion and dummy, shall be positioned in true alignment at right angles to the line of the sidewalk.

Where the sidewalk abuts a curb, or curb and gutter, the sidewalk shall be constructed with a thickened edge.

Joints and the sidewalk perimeter shall be edged with a 3/8 inch to 1/2 inch radius edger.

The surface of the sidewalks shall be brushed with a fiber hair brush of an approved type in a transverse direction except that at driveway and alley crossings it shall be brushed longitudinally.

(August 2016, City of Auburn GSP)

Add the following new section:

8-14.3(3)A Special Sidewalk

(August 2016, City of Auburn GSP)

(Downtown Sidewalk – 2x2 Scoring)

The "Special 2x2 Scored Cement Concrete Sidewalk" shall be concrete with 2 ft. x 2 ft. scoring pattern with a light broom finish.

(Downtown Street Corner Sidewalk - Brick)

The "Special Brick Sidewalk" at street corners as specified on the Plans shall be constructed of brick pavers in a rectangular pattern. The patterns shall extend from the back of curb to the building face or property line and minimum of 10 feet in either direction from the corner of the property lines. The brick pavers shall be Mutual Materials "Holland" 8cm, or approved equivalent and the color shall be per Plans.

8-14.3(4) Curing

(January 2017, City of Auburn GSP)

Delete this section and replace it with the following:

Concrete sidewalks shall be cured per methods described in Section 5-05.3(13) (Curing), with the following exceptions if the curing compound method is used:

- The Contractor shall use Type I clear curing compound per Section 9-23 (Concrete Curing Materials and Admixtures).
- The Contractor shall not use white pigmented curing compound.
- The curing agent shall be applied immediately after brushing and be maintained for a period of 5 calendar days.

The Contractor shall have readily available sufficient protective covering, such as waterproof paper or plastic membrane, to cover the pour of an entire day in event of rain or other unsuitable weather.

Additional requirements for curing in hot weather shall be as follows:

In periods of low humidity, drying winds, or high temperatures, a fog spray shall be applied to concrete after placement as soon as conditions warrant to

prevent the formation of shrinkage cracks. The spray shall be continued until conditions permit the application of liquid curing membrane or other curing media.

Additional requirements for curing in cold weather shall be as outlined in Section 5-05.3(14) (Cold Weather Work).

8-14.4 Measurement

(City Contracts, January 2017, City of Auburn GSP)

Supplement this section with the following:

"Sidewalk Ramp Detectable Warning Retrofit," will be measured by the square foot of truncated dome material installed on the existing ramp.

8-14.5 Payment

(City Contracts, April 2017, City of Auburn GSP)

Supplement this section with the following:

Payment will be made for each of the following Bid items that are included in the Proposal:

"Special 2x2 Scored Cement Concrete Sidewalk", Per Square Yard

"Special Brick Sidewalk", Per Square Yard

"Sidewalk Ramp Detectable Warning Retrofit", Per Square Foot

The unit contract price per square yard for "Cement Concrete Sidewalk", "Special 2x2 Scored Cement Concrete Sidewalk", and "Special Brick Sidewalk" shall be full pay for all work to complete the installation including subgrade preparation and thickened edges where identified.

The unit contract price per square yard for "Sidewalk Ramp Detectable Warning Retrofit" shall be full pay for complete installation of the detectable warning patterns including all preparation of the existing sidewalk, labor, equipment and materials.

8-18 Mailbox Supports

8-18.2 Materials

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Anchor Bolts, Nuts, and Washers for the Neighborhood Delivery and Collection Box Unit shall be in accordance with Section 9-06.5 (Bolts) and Section 9-06.22 (Bolts, Washers, and Other Hardware).

8-18.4 Measurement

(City Contracts, January 2017, City of Auburn GSP)

Supplement this section with the following:

Relocation of mailboxes shall be measured per each unit or cluster of mailboxes relocated.

8-18.5 Payment

(City Contracts, April 2017, City of Auburn GSP)

Supplement this section with the following:

Payment will be made for each of the following Bid items that are included in the Proposal:

"Relocate Type III Mailbox Support w/ boxes", Per Each

"Relocate Type IV N.D.C.B.U. (mailboxes)", Per Each

The unit contract price per each for relocating mailboxes shall be full payment to remove and re-install existing mailbox group, including all new materials necessary to install the support.

8-20 Illumination, Traffic Signal Systems, Intelligent Transportation Systems, and Electrical

8-20.1 Description

8-20.1(1) Regulations and Code

(April 2018, City of Auburn GSP)

The fourth paragraph is revised to read:

Safe-wiring labels required by Labor and Industries shall apply on this project.

8-20.1(3) Permitting and Inspections

(April 2018, City of Auburn GSP)

Supplement this section with the following:

The Contractor shall obtain electrical permit(s) from Washington State Department of Labor and Industries. Electrical Service inspection(s) will be performed by Labor and Industries. Obtaining the permit, requesting inspections, making corrections, and securing L&I approval is the responsibility of the Contractor.

8-20.2(1) Equipment List and Drawings

(January 2017, City of Auburn GSP)

Delete this section and replace it with the following:

Supplemental data for pole equipment, luminaries, splice kits, vehicle signal heads, pedestrian signal heads, pedestrian push button assemblies, video detectors, PTZ camera(s), junction boxes, conduit, conduit fittings, wiring, service/battery back-up cabinet,

controller cabinet (including controller and all other associated equipment in the cabinet), preemption detectors and discriminators, and all other electrical materials to be used on this project shall be submitted for approval before being incorporated into the work. Quantity, pole height, davit arm length, and mast arm length shall be indicated and consistent with the Plans.

The Contractor shall submit supplemental data and material shop drawings for all structural items. The shop drawings and structural calculations shall clearly identify the type of equipment to be used and shall be stamped by a registered professional engineer registered. Shop drawings shall conform to the contract Plans.

All material to be reviewed for the signal system shall be submitted in a single package.

The City of Auburn reserves the right to inspect the manufacturing process of all materials. Final inspection and acceptance of the installed materials will not be given until final installation and testing has been completed on the system. Approval to install materials and equipment must be obtained from the Engineer at the job site, before installation.

8-20.3 Construction Requirements

(December 2020, City of Auburn GSP)

Add the following new section:

8-20.3(1)D Order of Work

Except as specifically allowed in Section 8-20.3(1) (General), each element of existing signal, illumination, communication and ITS systems shall remain in operation until modified systems to replace such are operational and accepted by the Contracting Agency. This includes, but is not limited to temporary vehicle detection which shall be provided by the Contractor during construction to replace the function of existing vehicle detection systems prior to any project work that adversely impacts the function of existing detection systems. Temporary vehicle detection equipment shall be compatible with City signal cabinet and installation shall be coordinated with City traffic signal technicians. Contractor shall be responsible for ensuring temporary vehicle detection systems function properly at all times while in use.

All existing illumination and traffic signal display and detection system equipment shall remain operational until the corresponding new equipment is constructed, tested, operational and accepted by the Engineer. Temporary video detection equipment shall be fully operational and accepted by the Engineer as a substitute for the function of any existing induction loop or video detection prior to any construction activities that render such existing traffic detection ineffective. Temporary video detection systems shall be in accordance with Section 8-20.3(14)I (Video Detection System) of these specifications.

8-20.3(4) Foundations

(December 2021 City of Auburn GSP)

Supplement this section with the following:

Before placing the concrete, the Contractor shall block out around any other underground utilities that may lie in the excavated base to prevent foundation adherence to

the utility line. Concrete foundations shall be troweled, brushed, and edged. Exposed anchor bolts and conduits shall be promptly cleaned of any concrete after installation.

Where no sidewalk is planned or exists, the top of the foundation shall be a minimum of 12 inches above roadway centerline, unless otherwise noted on the Plans.

The joint between traffic signal cabinet and its foundation shall be sealed using a clear, waterproof, silicone caulk.

8-20.3(5) Conduit

8-20.3(5)A General

(April 2018, City of Auburn GSP)

Supplement this section with the following:

Unless specified on the Plans, metal conduit shall not be used.

Location wire placed for conduit containing, or that are to contain, fiber optic cable shall be 12 AWG.

Conduit shall be in accordance with all provisions of Section 9-29.1 (Conduit, Innerduct, and Outerduct).

Conduit runs installed entirely under sidewalk, driveways, and landscape areas may be Schedule 40 PVC unless otherwise noted on the Plans. The same type and schedule of conduit shall be used for the entire length of the run from outlet to outlet and from Schedule 80 PVC conduit crossing the roadway to the nearest junction box. Bends for conduits serving existing or future interconnect and fiber optic cables shall be no less than 4 feet in diameter. All conduit ends shall have bell end PVC bushings.

Stubouts shall be installed as shown on the Plans.

A pull tape shall be installed in all spare conduits for future conductors. The pull tape shall have printed sequential measurement markings at least every 3 feet. At least 2 feet of pull tape shall be doubled back into the conduit at each termination. Conduits without conductors (spare conduits) shall be plugged on both ends with mechanical plugs. Locate wire shall be installed in all empty or spare conduits, not in joint trench with conductors.

Loop stubouts that are installed before the final lift of pavement shall be surrounded with a 6 inch PVC sleeve. This sleeve shall be extended below the top of the stubout and be flush with finished grade. All loop conduit shall be appropriately capped and sealed with a molded plug cap. Molded plug cap installation shall comply with manufacturer's installation and recommendations. With the exception of connections to HDPE conduit, joints shall be connected with medium grade gray cement solvent applied per the manufacturer's recommendations. The loop wires shall pass through a hole in the cap. The end of the conduit will also be sealed with moldable duct sealing compound. Sifted sand will be used to cover all exposed loop wires before final filling with loop sealant.

All conduit shall display the Underwriter Laboratories certification (UL Listed).

8-20.3(6) Junction Boxes, Cable Vaults, and Pull Boxes

(April 2018, City of Auburn GSP)

Supplement this section with the following:

All lids shall open away from the traveled way. Prior to construction of finished grade, if cable vaults are installed or adjusted, pre-molded joint filler for expansion joints may be placed around the cable vaults. The joint filler shall be removed prior to adjustment to finished grade.

Junction boxes shall conform with all provisions of Section 9-29.2 (Junctions Boxes, Cable Vaults, and Pull Boxes). Junction Boxes shall be of the types indicated on the Plans. All Junction Boxes shall have slip-resistant surfaces, locking lids, and be equipped with Penta Head tamper resistant bolts as specified and detailed in the Plans.

6 inches of washed drain rock shall be placed inside the junction box and be spread evenly around all conduits.

All three-way service connections leading to luminaires, including street crossings and service cabinet junction boxes shall be made with a SEC Model 1791-DP or approved equivalent.

Box and vault lids shall be inscribed with a welded bead message with each letter being 4 inches tall and 3 inches wide as follows:

"LT" if used exclusively for lighting

"TS" if used exclusively for Traffic Signals

"TS" "LT" if jointly used for lighting and traffic signals

"COA COMM" if used for City of Auburn communications and/or for traffic signal interconnect.

The lids and frames shall be hot dipped galvanized after the welded bead legend is installed.

8-20.3(8) Wiring

(January 2017, City of Auburn GSP)

Supplement this section with the following:

All cable entering cabinets shall be neatly bundled and wrapped.

The Contractor shall pull out and dispose of wire for the existing illumination system that is no longer needed. All costs for removal and disposal of wire shall be included in the unit contract price for "Illumination System Complete".

8-20.3(9) Bonding, Grounding

(January 2017, City of Auburn GSP)

Supplement this section with the following:

The Contractor shall provide junction boxes or other Engineer approved cover over all grounding rods.

All junction boxes containing conductors carrying 120 volts or higher will have the lid and frame bonded to the system ground. The connections to the lid and frame will be made with approved compression type ring terminals. The braid will be of sufficient length so that the lid may be easily removed and placed next to the junction box. It will be routed around all cables so that it does not pass thorough any cable loops. In the case of Type 8 junction boxes, both lids shall be bonded.

When loop lead-in wires or interconnect wire are the only wires in the junction box, bonding is not required.

8-20.3(10) Service, Transformer, and ITS Cabinets

(April 2018, City of Auburn GSP)

Delete this section and replace it with the following:

A three-wire electrical service shall be used at 120/240 volts. Electrical service cabinets shall be per Section 9-29.24 (Service Cabinets) and shall be installed where shown on the Plans.

Power service cabinets shall be labeled by the Contractor to meet PSE Construction meter requirements: The label shall indicate the "City of Auburn" identification, the specific use of the service, and the general site address (example: City of Auburn, Street Lighting – 123 E Main St). The label shall be a permanent engraved phenolic nameplate or die-cut adhesive label at least 1 inch high. PSE will not provide the power meter without this permanent label.

Where underground power service is not utilized, overhead electrical service shall be brought to the power service cabinet through a conduit riser with a weather head on the service pole. The service shall be split in the load center into a 120 VAC/240 VAC circuit for the traffic signal and street lighting systems.

The Contractor shall provide and install service wire and PVC conduit between the service cabinet and the point of power service location as shown in the Plans.

8-20.3(11) Testing

(August 2016, City of Auburn GSP)

The last paragraph is revised to read:

Unless otherwise approved by the Engineer, signal turn-on will only be allowed Monday through Thursday (except for holidays or the day before a holiday), between the hours of 9:00 a.m. and 2:00 p.m.

(April 2018, City of Auburn GSP)

Supplement this section with the following:

For traffic signal turn-on, City personnel will put the signal into operation. The Contractor shall be present during the turn-on with adequate equipment to repair any deficiencies of signal operation.

All newly installed signal and pedestrian heads and pedestrian pushbuttons shall be fully covered with black plastic or yellow nylon cloth that is firmly attached, until such time for the signal turn-on.

8-20.3(13) Illumination Systems

8-20.3(13)A Light Standards

(April 2018, City of Auburn GSP)

Supplement this section with the following:

The poles shall be plumb with no shims. The poles shall be plumbed on leveling nuts secured to the anchor bolts and locking nuts on top of the base flange. The side of the shaft opposite the load shall be plumbed using the leveling nuts.

The void between the foundation and the pole flange shall be no larger than 2 inches and shall be completely filled around the conduit(s) with dry pack mortar and neatly troweled. A ¼ inch weep hole shall be installed on the downward slope side of the pad.

The dry pack mortar consists of 1:2 cement to fine sand mixture with enough water to allow the mixture to stick together when molded into a ball by hand, but which will not exude water when pressed.

8-20.3(13)C Luminaires

(November 2020, City of Auburn GSP)

Supplement this section with the following:

All luminaires, shall be in accordance with all provisions of Section 9-29.10 (Luminaires) and shall be installed according to the manufacturer's recommendations and as specified herein. Contractor shall furnish man-lift truck for use in final inspection of luminaire system. Luminaires shall be leveled in 2 planes. One plane perpendicular to the curb (parallel to davit arm), the other plane parallel to the roadway surface.

The luminaire shall be bolted to the davit arm by means of cast-in inserts and this detail shall be coordinated with the standard manufacturer to ensure proper fit. The terminal board shall have lugs of a 240-volt 3-wire power source. Terminals shall be labeled line-neutral-line. The neutral terminal shall be grounded to the metal housing of the luminaire.

All luminaires shall be provided with markers for positive identification of light source and wattage per Section 9-29.10 (Luminaires) of the Standard Specifications.

(August 2016, City of Auburn GSP)

Add the following new section:

8-20.3(13)F Luminaire Fusing

Luminaire fusing and electrical connections at lighting standard bases shall be per Section 9-29.7 (Luminaire Fusing and Electrical Connections at Light Standard Bases, Cantilever Bases and Sign Bridge Bases) except that light standards shall be provided with 2 in-line fuse holders, per this section, with the fuses mounted inside the pole and readily accessible from the access hole, electrical splices shall be in the junction box near each pole in accordance with the applicable City of Auburn Standard Details.. All luminaries shall be fused in the pole base with a “Y” type quick disconnect fuse system.

8-20.3(14) Signal Systems

8-20.3(14)B Signal Heads

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Vehicular Signal Heads

All signal heads shall meet the requirements of Section 9-29.16(2) (Conventional Traffic Signal Heads). Lens sizes shall be as shown in Contract Plans, Signal Head Type Details.

Overhead mounted signals shall be adjusted in the field such that a person standing on the pavement can see the brightest image of all vehicle signal sections from a distance complying with current MUTCD standards. Signal heads shall be plumbed, and aiming shall be by reference to the RED signal section.

Masking of optically programmed signal heads shall take place just before "turn-on" and after all field adjustments have been made. After masking, no further head position adjustments shall be made without the approval of the Engineer. Any final adjustments required shall be made in the Engineer's presence.

Pedestrian Signal Heads

Pedestrian signals shall be in accordance with all provisions of Section 9-29.20 (Pedestrian Signals).

Pedestrian signal heads shall be mounted with the bottom of the signal housing 8 feet above the sidewalk or ground surface.

8-20.3(14)C Induction Loop Vehicle Detectors

(April 2018, City of Auburn GSP)

Supplement this section with the following:

Loops shall be wound clockwise and consist of 4 turns of loop conductor.

From the loops to the junction box, the loop wires shall be twisted two turns per foot and labeled at the junction box in accordance with the loop schematics included in the Plans. A 3/8-inch saw cut will be required for the twisted pair.

Loop wires shall be connected to the lead-in cable using compression sleeves and sealed with 2-inch wide rubber mastic tape. An extra 10 feet of both loop wires and lead-in cable shall be coiled neatly in the junction boxes for future work. Loops shall be round and saw cuts shall be 6-foot diameter and shall be constructed using equipment designed for cutting round loops. The equipment shall use a concave, diamond-segmented blade. The saw cuts shall be vertical and shall be a minimum of 0.25 inches wide. The saw cut depth shall be minimum of 2 ½ inches and maximum of 3 inches measured at any point along the perimeter. The bottom of the saw cut shall be smooth. No edges created by differences in saw cut depths will be allowed.

Unless shown otherwise shown on the Plans, the stop bar loops shall be spliced in series per lane, mid and advance loop wires shall be spliced in parallel per lane and system loops shall be spliced into individual home runs per lane.

8-20.3(14)E Signal Standards

(January 2017, City of Auburn GSP)

Supplement this section with the following:

The poles shall be installed on leveling nuts secured to the anchor bolts and locking nuts on top of the base flange. The side of the shaft opposite the load shall be plumbed using the leveling nuts.

The void between the foundation and the pole flange shall be completely filled around the conduit(s) with dry pack mortar and neatly troweled. The distance between the foundation and the bottom of pole flange shall be less than 2 inches except for poles located within sloping portion of curb ramps where the distance may be up to 3 inches.

The dry pack mortar consists of 1:2 cement to fine sand mixture with enough water to allow the mixture to stick together when molded into a ball by hand but will not exude water when pressed.

The lower handhole cover shall be fastened with a tamperproof bolt.

(August 2016, City of Auburn GSP)

Add the following new section:

8-20.3(14)F Emergency Vehicle Pre-Emption

Detector

The Contractor shall provide and install 3M Company 700 Series preemption detectors at locations as shown in the Plans. The emergency preemption detectors shall be solid-state devices in weather resistant housing. The detectors shall be capable of detecting an optical signal generated by an Opticom brand emitter (3M Company). The detectors shall detect the optical signals from the emitter, amplify the signal, and transmit it to the phase selector. The detectors shall have a range control capable of being adjusted up to a maximum of 1/3 mile. Detectors shall be installed in compliance with manufacturer installation instructions and recommendations.

Phase Selector

The Contractor shall provide phase discriminator units as required to obtain the necessary number of channels for each leg of the intersection. The phase discriminator shall be a solid state, rack mounted device which shall provide power to the detectors. The phase selector shall receive the amplified signal from the detector, verify it as valid, and send an input to the controller. This input shall be for the duration of the detected signal plus 8 to 10 seconds additional time after the signal is lost. Four channels shall be provided.

The phase selector shall also include the following features:

1. High and low priority discrimination,
2. Settable signal intensity threshold for up to at least 2,500 feet,
3. Computer based user interface,
4. Front panel switches and indicators for testing, and
5. 20,000 priority/ vehicle class/ vehicle code ID combinations.

(August 2016, City of Auburn GSP)

Add the following new section:

8-20.3(14)G Interconnect Network

Traffic signal interconnect cable shall be installed as shown in the Plans and in accordance with all provisions of Section 9-29.3 (Fiber Optic Cable, Electrical Conductors, and Cable). All cable shall be installed in compliance with the manufacturer's installations and recommendations.

(December 2021, City of Auburn GSP)

Add the following new section:

8-20.3(14)H Pedestrian Push Buttons and Signs

Push buttons shall be in accordance with Section 9-29.19 (Pedestrian Push Buttons) and installed per the manufacturer's directions and recommendations.

Pedestrian push button assemblies shall be securely fastened to the signal standard or pedestrian pole using stainless steel fasteners. Signal standards shall be drilled and tapped for mounting push buttons. Push buttons shall be installed between 42-inches and 46-inches measured from the centerline of push buttons to the adjacent level landing. The push button must be reachable within 10 inches from the level landing. Braille is required on push button placards and the contractor is responsible to make sure they are placed in the correct locations.

(November 2020, City of Auburn GSP)

Add the following new section:

8-20.3(14)I Video Detection System

When video detection is shown in the Plans, the Contractor shall provide and install a fully functional Trafficon by Kar-Gor or Econolite Vision video detection camera system, as called out in the plans including all auxiliary equipment, cameras, housings, and mounts, and all required mounting hardware, cables, connectors, and wiring per Section 9-29.23 (Video Detection Cameras).

The Contractor shall allow two weeks to schedule a Kar-Gor or Econolite representative to assist with the system installation and turn on.

Final adjustment of the cameras shall be done by the Contractor in the presence and at the direction of the City of Auburn Traffic Signal Technician.

(April 2018, City of Auburn GSP)

Add the following new section including subsections:

8-20.3(14)J Closed Circuit Television (CCTV) Camera System

8-20.3(14)J.1 Description

(April 2018, City of Auburn GSP)

This work consists of providing a television surveillance camera system to include provision and installation of camera assemblies (camera, lens, and housing), pan and tilt drives, Ethernet switch, cables, patch cords and other equipment necessary to provide a complete and operable fiber optic-based closed circuit television (CCTV) system. The CCTV camera or camera's shall be delivered to the City of Auburn Maintenance and Operations building for setup and testing.

8-20.3(14)J.2 Materials

(April 2018, City of Auburn GSP)

CCTV system materials shall be per Section 9-29.27 (CCTV System). The CCTV camera shall be a Cohu RISE 4260. Unless otherwise indicated in the Plans or specified in the Special Provisions, all materials shall be new.

8-20.3(14)J.2(1) Mounting

(August 2016, City of Auburn GSP)

Mounting of camera on luminaire/signal poles shall utilize Cohu pole mounts and equipment and hardware shown in the Plans.

8-20.3(14)J.3 Construction Requirements

(April 2018, City of Auburn GSP)

For each new CCTV camera shown in the Plans, the Contractor shall furnish, install, and setup a CCTV camera system that includes the camera, mounting materials, cables, cable splices, Ethernet switch, and any additional equipment and hardware required for a complete and operational CCTV camera system, per Section 9-29.27 (CCTV SYSTEM).

8-20.3(14)J.3(1) General Cable Installation

(April 2018, City of Auburn GSP)

The Contractor shall submit to the Engineer the method that is intended to be used to install the various cables. Any cable runs which have damaged jackets or do not pass the appropriate test will be rejected and shall be replaced by the Contractor at no additional cost to the City of Auburn.

Shielded cables terminated at a cabinet shall have their shields grounded at the cabinet at one end and insulated at the other. Insulated spade type terminals shall be used when connecting wire to terminal blocks.

Cables at the camera end shall be soldered to the connectors provided with the equipment using established techniques.

The rear connection area shall be filled with silicone rubber compound. The cables to the camera shall be encased in a flexible sheath to form one cable between the camera and the local control cabinet.

All cables shall be supported so that there is no weight being transferred from the camera cable to the entry points through poles or extrusions. All holes through poles shall be sealed with outdoor rated watertight grips.

All cables shall be tagged with permanent markers of PVC identifying their use. Cables shall be tagged at both ends and at every junction box location.

8-20.3(14)J.3(2) Camera Cable

(August 2016, City of Auburn GSP)

Camera cables shall extend from the camera control receiver to the camera and pan/ tilt drive unit. These cables shall provide camera power, environmental housing heater power, pan/ tilt drive power and controls, camera lens controls, and additional wires for preset positioning of pan/ tilt and lens. The number and size of wires required in the camera cable is dependent upon the vendor selected for pan/tilt drives. The Contractor shall provide and install camera cables with the proper type and quantity of conductors to enable connection as recommended by the selected vendors and as required to provide for proper operation of the closed circuit television system.

Camera cables shall be as per the manufacturer’s specifications and designed for long life operation under adverse weather conditions. Cable connectors at the camera housing and pan/tilt drive shall be waterproofed in accordance with vendor

recommendations. Camera cables shall be terminated on terminals in the camera control cabinet.

8-20.3(14)J.3(3) CCTV System Test

(April 2018, City of Auburn GSP)

The Contractor shall allow the City 2 weeks to setup and test the PTZ camera(s). If problems are found by the City during each testing phase, the Contractor shall repair, replace, or reconfigure each CCTV camera installation as necessary, at no additional cost to the Contracting Agency.

(August 2016, City of Auburn GSP)

Add the following new section including subsections:

8-20.3(14)K Wireless Broadband Communications System

8-20.3(14)K.1 Description

(August 2016, City of Auburn GSP)

The work specified in this section shall include the furnishing and installation of wireless interconnect communication system devices, cables, outdoor hardened Ethernet hub or switch, patch cords and associated components in accordance with the Plans and specifications.

The Contractor shall provide materials, equipment, labor and the expertise required for the construction of a traffic signal/ITS wireless broadband communication system to interconnect the proposed traffic signal and ITS equipment with the City of Auburn's existing ITS system infrastructure as shown in the Plans and in accordance with these Special Provisions. All equipment shall be installed in compliance with the manufacturer's installations and recommendations.

8-20.3(14)K.2 Wireless Broadband System Materials

(August 2016, City of Auburn GSP)

The Contractor shall provide all products and materials required for the installation and splicing of the specified communications cables and associated interface devices.

8-20.3(14)K.3 Testing, Mounting and Wiring

(November 2020, City of Auburn GSP)

Broadband radio/panel antenna units shall be mounted on signal mast-arms or signal poles as indicated in the Plans. All units shall be installed utilizing Pelco Products, Inc. Astro-Brac or approved equivalent mounts per the wireless equipment manufacturer's recommendations for outdoor pole-mounted applications. All mountings shall have stainless steel hardware and provide a weather-tight cable passage between the wireless unit and the pole.

All wireless AP, and Ethernet setup, configurations and testing shall be done in consultation with the City's IT department and the Engineer.

The Contractor shall drill a 1-inch-diameter hole in the pole, deburr and provide rubber grommet prior to pulling cables. Cables shall be routed through traffic signal system conduits and junction boxes as shown in the Plans and terminated in the local signal controller cabinet.

Sufficient cable, 10 feet where bending radius permits, shall be left in each cabinet to properly terminate the cables. No splicing of communication cables shall be allowed.

Ethernet cables shall be routed in the cabinet and be plugged into a RUGGEDCOM RS900 Ethernet switch

8-20.4 Measurement

(City Contracts, January 2017, City of Auburn GSP)

Supplement this section with the following:

No unit of measure shall apply to the lump sum signal and lighting items specified in this section.

Vaults and junction boxes shall be measure per each unit installed.

Removal and resetting of the traffic signal items listed in the payment section shall be per each item removed and re-installed.

8-20.5 Payment

(City Contracts, April 2017, City of Auburn GSP)

Supplement this section with the following:

Payment will be made for each of the following Bid items that are included in the Proposal:

"Signal Interconnect System Complete", Per Lump Sum

"Video Detection System Complete", Per Lump Sum

"Splice Vault", Per Each

"Pull Box", Per Each

"Locking Junction Box", Per Each

"Adjust Existing Junction Box", Per Each

"Remove Signal Head", Per Each

"Remove Traffic Video Detection Camera", Per Each

"Remove and Reset Signal Head", Per Each

"Remove and Reset Video Detection Camera", Per Each

"Replace & Recycle Signal Head Modules", Per Each

"Replace Signal Controller Cabinet", Per Each

"Backplate Tape", Per Each

"Louvered Backplate", Per Each

"Traffic Video Detection Camera", Per Each

"Wide Angle Traffic Video Detection Camera", Per Each

"Signal Pole Terminal Cabinet", Per Each

"Signal Head with Mount", Per Each

"Signal Controller and Smart Monitor", Per Each

"Remove Street Light", Per Each

"Induction Loop Vehicle Detector", Per Each

The unit contract cost for "Remove Signal Head" and "Remove Traffic Video Detection Camera" shall include all work related to salvaging and removal of existing system components.

The Lump Sum Contract price for "Traffic Signal Revision Signage" shall be full pay for supplying, installing, maintaining and removing the sign and posts according to the Contract documents, including. Supplying and installing the warning placards on each of the signal heads identified in Detail A and Detail D of the Contract Plans.

The unit Contract prices for "Remove and Reset Signal Head" and "Remove and Reset Video Detection Camera" shall be full pay for Work associated with the removing, transporting, resetting, rewiring, repairing existing mounting location, and for supplying and installing all materials and any needed mounting fixtures and wiring.

The unit Contract price for "Replace & Recycle Signal Head Modules" shall be full pay for Work associated with removal and recycling of existing modules and supplying and installing LED modules.

The unit Contract price for "Replace Signal Controller Cabinet" shall be full pay for Work associated with removing existing cabinet and components from the foundation and salvaging, supplying and installing all necessary materials including cabinet, signal controller, MMU, other specified internal components, wiring, mounting hardware, and testing.

The unit Contract price for "Backplate Tape" shall be full pay for Work associated with supplying the materials and installing according to the Contract Plans.

The unit Contract price for "Louvered Backplate" shall be full pay for Work associated with supplying the materials and installing according to the Contract documents.

The unit Contract prices for "Traffic Video Detection Camera" and "Wide Angle Traffic Video Detection Camera" shall be full pay for Work associated with supplying and installing all necessary materials including cameras, wiring, mounting fixtures, surge suppressors, BNC two wire adapter, fuse blocks and video cards for a complete system. Note: only one video card is required per two traffic video cameras per intersection installed; the Wide Angle Traffic Video Detection camera uses one Trafficam "Edge" card.

The unit Contract price for "Signal Pole Terminal Cabinet" shall be full pay for Work associated with supplying and installing all materials and wiring according to the Contract documents.

The unit Contract price for "Signal Head with Mount" shall be full pay for Work associated with supplying materials (including louvered backplate with tape), wiring,

mounting, and installing according to the Contract documents; no adjustment will be made signal head type nor for mounting type.

The unit Contract price for "Traffic Signal Controller and Smart Monitor" shall be full pay for Work associated with supplying and installing the controller and smart monitor boards, including wiring, and testing according to the Contract Plans.

The unit contract cost for "Remove Street Light" shall include all work, materials, and labor to remove the street light and components, and for all costs related to salvaging, when identified.

The unit contract cost for "Induction Loop Vehicle Detector" shall include all Work associated with installing, splicing, and testing each loop.

8-21 Permanent Signing

8-21.3 Construction Requirements

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Signs shall be manufactured and installed in accordance with the current edition of the Washington State Sign Fabrication Manual of the Department of Transportation, and the Manual on Uniform Traffic Control Devices, and all provisions of Section 9-28 (Signing Materials and Fabrication). Code numbers on the Plans are in reference to the Washington State Sign Fabrication manual.

Signs located in sidewalks or paved areas only shall be installed with Sono tubes. Relocated signs shall be installed on new posts unless otherwise specified. Postholes shall allow placement of backfill around the post.

8-21.3(4) Sign Removal

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Costs for removing existing signs shall be included in the lump sum contract price for "Permanent Signing".

8-21.4 Measurement

(City Contracts, January 2017, City of Auburn GSP)

Supplement this section with the following:

"Relocate Permanent Traffic Sign and Post" shall be measured per each unit of work completed and accepted.

"Remove Traffic Sign" and "Traffic Sign" will be measured by each sign removed or installed.

8-21.5 Payment

(City Contracts, February 2024, City of Auburn GSP)

Supplement this section with the following:

Payment will be made for each of the following Bid items that are included in the Proposal:

"Relocate Permanent Traffic Sign and Post", Per Each

"Remove Traffic Sign", Per Each

"Traffic Sign", Per Each

The unit Contract price for "Relocate Permanent Traffic Sign and Post" shall be full pay for Work associated with the removing, salvaging, repairing existing mounting location, and reinstalling the sign and post according to the Contract Plans and these Specifications.

The unit Contract price for "Remove Traffic Sign" shall be full pay for Work associated with the removing, salvaging, and repairing existing mounting location.

The unit Contract price for "Traffic Sign" shall be full pay for supplying and installing the sign and mounting hardware according to the Contract Plans and these Specifications.

8-22 Pavement Marking

8-22.1 Description

(January 2017, City of Auburn GSP)

Supplement this section with the following:

The Contractor shall notify the Engineer of intention to receive approval of the channelization pre-mark at least 48 hours in advance.

8-23 Temporary Pavement Markings

8-23.1 Description

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Short Term Temporary Pavement Markings shall only be used when the temporary striping is anticipated to last less than 6 months. Phasing that will require temporary alignment longer than 6 months should install striping per Section 8-22 (Pavement Marking).

8-24 Rock and Gravity Block Wall and Gabion Cribbing

8-24.2 Materials

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Materials shall meet the requirements of the following sections of the Standard Specifications or as noted.

Spall Backfill for Walls	9-13.1

Perforated PVC Underdrain Pipe	9-05.2(6)

Rock used for rock wall shall be sound, hard, durable, ledge rock of a uniform color and obtained from a commercial quarry. Rock is to be free of seams, cracks, loose stratification or other defects tending to destroy its resistance to weather. The rock shall have a density of at least 145 pounds per cubic foot.

All two-man rocks (200-600 pounds) shall be a minimum of 12 inches in the least dimension. All three-man rocks (600-1,000 pounds) shall be a minimum of 18 inches in the least dimension.

8-24.3 Construction Requirements

(January 2017, City of Auburn GSP)

Supplement this section with the following:

The rock wall shall be constructed one course at a time. Rock selection and placement shall be such that at least 80% of the exposed face of the wall is rock.

Each horizontal row of rocks shall be seated and bedded by placing the specified backfill behind the rock to provide a stable condition for the entire wall. Each rock shall be keyed into adjacent rocks by utilizing the natural irregular shapes of the rocks. Voids larger than 2 inches shall be filled by wedging smaller rock of the same quality into the voids until the maximum remaining void is 2 inches or less.

8-24.4 Measurement

(City Contracts, January 2017, City of Auburn GSP)

Delete this section and replace it with the following:

"Rock Wall" will be measured by the length and height of finished wall surface including that portion of the "Rock Wall" toed into existing ground.

8-24.5 Payment

(City Contracts, April 2017, City of Auburn GSP)

Delete this section and replace it with the following:

Payment will be made for each of the following Bid items that are included in the Proposal:

"Rock Wall", Per Square Foot

The unit contract price for "Rock Wall" shall include all costs for excavation, backfill, underdrain pipe installation, and rock placement. Piping and connection to storm sewer system, if required, shall also be included in the unit price for "Rock Wall," unless otherwise specified.

(August 2016, City of Auburn GSP)

Supplement Division 8 with the following new section including subsections:

8-32 Fiber Optic Communications

8-32.1 Description

(November 2020, City of Auburn GSP)

The work specified in this section shall include the furnishing and installation of fiber optic cables, splices, splice enclosures, custom labels patch panels and associated components in accordance with the Contract Documents.

The Contractor shall provide materials, equipment, labor and the expertise required for the underground installation of fiber optic cables as components of the ITS network. Fiber optic communications materials shall be per Section 9-29.3 (Fiber Optic Cable, Electrical Conductors, and Cable).

8-32.2 Construction Requirements

8-32.2(1) Contractor Qualifications

(August 2016, City of Auburn GSP)

Installation and testing of fiber optic communications is a specialized trade that requires specific skills that can only be gained by experience. The City has determined that the successful completion of the fiber optic communications work specified in the Contract Documents require that the Contractor or its subcontractor, whichever shall be completing the fiber optic communications work, meet the following minimum qualification requirements: 5-years' experience installing fiber optic systems, including cable and splices, and fiber optic systems of similar type and size to those specified in the Contract Documents, ability to provide three (3), non-City of Auburn, public agency references that can provide verification of the Contractor's or subcontractor's experience and confirm that the Contractor or subcontractor successfully completed the installation and testing of fiber optic systems of similar type and size to those specified in the Contract Documents. The Contractor or its subcontractor will not be allowed to begin work on fiber optic communications until the City has verified that the Contractor or its subcontractor satisfies these qualifications requirements.

8-32.2(2) Quality Assurance

(August 2016, City of Auburn GSP)

All work described in this section shall meet or exceed the applicable provisions of the following documents:

1. ANSI/EIA/TIA-455, Standard Test Procedures for Fiber Optic Fibers, Cables, Transducers, Connecting and Terminating Devices, and Other Fiber Optic Components.
2. ANSI/TIA/EIA-526-7, Measurement of Optical Power loss of Installed Single-Mode Fiber Cable Plant.
3. ANSI/TIA/EIA-568-B, Commercial Building Telecommunications Cabling Standard
4. ANSI/TIA/EIA-569-A, Commercial Building Standard for Telecommunication Pathways and Spaces.
5. ANSI/TIA/EIA-598, Optical Fiber Cable Color Coding.
6. ANSI/TIA/EIA-607, Commercial Building Grounding and Bonding Requirements for Telecommunications.

7. ANSI/TIA/EIA-758, Customer-Owned Outside Plant Telecommunications Cabling Standard.
8. BICSI: BICSI Telecommunications Cabling Installation Manual (TCIM).
9. BICSI: BICSI Telecommunications Distribution Methods Manual.
10. BISCI: BICSI Customer-Owned Outside Plant Design Manual.

8-32.2(3) Fiber Optic Cable Installation

(August 2016, City of Auburn GSP)

Fiber optic cables shall be installed in continuous lengths without intermediate splices throughout the entire project, except at the location(s) specified in the Plans. The cable installation personnel shall be familiar with the cable manufacturer's recommended procedures including but not limited to the following:

1. Proper attachment to the cable strength elements for pulling during installation.
2. Cable tensile limitations and the tension monitoring procedure.
3. Cable bending radius limitations.

The Contractor shall comply with the cable manufacturer's specifications.

To accommodate long continuous installation lengths, bi-directional pulling of the fiber optic cable is approved and shall be implemented as follows:

From the midpoint, pull the fiber optic cable into the conduit from the shipping reel. When this portion of the pull is complete, the remainder of the cable must be removed from the reel to make the inside end available for pulling in the opposite direction. This is accomplished by hand pulling the cable from the reel and laying into large figure eight loops on the ground. The purpose of the figure eight pattern is to avoid cable tangling and kinking. The loops must be laid carefully one upon the other (to prevent subsequent tangling) and must be in a protected area. The inside reel end of the cable is then available for installation. In some cases, it may be necessary to set up the winch at an intermediate cable vault. The required length of cable is pulled to that point, and brought out of the cable vault and coiled into a figure eight. The figure eight is then turned over to gain access to the free cable end which can then be reinserted into the duct system for installation into the next section.

Installation shall involve the placement of the fiber optic cables in a specified innerduct or conduit as defined in the Plans. The Contractor shall ensure that innerducts are secured to prevent movement during the cable installation.

Prior to pulling fiber optic cables through existing conduits, the Contractor shall verify that the conduits are clear of any debris and that the conduits have enough room to accommodate the new fiber and any existing conductors (where present and not specified for removal). Where noted on the Plans, the Contractor shall remove the existing copper interconnect cable prior to installing the new fiber optic cable.

The pulling eye/sheath termination hardware on the fiber optic cables shall not be pulled over any sheaves.

When power equipment is used to install the fiber optic cables, it must be designed to be used with fiber optic cable. Low speeds shall be used, not to exceed 100 feet per minute. The equipment must show the rate of pull, tension and automatically shut down if any cable pulling parameters are exceeded. The tensile and bending limitation for fiber optic cables shall not be exceeded under any circumstances. The use of large diameter wheels,

pulling sheaves, and cable guides shall be used to maintain the appropriate bending radius. Tension monitoring shall be accomplished using commercial dynamometers or load-cell instruments.

8-32.2(4) Fiber Optic Cable Splicing

(August 2016, City of Auburn GSP)

This section describes minimum requirements for splicing and connecting of the specified fiber optic cables. Field splices for mainline to lateral cables and for end-to-end mainline cables shall be located as shown in the Plans. No additional splices shall be allowed without the approval of the Engineer

All fusion splicing equipment shall be in good working order, properly calibrated, and meet all industry standards and safety regulations. Cable preparation, closure installation, and splicing shall be accomplished in accordance with accepted and approved industry standards.

Upon completion of the splicing operation, all waste material shall be deposited in suitable containers, removed from the job-site, and disposed of in an environmentally acceptable manner.

The Contractor shall use the fusion method with local injection and detection for all fiber optic splicing.

The average splice loss of each fiber shall be 0.10 dB or less. The average splice loss is defined as the summation of the attenuation as measured in both directions through the fusion splice, divided in half.

No individual splice loss measured in a single direction shall exceed 0.15 dB.

The Contractor shall seal all cables where the cable jacket is removed. The cable shall be sealed per the cable manufacturer’s recommendation with an approved blocking material.

All below ground splices shall be contained in re-enterable waterproof splice enclosures.

All splices shall be contained in splice trays utilizing strain relief, such as heat shrink wraps, as recommended by the splice tray manufacturer.

Upon sealing the splice closure, the Contractor shall show that the closure maintains 100 psi of pressure for a 24-hour period.

At all fiber optic splice locations, the Contractor shall neatly coil and secure a slack loop of fiber optic cable in a manner that is consistent with optical fiber specifications, including minimum bend radius.

8-32.2(5) Fiber Optic Cable Labeling

(December 2020, City of Auburn GSP)

Permanent cable labels shall be used to identify fibers and patch cords at each termination point. The cable labels shall consist of white colored heat shrink wraps with identification showing the cable segment, and the far end of the cable. The cable shall be labeled with non-fading permanent ink. Fiber Optic Cable shall have custom City of Auburn labels in Vaults and at aerial attachment points.

8-32.2(6) Fiber Optic Cable Racking in Cable Vaults

(August 2016, City of Auburn GSP)

After the cables are installed and spliced, cables, and innerducts shall be racked with spare conduits and innerducts sealed. Since there is substantial risk of damage to optical fibers by careless handling of the cables, much care shall be exercised, especially with regard to observing the minimum bending limitations. Cables shall be racked in vertical figure eight loops, which shall permit pulling slack from the vault without introducing twist to the cable.

Lateral cables shall be placed behind the main cables when changing levels. Cables or innerducts shall be secured in racked position with outdoor rated cable ties.

City of Auburn identification/warning tags shall be securely attached to the cables or innerducts in at least two locations in each cable vault or pull box and once in every J-box passed through. The Identification Tag shall be a custom orange label saying **"COA Fiber Optic Cable, If Damaged Call 911"** and label origin and destination of the fiber identified.

All coiled cable shall be suitably protected to prevent damage to the cable and fibers. Racking shall include securing cables or innerducts to brackets (racking hardware) that extend from the side walls of the cable vault or pull box. The Contractor shall provide all required brackets and other racking hardware required for the fiber optic cable racking operations as specified. All racking hardware shall be stainless steel.

8-32.2(7) Fiber Optic Patch Panels

(August 2016, City of Auburn GSP)

A fiber optic patch panel shall be installed in every signal controller cabinet where a new fiber optic connection is shown in the Plans per Section 9-29.13 (Traffic Signal Controllers).

The patch panel shall be attached to Contractor supplied ¼-inch aluminum plate attached to the signal side rails with spring nuts.

8-32.2(8) Fiber Optic Splice Case

(August 2016, City of Auburn GSP)

Splice enclosures shall be supplied and installed where shown the Plans that specify installation of a new fiber optic connection in a Vault or Pull box per Section 9.29.3(1)A (Singlemode FiberOptic Cable) (SCF).

The SCF splice closures shall be available in canister (butt) and in-line styles to fit most applications. All end-caps feature two express ports for uncut feeder cables. QUICK-SEAL™ Mechanical Seal drop ports shall be utilized because they allow for rapid and easy installation during initial build or future expansions.

The Splice Closure Housing shall be non-metallic. It shall be resistant to solvents, stress cracking and creep. The housing materials shall also be compatible with chemicals and other materials to which they might be exposed in normal applications. The optical fiber closure shall be capable of accepting any optical fiber cable commonly used in interoffice, outside plant and building entrance facilities. As an option, the ability to double the cable capacity of an installed canister splice closure by use of a kit shall be available. Such a conversion shall not disturb existing cables or splices.

Encapsulation shall not be required to resist water penetration. The splice closure shall be re-enterable. The closure end-cap shall be capable of accepting additional cables without removal of the sheath retention or strength-member-clamping hardware on

previously installed cables or disturbing existing splices. The optical fiber splice closure shall provide a clamping mechanism to prevent pistoning of the central member or strength members and to prevent cable sheath slip or pullout. The splice closure shall have appropriate hardware and installation procedures to facilitate the bonding and grounding of metal components in the closure and the armored cable sheath. The cable bonding hardware shall be able to accommodate a copper conductor equivalent to or larger than 6 AWG.

8-32.3 Fiber Optic Cable Testing

(August 2016, City of Auburn GSP)

The Contractor shall provide certified documentation or test results that demonstrate that all fiber optic cables meet the specified optical and mechanical performance criteria before and after installation.

Upon completion of the fiber optic cable installation (and splicing) the Contractor shall perform testing specified herein. The Contractor shall provide the Engineer with a minimum of 7 calendar days prior notice of the start of testing. The installed optical fiber cable shall comply with the transmission requirements of this specification, the cable and hardware manufacturer's specifications, and prescribed industry standards and practices.

All backbone and horizontal cabling, which is terminated by the contractor, shall be tested to applicable EIA/TIA Standards.

Upon completion of the tests all fiber optic cable coils shall be secured with ends capped to prevent intrusion of dirt and water.

8-32.3(1) Insertion Loss Testing

(August 2016, City of Auburn GSP)

Insertion loss testing shall be used to measure end-to-end attenuation on each new fiber installed between a field device and the City control facility.

The insertion loss for each mated fiber optic connector pair shall be $\leq$ 0.75 dB Reflectance for single-mode single fiber UPC cable assemblies shall be $\leq$ -55 dB Mated connector pair loss testing shall be based on one unidirectional optical time domain reflectometer (OTDR) inspection in accordance with the OTDR operating manual for systems greater than 300 feet.

In addition to connector insertion loss for each mated pair, the contractor shall perform end-to-end insertion loss testing for each multimode fiber at 850 nm and 1300 nm from one direction for each terminated fiber span in accordance with EIA/TIA-526-14A (OFSTP 14) and single-mode fibers at 1310 nm and 1550 nm from one direction for each terminated fiber span in accordance with TIA/EIA-526-7 (OFSTP 7). For spans greater than 300 feet, each tested span must test to a value less than or equal to the value determined by calculating a link loss budget. For horizontal spans less than or equal to 300 feet, each tested span must be < 2.0 dB.

The Contractor shall inspect each terminated multimode fiber span for continuity and anomalies with an OTDR at 1300 nm from one direction in accordance with the OTDR operating manual for systems greater than 300 feet. The Contractor shall inspect each terminated single-mode fiber span for continuity and anomalies with an OTDR at 1550 nm from one direction in accordance with OTDR operating manual for systems greater than 300 feet.

Prior to commencing testing, the Contractor shall submit the manufacturer and model number of the test equipment along with certification that it has been calibrated within 6 months of the proposed test dates.

The following information shall be documented for each fiber test measurement:

- Wavelength
- Fiber type
- Cable, tube and fiber IDs
- Near end and far end test locations
- End-to-End Insertion Loss Data
- Individual Splice Loss Data
- Date, time, and operator

8-32.3(2) Optical Time Domain Reflectometer (Otdr) Testing

(August 2016, City of Auburn GSP)

A recording optical time domain reflectometer (OTDR) shall be utilized to test for end-to-end continuity and attenuation of each optical fiber. The OTDR shall be equipped with a 1,310 nm and 1,550 nm light source for single-mode optical fibers. The OTDR shall have an X-Y plotter to provide a hard copy record of each test measurement.

The OTDR shall be equipped with sufficient internal masking to allow the entire cable section to be tested. This may be achieved by using an optical fiber pigtail of sufficient length to display the required cable section, or by using an OTDR with sufficient normalization to display the required cable section. A hard copy X-Y plot shall be provided for all fiber optic attenuation tests.

Prior to commencing testing, the Contractor shall submit the manufacturer and model number of the OTDR test unit along with certification that it has been calibrated within 6 months of the proposed test dates.

Each new mainline and lateral fiber shall be tested in both directions at the 1310 and 1550 nanometer wavelengths. Existing mainline and lateral fibers that are spliced to or re-spliced as part of this contract shall also be tested in both directions and at both wavelengths. Splices to existing fibers shall also be measured and recorded.

The following information shall be documented for each fiber test measurement:

X-Y plot scaled for fiber length

Wavelength

Refraction index

Fiber type

Averaging time

Pulse width

Cable and fiber IDs

Near end and far end test locations

Date, time, and operator

Event table that includes: event ID, type, location, loss, and reflection.

8-32.3(3) Fiber Cable Testing Documentation

(August 2016, City of Auburn GSP)

The Contractor shall submit the fiber test results to the Engineer for approval per Section 9-38 (Submittal Approval). 1 licensed copy if the OTDR manufacturers software shall be provided to the City of Auburn at the time the fiber test results are provided, for viewing and printing the OTDR results. The Contractor shall take corrective actions on portions of the fiber installation determined to be out of compliance with these specifications.

The184ollowingg information shall be included in each test result submittal:

1. Contract number, contract name, contractor name and address.
2. Dates of cable manufacture, installation, and testing.
3. Manufacturer's test results of the cable as shipped.
4. Location of all splices.
5. OTDR test results.
6. End-to-End Insertion Loss Data.
7. Individual Splice Loss Data.
8. Connector Insertion Loss Data
9. "As Installed" Diagram

8-32.4 Measurement

(City Contracts, August 2016, City of Auburn GSP)

"Fiber Optic Cable – ____ Strand SMFO" will be measured by the lineal foot of cable installed and accepted, including slack storage.
"Fiber Optic Patch Panel" will be measured per each unit installed and accepted.
"Fiber Optic Splice Case" will be measured per each splice case installed and accepted.

8-32.5 Payment

(City Contracts, August 2016, City of Auburn GSP)

Payment will be made in accordance with Section 1-04.1, for each of the following bid items that are included in the proposal:

"Fiber Optic Cable – _____ Strand SMFO", Per Lineal Foot

"Fiber Optic Splice Case", Per Each

"Fiber Optic Patch Panel", Per Each

The unit bid item prices per each for splice cases and patch panels shall be full pay to furnish, install, and test the specified equipment.

The bid item prices for "Fiber Optic Cable – _____ Strand SMFO" shall include, but not be limited to, all costs for the following:

- Furnishing, installing and testing the fiber optic cable.
- Furnishing and installing racking hardware in existing and proposed pull boxes and vaults for fiber optic cable where the Plans specify slack storage.
- Pulling fiber through vaults and junction boxes
- Removing existing fiber messenger cable from aerial attachments and from conduits and junction boxes for the installation of fiber optic cable as indicated in the Plans.

- Protecting and preserving existing conductors as indicated in the Plans and as required to maintain the existing signal and ITS system functions,

(January 2018, City of Auburn GSP)

Supplement Division 8 with the following new section including subsections:

8-33 Bollards

8-33.1 Description

(January 2018, City of Auburn GSP)

This work consists of building, furnishing, and installing bollards where shown on the Plans and as detailed in the Standard Detail(s).

8-33.2 Materials

Materials shall meet the requirements of the following sections:

Timber and Lumber	Section 6-04 (Timber Structures) and 9-09 (Timber and Lumber)
Structural Steel and Related Material	Section 9-06 (Structural Steel and Related Materials)

8-33.4 Measurement

(City Contracts, January 2017, City of Auburn GSP)

"Removable Bollard" and "Fixed Bollard" shall be measured per each bollard installed and accepted.

8-33.5 Payment

(City Contracts, April 2017, City of Auburn GSP)

Payment will be made for each of the following Bid items that are included in the Proposal:

"Removable Bollard", Per Each

"Fixed Bollard", Per Each

The Unit contract price per each for "Removable Bollard" and "Fixed Bollard" shall be full pay for all labor, tools, equipment and materials required to furnish and install each bollard.

(August 2016, City of Auburn GSP)

Supplement Division 8 with the following new section including subsections:

8-34 Wood Fence and Gates

8-34.1 Description

(August 2016, City of Auburn GSP)

This work shall consist of installing new "Wood Fence" and "Wood Gate" where shown and as detailed on the Plans.

8-34.2 Construction Requirements

(August 2016, City of Auburn GSP)

All work shall be in accordance with the applicable portions of Section 6-04 (Timber Structures), 8-11 (Guardrail), 8-12 (Chain Link Fence and Wire Fence), 9-06 (Structural Steel and Related Materials), 9-09 (Timber and Lumber), and 9-16 (Fence and Guardrail) of the Standard Specifications and these Special Provisions.

All lumber shall be Douglas Fir Surfaced four side (S4S), Number 1 Structural per Western Lumber Grading Rules unless otherwise noted. All lumber shall be pressure treated with ChemoniteTM or approved equivalent per AWPB-LP22. Fencing boards shall be tight knot western red cedar, Number 2 or better.

Metal fabrications, fasteners and hardware shall be in accordance with Section 9-06.22 (Bolts, Washers, and Other Hardware) of Standard Specifications.

Nail fasteners shall be galvanized standard wire nails.

Concrete shall be Cement Concrete Class 3000 in accordance with Section of 6-02 (Concrete Structures) of the Standard Specifications.

8-34.4 Measurement

(City Contracts, August 2016, City of Auburn GSP)

"Wood Fence" shall be measured per linear foot of work completed and accepted.

"Wood Gate" shall be measured per each unit of work completed and accepted.

8-34.5 Payment

(City Contracts, April 2017, City of Auburn GSP)

Payment will be made for each of the following Bid items that are included in the Proposal:

"Wood Fence", Per Linear Foot

"Wood Gate", Per Each

The unit contract price shown in the proposal for "Wood Fence" shall be full pay for labor, tools, materials, and equipment necessary to perform the work, complete.

The unit contract price shown in the proposal for "Wood Gate" shall be full pay for labor, tools, materials, and equipment necessary to perform the work, complete.

END OF DIVISION 8

DIVISION 9 Materials

9-05 Drainage Structures and Culverts

9-05.7 Concrete Storm Sewer Pipe

9-05.7(1) Plain Concrete Storm Sewer Pipe

(January 2017 City of Auburn GSP)

Supplement this section with the following:

Concrete storm drainpipe shall conform to ASTM C14 Class 3.

9-05.7(2) Reinforced Concrete Storm Sewer Pipe

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Reinforced concrete storm drainpipe shall conform to ASTM C76, Class IV.

9-05.12 Polyvinyl Chloride (PVC) Pipe

9-05.12(1) Solid Wall PVC Culvert Pipe, Solid Wall PVC Storm Pipe, And Solid Wall PVC Sanitary Sewer Pipe

(August 2016, City of Auburn GSP)

Revise the first sentence of the second paragraph to the following:

Solid wall PVC pipe shall meet the requirements of ASTM D3034 for the class or SDR of pipe specified.

9-05.13 Ductile Iron Sewer Pipe

(August 2016, City of Auburn GSP)

Delete the first sentence of the last paragraph and replace it with the following:

All fittings shall be ductile. All joints including fittings shall be push-on rubber gasket joints. Mechanical joints shall not be used.

9-14 Erosion Control and Roadside Planting

9-14.2 Topsoil

9-14.2(1) Topsoil Type A

(February 2024, City of Auburn GSP)

Supplement this section with the following:

The topsoil shall be a loamy sandy loam textural class as determined by the U.S. Department of Agriculture Classification System, free from materials toxic to plant growth, noxious weed seeds, rhizomes, roots, subsoil, and debris.

9-14.2(3) Topsoil Type C

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Small tree/brush stumps and roots shall be removed and topsoil shall contain no more than two percent (2%) aggregate by weight remaining on a ½ inch sieve.

9-14.5 Mulch and Amendments

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Specific topsoil amendment and fertilizer specification for the plant types specified on the Plans shall be as per a certified soils laboratory recommendations from, representative topsoil samples furnished by the Contractor to the approved Soils Laboratory.

9-14.5(3) Bark or Wood Chips

(January 2017, City of Auburn GSP)

Supplement this section with the following:

The Contractor shall submit sample of the bark or wood chips for approval before delivery to the job site. Bark shall be free from weed seeds, sawdust and splinters, and shall not contain wood fiber or other compounds detrimental to plant life. Source shall be from freshwater mill.

9-14.6(1) Polyacrylamide (PAM)

(January 2017, City of Auburn GSP)

Supplement this section with the following:

PAM will only be used upon approval of the Engineer.

(January 2017, City of Auburn GSP)

Add the following new section:

9-14.7 Plant Materials

9-14.7(5) Tagging

All plant material except groundcover shall be legibly tagged. Tagging may be by species or variety with minimum of one tag per 10 trees or shrubs.

(January 2017, City of Auburn GSP)

Add the following new section:

9-14.7(6) Inspection

Samples may be submitted to the Engineer for approval as to size, grade, and overall specifications.

9-15 Irrigation System

9-15.1(2) Polyvinyl Chloride Pipe and Fittings

(January 2017, City of Auburn GSP)

Supplement this section with the following:

The triple-swing joint assembly shall be constructed as detailed with Schedule 80 PVC nipples and "Marlex" street ells as manufactured by "LASCO Fluid Distribution Products" or approved equivalent.

9-15.3 Automatic Controllers

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Controller shall be Weathermatic Valcon SL Series Controller with Remote Control Technology "FLM" Series Connector installed at controller for remote control operation from the City of Auburn central control station.

The automatic controller electrical enclosure shall be a Metered Cold Rolled Steel Vandal Resistant enclosure #SB-24CR/120V with CSA controller subassembly. Enclosure shall be installed on a concrete base and shall be prime-coated and painted with baked enamel finish; dark green color as selected by the Engineer as manufactured by "V.I.T. Product, Inc." or approved equivalent.

9-15.5 Valve Boxes

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Install a gravel sump at the bottom of each valve box.

The automatic control boxes shall be Model No. 1320 valve box with locking cover, and extensions as required as manufactured by "Carson Industries, Inc." or approved equivalent.

9-15.6 Gate Valves

(January 2017, City of Auburn GSP)

Supplement this section with the following:

The gate valve boxes shall be 5 and ¼ inch Roadway Valve Box #111129-03 with cast iron "Water" cover #111026 as manufactured by "Ametek" or approved equivalent.

9-15.7(2) Automatic Control Valves

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Automatic control valves shall be Weathermatic 8200CR brass valves capable of communicating with the controller. Size as noted on drawing.

9-15.8 Quick Coupling Equipment

(January 2017, City of Auburn GSP)

Supplement this section with the following:

The quick coupler valves shall be Buckner QB5LRC10 quick coupling valves with RC25001 valve keys or approved equivalent. Quick coupler valves shall be installed at the point of connection at the end of the main line, and at each cluster of automatic control valves.

The quick coupling valve boxes shall be Model 910-12B 10 inch Round Valve Box with locking green top extensions as manufactured by "Carson Industries, Inc." or approved equivalent.

9-15.9 Drain Valves

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Drain valves shall be 1 inch diameter.

The drain valve box shall be 5 and ¼ inch Roadway Valve Box #111129-03 with cast iron "Water" cover #111026 as manufactured by "Amtek" or approved equivalent.

9-15.11 Cross Connection Control Devices

(September 2021, City of Auburn GSP)

Supplement this section with the following:

The Double check valve assembly shall be a Febco 850 or approved equivalent sized to match the irrigation meter size and be approved by the State of Washington Dept of Health.

The Double-Check Valve Backflow Assembly Vault for ¾ inch to 2 inch assemblies shall be a Carson molded box, or approved equivalent, and for assemblies larger than 2 inch a No. 25-TA Concrete Vault with Locking Metal Cover as manufactured by PIPE, Incorporated or approved equivalent.

9-15.17 Electrical Wire and Splices

(January 2018, City of Auburn GSP)

Supplement this section with the following:

Electrical wire shall be #14 UF wire. Utilize direct bury underground splice kits. Do not splice or connect wires outside of valve boxes. Coil 3 feet length of wire at each connection.

Provide 4 extra valve wires (yellow) routed from the controller through each valve box to the farthest valve.

9-15.18 Detectable Marking Tape

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Detectable marking tape shall be 3-inch wide detectable tape on main lines only.

9-29 Illumination, Signal, Electrical

9-29.1 Conduit, Innerduct, Outerduct

(April 2018, City of Auburn GSP)

Supplement this section with the following:

Traffic Signal, ITS, and Street light conduit shall be Schedule 80 PVC-ASTM D1785 and as shown on the Plans.

9-29.2 Junction Boxes, Cable Vaults, and Pull Boxes

(September 3, 2019, WSDOT GSP)

Supplement this section with the following:

Slip-Resistant Surfacing for Junction Boxes, Cable Vaults, and Pull Boxes

Where slip-resistant junction boxes, cable vaults, or pull boxes are required, each box or vault shall have slip-resistant surfacing material applied to the steel lid and frame of the box or vault. Where the exposed portion of the frame is ½ inch wide or less, slip-resistant surfacing material may be omitted from that portion of the frame.

Slip-resistant surfacing material shall be identified with a permanent marking on the underside of each box or vault lid where it is applied. The permanent marking shall be formed with a mild steel weld bead, with a line thickness of at least 1/8 inch. The marking shall include a two character identification code for the type of material used and the year of manufacture or application. The following materials are approved for application as slip-resistant material, and shall use the associated identification codes:

1. Harsco Industrial IKG, Mebac #1 - Steel: M1
2. W. S. Molnar Co., SlipNOT Grade 3 – Coarse: S3
3. Thermion, SafTrax TH604 Grade #1 – Coarse: T1

9-29.3 Fiber Optic Cable, Electrical Conductors, and Cable

(April 2018, City of Auburn GSP)

Supplement this section with the following:

Illumination

Wire conductors for underground feeder runs and for circuitry from the in-line fuse in the poles to the junction box shall be 600 volts (minimum rated at 75 degree C) # 8 AWG single conductor stranded-copper, U.S.E. insulated, in accordance with the Insulated Power Cable Engineer's Association Specifications. SPEC 2150.

Wire conductors inside the pole from the ballast to the in-line fuse, shall be 600 volt, pole and bracket cable, 2 conductor, stranded-copper No. 10, Type HMW grade or better. Conductor insulation shall consist of a 45-mil polyvinyl chloride with a 95-mil polyethylene jacket.

Single conductors for street lighting shall be stranded copper with insulation conforming to USE 600 volt minimum rated at 75 degree C and shall be color-coded in a consistent manner throughout the project.

A three-wire electrical service shall be used at 120/240 volts. The contractor shall have the service inspected by the Department of Labor and Industry and coordinated with the Power Company to have the service installed.

Overhead electrical service, when allowed, shall be brought to the load center through a conduit riser with a weather head on the service pole.

Traffic Signals

1. Loop Lead-In Cable shall be #14 AWG and Pedestrian Push Button cable shall be, #14 AWG, two conductor stranded copper, twisted approximately two turns per foot. The conductors shall be covered with a foil shield and protected with an outer jacket. The cable shall conform to IMSA Spec. No. 50-2.

2. Detector Loop Wire (sawcut) shall be No. 14 AWG class B stranded copper wire with cross-linked polyethylene type USE insulation and conform to IMSA Spec. 51-3.

3. The detector lead-in cable for Emergency Vehicle Preemption (EVP) shall be 3M OPTICOM Model 138 shielded detector cable or approved equivalent. No splicing will be allowed between the detector and the controller cabinet.

4. Signal Interconnect Cable shall be copper or fiber as shown in the Plans. For Copper the traffic signal interconnect system shall conform to REA Spec. PE-38 (self-supporting combination signal cable and messenger cable) or PE-39 for underground. The signal cable shall consist of 12 pair No. 19 AWG conductors. For fiber optic cable, the cable shall be single mode all dielectric gel free loose tube single mode fiber optic with a minimum of 48 count.

5. Traffic Video Detection Camera Cable shall be a parallel construction of one PVC-jacketed RG 59/U (Coaxial) and one PVC-jacketed five conductor (Power) 18 AWG cable under an oval black flame retardant polyvinyl chloride jacket meeting the requirements of the video detection system manufacturer's recommendations.

Video camera cable shall meet the following requirements, or approved equivalent meeting the requirements of the video detection system manufacturer's recommendations:

RG 59/U (Coaxial)

Conductor:	20 AWG solid bare copper 0.032″.
Dielectric:	0.054″ wall of gas injected foamed polyethelene to 0.140″ nom.
Braid:	36 AWG bare copper with 95% coverage. Pull in aluminum/polyester tape under braid.
Jacket:	0.035″ wall black 75 degrees C polyvinyl chloride to 0.232″ nom.

18 AWG Cable (Power)

Conductor:	5-18 AWG bare copper 0.048″.
Insulation:	0.012″ wall polyvinyl chloride per the color code to 0.072″ nom.
Cabling:	Five 18 AWG conductors cabled together in a 3¼″ left hand lay to a nom. diameter of 0.194″.
Jacket:	0.025″ wall black 75 degrees C polyvinyl chloride to 0.244″ nom.
Color Code:	White, Red, Black, Brown, Blue.
Rating:	Multi-conductor leg is rated at 600V.

9-29.3(1)A Singlemode Fiber Optic Cable

(January 2017, City of Auburn GSP)

Supplement this section with the following:

All fiber optic cable shall be ALTOS All-Dielectric Gel Free Cables by Corning, or approved equivalent, per the following schedule:

Fiber Count	Nominal Cable Weight (lb/1000ft)	Minimum Installed Bend Radius (in)
12	49	4.1
48	49	4.1
288	131	7.2

All optical fibers shall be identifiable by standard color codes as defined in ANSI/TIA/EIA-598.

Fiber optic cable shall be tested according to Section 8-31.3 (Fiber Optic Cable Testing).

Splice cases shall be Corning, Tyco or approved equivalent.

(September 2021, City of Auburn GSP)

Add the following new section:

9-29.6(1)A Lighting & Signal Standards & Davit Arms

Lighting Standards

Lighting standards shall be aluminum, davit-style units in accordance with Section 9-29.6 (Light and Signal Standard) of the Standard Specifications and these special provisions.

Mounting heights for light fixtures shall be as noted on the Plans.

Lighting standards shall have 2 through-bolts where the davit arm intersects the pole in accordance with the applicable City of Auburn Standard Details. All poles to be furnished shall maintain a minimum safety factor of 4.28 on yield strength of weight load and 2.33 for basic wind pressure. All materials shall be natural polished aluminum color.

A grounding nut or provision in the handhole frame for accommodating a threaded bolt for the purpose of attaching a grounding connector shall be provided on the inside of the shaft. After fabrication, the handhole shall have the mechanical strength of not less than the temper of the material utilized for the manufacturer of the pole.

All bolts (not including Anchor Bolts), nuts, screws, and washers, shall be stainless steel, unless designated otherwise.

VMS Support Structure

VMS Support structure shall meet the above stated criteria for traffic signal standards and the dimensions and details included in the plans.

The following loads shall be used for design of the VMS sign pole and mast arm structure: dead loads shall consist of the weight of the sign times a safety factor of two; wind loads shall be taken as 30 PSF for the sign and 24 PSF for the supporting structure and, (including the effect of gust and shape factors), on the greatest area of signs and structure in any elevation view; live load may be omitted.

Signal Standard

A signal standard shall consist of the following components: a round tapered steel vertical pole shaft, a round tapered horizontal mast arm, a davit style luminaire arm attachment, anchor bolts with nuts, washers and all associated hardware.

The pole shaft and signal mast arm shall not vary in roundness more than 1/16 inch in straight sections.

Longitudinal seam welds shall have full penetration for not less than 60% of their full length. Butt welds in the shafts shall have back-up rings and full penetration for 100% of the circumference. All welds shall be deburred.

Materials, construction and assembly techniques shall be as specified on the Standard Plans and as shown in the Plans. All materials shall be hot-dipped galvanized after fabrication in accordance with ASTM A-123.

Design shall be in accordance with the requirements of the 2011 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals and the values on the Detail Sheet as shown in the Plans. Sizes on the Detail Sheet as shown in the Plans shall govern in differences between the Standard Plan and the Detail Sheet as shown in the Plans.

The following loads shall be used: dead loads shall consist of the weight of the signals and signs times a safety factor of two; wind loads shall be taken as 30 PSF for the signals and signs and 24 PSF for the supporting structure, (including the effect of gust and shape factors), on the greatest area of signals, signs and structure in any elevation view; live load may be omitted.

Complete calculations for structural design shall be submitted with the shop drawings for approval before fabrication or ordering material. These calculations shall include the stresses in the pole and cantilever arms, the attachment of the signals and signs to the structure, the connection between the cantilever arms and vertical pole, pole section at handhole, base plate, anchor bolts and foundations.

Pole Shaft

The round tapered pole shaft shall be made of one-ply, hot-rolled basic open-hearth steel. Structural steel having a minimum yield point of 33,000 psi or more shall be used for all structural parts and shall be galvanized after fabrication in accordance with ASTM A-123.

A flange plate shall be attached to the vertical pole shaft for the purpose of mounting the mast arm. The flange plate shall be supported by side plates tangent to the shaft and

gusset plates on top and bottom. A 3-inch wire way hole shall be provided (matching the wire way hole in the mast arm flange plate). Four holes for mounting the mast arm shall be drilled and tapped for high tensile bolts.

A 7" x 21" Internal Terminal Cabinet shall be constructed integral to the pole with a stainless steel hinged door and a best slam lock. It shall be no lower than 4 ft 6" from the ground.A 4-inch x 6½ inch reinforced hand hole frame and rain-tight cover with tamper resistant screws shall be provided. The frame shall be welded into the shaft 18 inch above the base plate on the opposite side of the mast arm attachment. A grounding nut or provision for accommodating a threaded bolt or stud shall be provided in the frame.

A second hand hole shall be provided and welded into the shaft directly opposite the mast arm mounting plate. A J-hook wire support shall be provided inside the pole shaft between the frame and mast arm mounting plate.

Vehicle Signal Mast Arm

The vehicle signal mast arm shall be sized as shown on the Plans.

End caps shall be supplied and be weather tight and all unused tenons or holes shall be plugged and sealed.

A mast arm flange plate matching the pole shaft flange plate shall be welded to the mast arm base segment. The flange plate shall have a hole cut in the center equal to the outside diameter of the mast arm base.

The flange plate shall be welded to the mast arm by two continuous arc welds, one on the outside and the other on the inside. The outside weld shall be on top face of the flange plate. The inside weld shall be in the gap between the bottom face of the mast arm and the inside face of the flange hole.

Four holes for high tensile bolts shall be drilled in the flange plate matching the four tapped holes in the pole shaft mast arm mounting flange plate.

For the purpose of mounting the traffic signal displays, 2 inch couplings shall be welded to the mast arm extension segment at the locations specified on the Detail Sheet as shown in the Plans. A ½ inch diameter hole shall be drilled in each coupling to allow for the thru-bolt.

Signal Pole Anchor Base

Four holes sized to receive the anchor bolts shall be drilled in the base. Slotted holes ¼ inch larger than the anchor bolt shall be permitted. Minimum bolt circle pattern shall be as specified in the Plans.

Four high-strength anchor bolts A307 shall be furnished with each pole. Each anchor bolt shall have an "L" bend at the bottom end or multiple anchor plates per the manufacturers recommendation, and shall have 7-inch minimum thread on top. Anchor bolt dimensions shall be per Detail Sheet as shown in the Plans or per Manufacturer's recommendations whichever is larger. All anchor bolts shall be furnished with 2 heavy hex nuts, two standard washers, bolt covers and provisions for mounting with stainless steel screws. Threaded ends of bolts, nuts and washers shall be hot dipped galvanized in accordance with ASTM A-123. The anchor bolts shall be capable of resisting at yield strength stress the bending moment of this shaft at its yield strength stress.

Luminaire Attachment

Unless otherwise indicated in the Plans all traffic signal poles shall be equipped with davit style luminaire arms as shown in the Plans. The davit style arm shall be secured to the top of the pole shaft using a cone reducer providing a flush, smooth transition. From the cone reducer the luminaire shaft shall be continuously tapered at the same rate as the pole shaft while incorporating a 5-foot, 9-inch radius bend at the end. A pipe tenon of the diameter and length specified for the luminaire shall be provided in the end of the davit arm. The tenon shall be two degrees above level. Luminaires shall be adjusted to be parallel to the roadway and shall follow the slope of the roadway on inclines/hills.

(August 2016, City of Auburn GSP)

Add the following new section:

9-29.6(1)B Wrapping

The aluminum pole shaft and bracket arm assembly shall be entirely wrapped with a heavy, water-resistant paper for protection during shipment. Any marks or stain resulting from wrapping materials shall be cause for rejection. Scratching, marking, denting, or other damage to poles and fittings at the point of delivery shall also be cause for rejection.

(April 2018, City of Auburn GSP)

Add the following new section:

9-29.6(2)A Anchor Bases

A one-piece anchor base of adequate strength, shape, and size shall be secured to the lower end of the shaft so that the base shall be capable of resisting the bending movement of the shaft at its yield-strength stress. The base shall be provided with 4 slotted or round holes to receive the anchor bolts. Bolt covers shall be provided with each pole. Base plates for Type II signal poles shall not exceed 18 ½ inches square.

9-29.6(4) Welding

(January 2017, City of Auburn GSP)

Supplement this section with the following:

All welds shall be deburred.

9-29.6(5) Foundation Hardware

(November 2020, City of Auburn GSP)

Supplement this section with the following:

Four high-strength steel anchor bolts shall be furnished with the poles. Threaded ends and all nuts and washers shall be hot-dipped galvanized. The anchor bolts shall be capable of resisting at yield-strength stress the bending movement of the shaft at its yield-strength stress.

9-29.7 Luminaire Fusing & Electrical Connections at Light Standard Bases, Cantilever Bases and Sign Bridge Bases

(April 2018, City of Auburn GSP)

Delete this section and replace it with the following:

Fuses shall be Bussmann Slow Blow or approved equivalent.

Fuse connector kits shall be SEC Model 1791-SF (2 each) or approved equivalent.

Connector kits to connect luminaires to the system in the junction box shall be SEC Model 1791-DP, or approved equivalent.

9-29.9 Ballast, Transformers

(January 2017, City of Auburn GSP)

Supplement this section with the following:

The luminaire shall contain an integral high-power factor-regulator ballast suitable for 240-volt operation with a 10% voltage variation. The ballast shall be prewired to the lamp socket and terminal board, requiring only connection of the power supply leads to the terminal board.

9-29.10 Luminaires

(November 2020, City of Auburn GSP)

Delete this section and replace it with the following:

The LED Street Light Shall meet the following specifications;

Housing

Luminaire housing shall be die cast aluminum with integral cooling fins universal four-bolt slip fitter for mounting to $1^1/_4$ " to 2" ($1^5/_8$" to $2^3/_8$" O.D.) diameter mast arm. Housing must be similar shape to traditional cobra head. Housing meets ANSI C136.31-2001 and CalTrans 611 vibration standards. Conductors from power supply to terminal block and LED board must be spliced with quick style electrical disconnects Photocontrol receptacle is standard for ANSI C136.41-2013, 7-pin, photocell by others. Fixture must be capable of using a 7-pin photocell with field adjustable drive current. Photocontrol shall be rotatable without tools. Housing shall have a leveling bubble for adjusting the head.

Light Emitting Diodes

Hi-flux/Hi-power white LEDs shall produce a minimum of 90% of initial intensity at 100,000 hours of life at 700mA, TM-21 Calculator required. LEDs shall be tested in accordance with IESNA LM-80 testing procedures. They shall have a mean correlated color temperature of 4000K (standard) ± 300K and a minimum CRI >70.

Optical Systems

Micro-lens optical systems shall produce IESNA Type 2, and 3 distributions. Fixture shall not use acrylic or plastic secondary exterior lens over the LEDs. Emitters shall be of single LED per die design. Luminaire shall be classified as "full-cutoff" and produce 0% total lumens above 90º with a BUG rating of U-0.

Electrical

The Driver shall be dimmable. The power supply shall have a minimum power factor of .90 and <20% Total Harmonic Distortion (THD). Power supply drive current shall be field adjustable without tools.

Finish

Housing shall receive a fade and abrasion resistant, epoxy polyester powder coat light gray finish standard.

Accessories

Optional flush mounted house side and cul-de-sac shield shall be available. The house side shield cuts off light at ½ mounting height behind the luminaire and the cul-de-sac shield cuts light off ½ mounting height behind and 1 ½ mounting height on either side of the pole. Both shields must be factory or field installable without the use of tools.

Listings/Ratings/Warranties

Luminaires shall be UL listed for use in wet locations in the United States and Canada. Optical systems shall maintain an IP66 rating. Ten-year limited warranty is required for all components. All units are listed by Design Lights Consortium (DLC).

Photometry

All luminaires shall be photometrically tested by certified independent testing laboratories in accordance with IESNA LM-79 testing procedures.

Warranty

All luminaires shall have a Ten-year manufacturer's product warranty to be free of defects in workmanship and/or material. This warranty includes all electrical and mechanical components including finish and gaskets. Failure of over 10% of the LEDs in the luminaire during the warranty period will constitute a luminaire "failure". Manufacturer will repair or replace any units found to be defective or that fail within this period.

9-29.11(2) Photoelectric Controls

(December 2020, City of Auburn GSP)

Supplement this section with the following:

The photoelectric control shall be Vantage Point Lighting Control Module manufactured by Sensus USA Inc.

9-29.12(1) Illumination Circuit Splices

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Approved copper splice "C" crimp connectors shall be used to connect bonding wires.

9-29.12(2) Traffic Signal Splice Material

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Loop lead-in wires shall be spliced at the junction box; with a waterproof splice leaving 10 feet each of loop wire and loop lead-in cable for future work. The connection shall be

made using compression sleeves sealed with black 50-mm wide, ethylene propylene rubber mastic tape.

(August 2016, City of Auburn GSP)

Add the following new section:

9-29.12(6) Sealants

Loop detector sealant specifically manufactured for loop wire shall be used to imbed the loop wire into the pavement and fill the sawcut to within 1/16 inch of the top of the pavement. Sealant shall completely cover the foam backer rod.

Loop Sealant shall be:

1. Crafco Loop Detector Sealant 271;
2. Max Cutter Seal No. 3;
3. 3M Black 5000; or
4. Engineer approved equivalent.

Installation shall conform to the manufacturer recommendations.

9-29.13(2) Traffic Signal Controller Assembly Testing

(January 2017, City of Auburn GSP)

Delete this section and replace it with the following:

The entire controller cabinet, complete with all auxiliary equipment, shall be delivered to the City of Auburn Maintenance & Operation facility, located at 1305 C Street SW, for testing in the Traffic Signal Shop. The period of testing shall be for a minimum of 2 weeks in duration and is intended to demonstrate the operation of all equipment. Any deficiencies or equipment failures discovered shall be corrected by the Contractor, at his expense.

In the event that it is not possible for the City and the Contractor to agree on the cause of a malfunction, the City's decision shall be binding.

The successful completion of the performance test will constitute acceptance of the equipment by the City.

9-29.13(3) Traffic Signal Controller

(January 2017, City of Auburn GSP)

Delete this section and replace it with the following:

General

The traffic signal controller shall be the Cobalt model by Econolite.

9-29.13(6) Emergency Preemption

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Emergency Preemption System equipment shall be compatible with the operational requirements of the existing Opticom brand (3M Company) emitters, detectors, and phase selectors owned by the City.

9-29.13(10) NEMA and Type 2070 Controllers and Cabinets

(December 2021, City of Auburn GSP)

Section 9-29.13(10) including title is replaced with the following:

9-29.13(10) Traffic Signal Controller Cabinet Unit

Controller cabinet furnished and installed by the Contractor shall be one of the following types, as specified in the Plans:

Western Systems Modified P-Plus Cabinet Requirements
Western Systems controller cabinets shall be NEMA TS-2 Type 1 P style cabinet per the City of Auburn approved Western Systems Part # 3012500000 with Alpha BBS. The cabinet shall be fully loaded with BIU's, MMU Smart Monitor, 16 detector cards, load switches, and a GTT 3M 764 Opticom.

Econolite P 44 Cabinet Requirements
Econolite controller cabinets shall be NEMA Type 2 TS-1 P style cabinet per City of Auburn approved Econolite part #166799B. The cabinet shall be fully loaded with BIU's, MMU SmartMonitor, 16 detector cards, load switches, and a GTT 3M 764 opticom.

The cabinet shall meet the following additional requirements:

- Wired and tested to the 2003 NEMA Traffic Controller Assemblies specification with NTCIP Requirements Version 02.06 (as amended herein).

- Equipped with all auxiliary equipment and plug-ins required to operate 8 vehicle phases, 4 pedestrian phases and 4 overlap phases (NEMA TS-2, Type 1).

- Designed for 16 channel operation where each load switch socket can be configured for a vehicle phase, pedestrian phase or overlap operation. These load switch sockets shall be configured in this manor without rewiring the back side of the load-bay. BIU load switch drivers 1-16 shall be wired to appropriate load switch sockets via a terminal block located on the front side of the load bay so as to allow checking voltage inputs to the load switch sockets without dropping the load bay.

- Wired for up to a minimum of (32) channels of detection, (4) channels of Opticom™ preemption.

- The complete cabinet assembly with electronics shall undergo complete input/output function testing by the manufacturer before being released to the City of Auburn.

- Field Terminal Labels
  Field terminals shall be labeled with City of Auburn numbering as well as manufacturers.

- Device Labeling

Every module or device shall have affixed thereto; permanent nametags or nameplates stating the component's function within the composite signal control system. Specifically each loop detector unit shall be labeled, so as to indicate the loop numbers connected to each channel. The front of the shelf where each item is to be placed shall have a similar label so those items can be replaced during maintenance in an expedient fashion.

- Schematics, Software and Manuals
  The controller cabinet shall have a waterproof envelope with a side access attached to the inside of the cabinet door. At the time of delivery, the envelope shall have one complete set of schematics and manuals for each assembly and subassembly located in the cabinet, and a complete wiring diagram for the cabinet and the controller assembly. In addition, a duplicate copy of the above shall be provided to the City of Auburn Traffic Engineering Section.

- Fiber Optic Patch Panels
  Where fiber optic connections are shown in the Plans, the fiber patch panel shall be a pre-terminated Corning 12 port Single-Panel Housing (SPH-01P) with a 12 ct pigtail and corning buffer tube fanout kit and Unicam SC connectors..

9-29.16 Vehicular Signal Heads, Displays, and Housing

(August 2016 City of Auburn GSP)

Replace the first sentence of the second paragraph with the following:

Backplates shall be constructed of 5-inch-wide, .050-inch-thick corrosion-resistant flat black finish, louvered aluminum, attached with stainless steel hardware.

9-29.16(2) Conventional Traffic Signal Heads

(January 2017 City of Auburn GSP)

Supplement this section with the following:

Vehicle signal head housings shall be rigid mount type M.

9-29.16(2)A Optical Units

(April 2018 City of Auburn GSP)

Supplement this section with the following:

The LED's shall have a 15 year manufacturer's warranty. The LED shall be Dialight Light Emitting Diode (LED) with clear lenses. Part numbers for Dialight LEDs are as follows:

Size	Description	Part Number
12 inch	RED Ball	433-1270-003XL15
12 inch	AMBER Ball	433-3270-901XL15
12 inch	GREEN Ball	433-2270-001XL15
12 inch	RED Arrow	432-1374-001XOD15
12 inch	AMBER Arrow	431-3374-901XOD15
12 inch	GREEN Arrow	432-2374-001XOD15
12 inch	GREEN/AMBER Arrow	430-6370-001

12 inch	AMBER/AMBER Flashing Arrow)	430-6370-805

9-29.16(2)E Painting Signal Heads

(April 2018, City of Auburn GSP)
The first sentence of the first paragraph is revised to read:

Traffic signal heads shall be finished with two coats of dark green (SAE AMS Standard 595) oven baked powder coating comprised of resins and pigments.

9-29.18 Vehicle Detector

(January 2017 City of Auburn GSP)

Supplement this section with the following:

Vehicle detectors shall be 2 channel rack mount style and compliant with NEMA TS1 and TS2 standards. They shall be capable of auto tuning and be able to withstand temperatures ranging from minus 40 degrees to plus 80 degrees C. They shall have a minimum of 15 sensitivity levels, 4 frequencies plus sequential scanning to avoid crosstalk, and have pulse and short and long presence modes. They shall have separate detect and fault LED's on the front face.

9-29.19 Pedestrian Push Buttons

(December 2021 City of Auburn GSP)

Replace the first paragraph with the following:

The Pedestrian Push Button Assembly shall be an Guardian APS manufactured by H.D. Campbell Company, 1486 NW 70th Street, Seattle, WA 98117 and shall be black in color with a white button.

Specifics of voice programming shall be provided as part of the submittal review and subject to the Engineer's approval prior to submittal acceptance.

APS push button stations shall include a control module that the Contractor shall install in corresponding pedestrian signal head and manufacturer-supplied multi-conductor interconnect cable that the Contractor shall install per the manufacturer's recommendations between the control module and push button station.

9-29.20 Pedestrian Signals

(January 2017 City of Auburn GSP)

Supplement this section with the following:

Pedestrian signals shall be a LED, filled hand/walking person countdown display.

The maximum overall dimensions of the signal shall be 19 inch wide by 18¾ inch high by 8¾ inch deep, including the egg crate Z type visor and hinges. The signal shall be furnished complete and ready to operate. In order to facilitate installation and maintenance, the signal shall be designed so that all components are readily accessible from the front by opening the door.

Each signal shall be provided with an egg crate visor constructed of polycarbonate material. The egg crate or "Z" crate type sun shield, if used, shall be held in place by the use

of stainless steel screws. The complete egg crate or "Z" crate assembly shall be 1½ inch deep.

The case shall be one-piece corrosion resistant aluminum alloy die-casting. Integrally cast hinge lug pairs, two at the top and two at the bottom of each case, shall be provided for operation of a swing door down. The unit shall be mounted with Type E mountings unless indicated otherwise on the attached Plans. All terminal compartments shall be either ferrous metal or bronze.

Pedestrian signal heads shall be Dialight ITE compliant Light Emitting Diode (LED) or approved equivalents.

(February 2023, City of Auburn GSP)

Add the following new section:

9-29.22 Rectangular Rapid Flashing Beacon (RRFB)

The contractor shall provide and install a hardwired 120 volt power Rectangular Rapid Flashing Beacon (RRFB) with hardwire communication between the multiple beacons. The beacons shall conform to the latest MUTCD.

The RRFB shall utilize two frontside LEDs that are approximately 5" by 2" and a minimum of 7" apart. They shall be double sided where shown in the plans. There shall be end mounted indicator flashers in the direction of the pedestrian crossing only. The system shall utilize the black Campbell AGPS pushbutton with modified 5" x 7" yellow R10-25 MUTCD signs.

The pole shall be a 4 1/2" OD Galvanized steel or aluminum pipe threaded at one end to fit a square pedestal 4 bolt aluminum frangible pole base. The top of the 4 ½" pole shall be capped with a waterproof factory cap. The four bolt concrete foundation shall be a minimum of 18" round by 3 feet deep and meet the manufacturers recommendations.

Equipment enclosures shall be mounted out of reach above or behind the pedestrian signage.

The RRFB units shall be Eltec or Carmanah.

(November 2020, City of Auburn GSP)

Add the following new section:

9-29.23 Video Detection Cameras

The Video Detection System shall be Econolite Vision or Trafficon by Kar-Gor and the presence detector boards shall be Trafficon VIP3D.2, which monitors only two cameras. Both systems shall include built in ethernet communication for our ITS system.

The cameras shall be located as indicated on the Plans. Cameras shall be mounted on signal mast arms as shown in the Plans utilizing Pelco Extended Tilt & Pan pole mount, for installation on the signal arm with cable mount and 72-inch tube or approved equivalent. The cable mount shall be suitable for the mast arm diameter at each camera installation location.

The camera housings and internal cameras shall be the latest approved models.

9-29.24 Service Cabinets

(November 2020 City of Auburn GSP)

Supplement this section with the following:

Service cabinet shall be a metered aluminum Skyline Electric Series 47700-A1-R1, with Underwriters Laboratory label on the panel boards as in accordance with the applicable City of Auburn Standard Details. The service cabinet shall comply with all requirements of Puget Sound Energy and Washington State Labor and Industries. It shall be the Contractor's responsibility to obtain these requirements and ensure that the cabinet complies with the requirements. The service cabinet shall be equipped with a stainless steel handle, a three-point locking system, and a Best six-tumbler mortise cabinet lock with dead bolt.

Two copper ground rods shall be installed per WSDOT and the NEC.

The cabinet shall contain the following branch breakers as applicable:

20 AMP	2 pole	Lighting Circuit A
20 AMP	2 pole	Lighting Circuit B
30 AMP	1 pole	Traffic Signal
100 AMP	2 pole	Main

(October 2016 City of Auburn GSP)

Supplement Division 9 with the following new section:

9-29.26 Traffic Signal Battery Backup System

All battery backup power units shall utilize the newest Alpha Inverter/Charger unit, complete with associated remote control display panel.

Batteries shall be connected utilizing approved quick-connect modular battery connectors. Battery cable sizing shall be appropriate for the type and quantity of batteries supplied.

Batteries shall be 12 Volts DC, 110 amp hour minimum, absorbed glass mat type, group 27. Batteries shall meet or exceed specification MIL B-8565J (Sec 4.6.22). There shall be 4 batteries supplied by the Contractor.

All battery backup power units shall possess an AC voltage bypass/disconnect switch or relay. The bypass/disconnect method shall couple the normal AC power source directly to the signal controller cabinet, while completely isolating the inverter/charger unit from the circuit.

(February 2023, City of Auburn GSP)

Supplement Division 9 with the following new section:

9-29.27 CCTV System

CCTV cameras shall be a Axis M5525-E 2 MP Mini PTZ Dome with a Axis Ethernet 15 Watt POE injector.

The ethernet switches shall be shelf mount Ruggedcom RS900G gigabit ethernet switches with SM fiber ports and necessary 120 volt power cords and ethernet cords and jumpers.

Camera mounting equipment shall be use a custom 1-1/2" threaded pipe Painted Signal black, T94A01D Pendant mounting kit and Pelco AstroBrac 90 degree pole mount and other equipment and hardware as shown in the plans and as required for a complete and operational CCTV camera system. The signal pole mount may have to be modified as shown in the plans.
(November 2020 City of Auburn GSP)

Supplement Division 9 with the following new section:

9-29.28 Variable Message Sign System

Major elements of the variable message sign (VMS) system shall consist of the variable message sign, sign structure, foundation and ground-mounted VMS field cabinet including the VMS controller, Alpha Battery Backup, compact batteries, fiber optic patch panel, ethernet switch, power supply, and associated equipment. Conduit, junction boxes and wiring/cabling to connect the sign, controller and various components of the system shall be per the manufacturer's requirements.

VMS Display and Housing

The sign display shall be supplied by one of the following vendors:

Daktronics, Inc.
331 32nd Ave.
P.O. Box 5128
Brookings, SD 57006-5128
Tel: (888) 325-8726
Email: transportation@daktronics.com

The sign display shall be a continuous matrix of amber LED pixels, with a minimum of 18 pixels high and 75 pixels wide with a pitch of 44 mm to 48 mm. Each pixel shall be made from a grouping of amber light emitting diodes and contain no moving parts. The matrix of pixels shall be capable of displaying a messages with 2 lines of 12-inch text, 12 characters long.. The sign display and other associated VMS components shall permit a test message using all pixels (1350 min.) simultaneously running at the maximum brightness and 100 percent duty.

The sign display shall provide front service for all LED display modules, electronics, power supplies, environmental control equipment, air filters, wiring, and other internal VMS components.

The nominal external dimensions of the sign shall not exceed 13.0 feet in width, 4.0 feet in height, and 1.5 feet in depth. The VMS back and side housing walls shall be vertical. Display modules shall be parallel to the front VMS wall, so that use of the LED viewing cone is optimized. The dead load of the housing and contents shall not exceed 600 lbs.

VMS housing exterior sheet material shall be 5052 aluminum alloy and shall have a minimum thickness of 0.125 inches. Exterior sheet seams shall be chemically bonded or continuously welded and waterproof. VMS housing structural frame members (I-beams, C-channels, Zee-extrusions, and bar stock) shall be aluminum alloy number 6061-T6.

VMS housings shall be constructed to present a clean, neat appearance, and the equipment located within shall be protected from rain, snow, dirt, and corrosion. Weep holes shall be fabricated in a manner which prevents the entrance of insects.

The front of the LED display matrix shall be completely covered with polycarbonate sheeting that is weather tight, ultraviolet (UV) light protected, non-glare, and which has a minimum

thickness of 0.11 inches. To achieve maximum display contrast and legibility, the outside of the polycarbonate sign face shall be fully covered with a mask, which is formed from aluminum sheeting. The mask shall have a minimum thickness of 0.09 inches and shall contain a circular opening for each pixel. The openings shall not hinder the 15° half-angle LED viewing angle (30° inclusive viewing cone). All exposed metal on the VMS front face, which is visible to viewing motorists, shall be coated with black Kynar 500 resin or an equivalent oven-fired fluoropolymer-based coating having a minimum outdoor service life of 20 years. This shall include the aluminum face mask, the aluminum border outside the LED display matrix, and all the mounting and assembly hardware.

All VMS equipment, components, modular assemblies and other non-structural elements of the sign shall be removable, transportable, and capable of being installed by a single technician utilizing a one-person aerial lift truck.

Ribbon cable shall be protected at all points of physical contact where it touches metallic frameworks. Either the ribbon cable or the frame, or both, shall be wrapped with a protective covering where the cable touches the framework, to prevent cable insulation rub-through from road induced vibration in the sign framework.

The interior VMS environment shall be monitored and controlled by the sign controller. Environmental control shall be designed to maintain the internal VMS temperature at or below +140°F when the outdoor ambient temperature is at or below +115°F. The VMS environmental control system shall consist of four primary subsystems as follows:

Internal Temperature Sensors and Cooling/Heating Systems

The VMS shall contain two internally-mounted temperature sensors which are equipped with external thermocouples and which the sign controller continuously monitors. This temperature information shall be used by the sign controller to determine when to activate and deactivate the environmental control systems described herein. Sensors shall be located on opposite ends of the upper 1/3 of the LED display matrix, and their external thermocouples shall be attached to and make contact with an LED pixel circuit board.

The thermocouple and LED board shall be easily detached, in the event that one of the units requires removal and replacement. Sensors shall be capable of measuring temperatures from -40°F to +185°F. The sign controller shall automatically shut down the LED display whenever one or both sensors indicate that LED board temperature has exceeded +140°F. The sign controller shall automatically restart the LED display whenever the suspect temperature falls below +130°F. Both shutdown and re-start temperature thresholds shall be user-programmable. Sensor temperatures and VMS shutdown/re-start events shall be reportable to the VMS Central Software.

LED Display Cooling System

The VMS shall contain a ventilation system to monitor and control internal cabinet temperature with user-programmable temperature thresholds. This system shall be comprised of fan-forced air to control ventilation in the cabinet. . The sign controller shall initially be programmed to activate the LED cooling fan system based on the manufacturer's recommendations for the application(s) on this project. Cooling fans shall be located so as not to hinder removal of LED display modules and driver boards.

Front Face Panel Defog/Defrost System - The VMS shall contain a defog/defrost system which circulates warm, fan-forced air across the inside of the polycarbonate front face whenever LED board temperature falls below a user-programmable threshold. The air

source shall consist of a fan or fans that provide uniform airflow across the polycarbonate face panel.

The sign controller shall initially be programmed to activate the defog/defrost system whenever LED board temperature falls below +40°F and shall deactivate the defog/defrost system whenever LED board temperature exceeds +105°F. A 100-watt heating element shall be mounted in front of each defog/defrost fan and shall serve to warm the air directed across the VMS face. Heating elements shall be on only when the defog/defrost fans are on.

VMS Mounting Hardware

A VMS, sign structure and foundation are included in the construction. The sign housing shall be provided with all necessary hardware including sign mounting beams, vertical and horizontal brackets, maintenance walkways, and all related hardware to install the VMS.

The VMS housing, structural framing, face covering, and mounting members shall be designed to withstand a wind velocity of 100 mph with a 30 percent gust factor and shall otherwise comply with the latest requirements of AASHTO's Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals.

VMS Sign Structure

The VMS sign structure shall be as specified for ***VMS Support Structure*** Special Provision 9-29.6(1)A.

Ground-mounted VMS Field Cabinet

The field cabinet shall be as specified in Section 9-29.13(10) and shall contain the VMS sign controller, Alpha Battery Backup, Compact batteries, ethernet switch and fiber optic patch panel for communication with the City of Auburn fiber optic ITS network.

VMS Sign Controller

Each VMS shall include an associated sign controller, which shall be installed in the field cabinet.

To support the VMS and VMS controller functions, they shall be provided with two serial communication ports.

One communication port shall be used to connect a laptop to the controller. The interface shall be wired as a 9-pin, EIA-232 DCE port. The port shall connect to a laptop computer using a straight-through 9-pin cable. One cable shall be supplied for each VMS installed in this contract.

The second communication port is for remote control of the sign from the central computer. The interface shall be wired as a 9-pin, EIA-232 DTE serial port. This port shall be connected to a communication interface (modem) specified elsewhere in this contract. A cable shall be supplied to connect the VMS communication port to the modem port (the modem port may be a non-standard pin-out and require a custom-made cable).

The sign controller hardware and software shall support all VMS communication, control, and diagnostic features as listed herein.

Memory

Sign controllers shall have both permanent and semi-permanent memory. Permanent memory shall be EE-PROM integrated circuits and shall contain the executable sign controller software. Semi-permanent memory shall be RAM integrated circuits with a battery backup that retains the data in memory for a minimum of one year following a power failure. Semi-permanent memory shall contain the library of messages, the message display schedule and programmable

operating parameters. Each message shall have the capability to be defined and stored as a three-page message.

Power Interruptions

Contents of the sign controller's memory shall be preserved by battery backup during AC power interruptions and the controller shall automatically resume operation once AC power is restored. Upon recovering from a power interruption, the sign controller shall display the message identified by the Power Recovery Message parameter. The sign controller shall report to the central computer that it has recovered from a power interruption.

Sign Controller Software

The sign controller shall cause the desired message to be displayed on the VMS. The sign shall display alphanumeric character fonts. The sign controller shall provide a default value for each NTCIP object supported.

Message Selection

The central computer or laptop computer shall cause the sign controller to implement a message selected from those stored in controller memory, or a new message entered via the communication port.

The sign controller shall incorporate CRC checks to verify MULTI strings. The sign shall not display a message unless the Message Activation Code CRC matches the Message CRC.

A message shall remain displayed on the sign until either a command to change the current message or a command to blank the display is received. A command to display a message shall not succeed if the activation priority is less than the run time priority of the message currently displayed.

Data Transmission Requirements

Each sign controller shall contain two communication ports. Each communication port shall be labeled ("Local" or "Central") and shall be set to 9600 baud at the factory. Each port shall operate independently at baud rates of 1200, 2400, 9600, and 19,200 bits per second. The user shall select the baud rate for each port via a DIP switch.

Communication

The sign controller hardware and software shall communicate with the central computer in a polled multi-drop operation. In the polled multi-drop operation, several sign controllers shall share the same communication channel, with each controller assigned a unique ID number. Controller ID numbers shall conform to the NTCIP requirements for address numbers. A sign controller shall only reply to messages labeled with its ID. In polled multi-drop mode, sign controllers never initiate communication, but merely transmit their responses to messages from the central computer.

A laptop computer connected to the sign controller's local communication port shall have the same control and diagnostic capabilities as the central computer. However, local laptop control capability shall be limited to the VMS which is directly connected to that sign controller.

NTCIP Requirements

The sign controller software shall comply with the National Transportation Communications for ITS Protocol (NTCIP) documents and all related errata sheets published before July 1, 1999 and as referenced herein.

The sign controller software shall support the following standards:

1. NTCIP 1101, *Simple Transportation Management Framework* (STMF), Conformance Level 1 (Simple Network Management Protocol (SNMP))
2. NTCIP 2001, *Class B Profile*. All serial ports on the device shall support communications according to these standards.
3. NTCIP 2101, *SP-PMPP/RS232* Point-to-Multi-Point Protocol (PMPP)
4. NTCIP 2201, *NTCIP TP-Null* Transport Profile Null (TP-NULL)

The sign controller software shall implement all mandatory objects of all mandatory conformance groups as defined in NTCIP 1201, *Global Object Definitions*, and NTCIP 1203, *Object Definitions for Dynamic Message Signs*. Software shall implement the following conformance groups:

NTCIP 1203, Object Definitions for DMS

1. VMS Sign Configuration
2. MULTI Configuration
3. Default Message Control
4. Pixel Service Control
5. MULTI Error Control
6. Sign Status
7. Status Error
8. Pixel Error Status
9. Lamp Error Status
10. Fan Error Status
11. Power Status
12. Temperature Status

The software shall implement the following optional objects:

NTCIP 1203, Object Definitions for DMS

1. dmsMessageBeacon
2. dmsMessagePixelService
3. dmsCommunicationsLossMessage
4. dmsPowerLossMessage
5. dmsTimeCommLoss
6. dmsMultiOtherErrorDescription
7. dmsStatDoorOpen
8. fanFailures
9. fanTestActivation
10. lineVolts
11. tempMaxSignHousing

Objects required by these specifications shall support all values within its standardized range. The standardized range is defined by a size, range, or

enumerated listing indicated in the object's SYNTAX field and/or through descriptive text in the object's description field. The following list indicates the modified object requirements for these objects.

Object Name	Object ID	Minimum Requirements
Number of Fonts	numFonts	9
Maximum Characters per Font	maxFontCharacters	255
Default Background Color	defaultBackgroundColor	0
Default Foreground Color	defaultForegroundColor	9
Default Justification Line	defaultJustificationLine	2, 3, and 4
Default Justification Page	defaultJustificationPage	2, 3, and 4
Number of Permanent Msgs.	DmsNumPermanentMsg.	2
Maximum No. Changeable Msg.	DmsMaxChangeableMsg.	8
Maximum Number Volatile Msg. *	dmsMaxVolatileMsg.	8
Control Mode	dmsControlMode	2, 4, and 5

* Changeable messages in excess of the minimum requirement are considered to meet the specification for an equivalent number of Volatile messages.

The first permanent message shall be used to blank the sign display. The second permanent message shall be the diagnostic message.

Sign controller software shall implement the following tags (opening and closing where defined) of the Mark-Up Language for Transportation Information (MULTI) as defined in NTCIP 1203:

1. Flash
2. Font
3. Justification Line
4. Justification Page
5. Moving Text
6. New Line
7. New Page
8. Page Time

Documentation
Software shall be supplied with all documentation on 1.44Mb IBM-compatible diskette(s). ASCII versions of the following Management Information Base (MIB) files in Abstract Syntax Notation 1 (ASN.1) format shall be provided on CD-ROM:

1. The official MIB Module referenced by the device functionality.

2. A manufacturer-specific version of the official MIB Module with the non-standardized range indicated in the SYNTAX field. The filename shall match the official MIB Module, with the extension "spc".

3. A MIB Module of all manufacturer-specific objects supported by the device with accurate and meaningful DESCRIPTION fields and the supported ranges indicated in the SYNTAX field.

Control Software
This work shall consist of furnishing Variable Message Sign (VMS) control software. The control software shall be a 32-bit application, designed to operate on Microsoft® Windows NT™, 98™, or 2000™ operating system. The control software shall provide for command and control of the following functions:

VMS Control
Software shall retrieve, display, update and download/upload the following functional parameters to the local sign controller in response to user-initiated instructions. The sign controller shall not perform pixel service tests when VMS are displaying messages. Software shall perform the following operations in conjunction with its monitoring and logging functions:

Display a message
Blank the current message
Change message priority
Pixel service, lamp and fan tests
Set time and date in the sign controller
Retrieve sign controller ID, type, and manufacturer

Communications
Communications between the control software and sign controller shall be NTCIP compliant, as indicated in the Special Provision for Variable Message Sign System.

The control software shall verify all communications for errors. If a response from a sign controller contains a communication error, or if there is no response, the Control Software shall re-establish communications.

Data Collection
The control software shall retrieve errors detected, message number currently being displayed, and current message priority. Using different commands, the software shall retrieve message MULTI strings, a map of defective pixels, the time and date, the event schedule, and configuration parameters.

Message Library
The control software shall store messages and transfer messages to a sign for storage and/or display. When a user desires to send a message to a sign, the control software shall offer as choices only those messages compatible with the sign in question. The control software shall allow message names of up to 25 characters in length. If the selected name already exists, the software shall notify the user and give the option of replacing the existing message or selecting another name.

The control software shall display all character fonts supported by the Variable Message Sign System. Messages shall be displayed on the computer monitor in exactly the same format (font, text centering and justification) as on the Variable Message Sign.

Software Duplication Rights
The City of Auburn shall have the right to duplicate the Variable Message Sign Control Software as needed for use in controlling signs under its jurisdiction.

Documentation
The Contractor shall furnish 1 copy of the Control Software user manuals to the Engineer. In addition, 2 sets of the software, installation program, instructions and user manual shall be furnished on CD ROM or diskettes to the Engineer.

9-30 Water Distribution Materials

9-30.1 Pipe

9-30.1(1) Ductile Iron Pipe

(February 2018, City of Auburn GSP)

The third sentence of the first paragraph in the list is revised to read:

All other ductile iron pipe shall be Special Thickness Class 52.

9-30.2 Fittings

9-30.2(1) Ductile Iron Pipe

(September 2020, City of Auburn GSP)

Supplement this section with the following:

All pipe fittings, adapters and joints for ductile iron pipe shall be ductile iron designed to AWWA Specification (unless otherwise approved in writing by the Engineer) with sufficient tangent at the ends to allow for proper joint connections and shall be coated to give them protection equal to that of the pipe. Field fabricated fittings will not be permitted. Flexible couplings shall be of the style as required for specific application.

9-30.2(6) Restrained Joints

(September 2020, City of Auburn GSP)

Delete this section and replace it with the following:

Bolted restrained joint (R.J.) fittings shall be Megalug RomaGrip, Star, or approved alternate. All welding associated with the restraint system shall be performed in the pipe manufacturer's shop. No field welding will be permitted.

Mechanical joint restrain systems shall meet the following requirements:

Restrainers shall be manufactured of ductile iron and shall meet or exceed all the requirements of ANSI A21.11 (A WW A C 111) and ASTM A536. The restrainer system shall provide anchoring ductile iron pipe and fittings, valves and PVC pipe to mechanical joint pipe or fittings, or bell to spigot PVC pipe joints. The restrainer shall accommodate the full working pressure rating of the pipe plus surge allowance. In the assembly of the restrain device, the contractor shall tighten the bolts to the correct torque range as recommended by the restraint manufacturer. The restrainers shall be painted black for ductile iron pipe and painted red for PVC pipe applications. The restraining device shall not damage or lower the working pressure of the pipe installed. Restrainers shall be properly stored to minimize sand and

debris build-up. Specifically, the twist-off-screws and associated threads shall be clean (free of sand) prior to installation.

Restrainer specifically for ductile iron pipe may be restrained by utilizing a joint restraint gasket which includes a stainless steel locking segment vulcanized into the rubber gasket. The gasket shall be rated for operating pressures up to 250 psi based on the performance requirements of ANSI/ A WW A C 111/ A21.11.

9-30.3 Valves

9-30.3(1) Gate Valves (3-inches to 16-inches)

(July 2022, City of Auburn GSP)

Delete this section and replace it with the following:

Resilient wedge gate valves shall be used on all 12 inch and smaller water lines and shall be manufactured by Clow, American Flow Control, Waterous, M & H, Kennedy or Mueller with epoxy-coated valve interiors. The valves shall conform to ANSI/AWWA Specifications C509 or C515 with a 200-psi working pressure rating (minimum). They shall be iron bodied, bronze-mounted, non-rising stem and counterclockwise opening with a 2 inch square operating nut. All valves on the fire hydrant line(s) shall be 6-inch diameter mechanical joint by flange. All other valves shall be either mechanical joint by flange or Mechanical joint shackled to tees or crosses. Valve stems shall be provided with O-ring seals.

9-30.3(3) Butterfly Valves

(December 2020, City of Auburn)
Supplement this section with the following:

Butterfly valves shall conform to AWWA Specification C-504, Class 150 B shall have Mechanical joint ends and be rated at 150 psi or higher working pressure and shall be manufactured by Mueller, Clow, M&H, or Kennedy. Operator shall have standard AWWA 2 inch square nut.

9-30.3(4) Valve Boxes

(February 2018, City of Auburn GSP)

Supplement this section with the following:

Valve boxes shall be two-piece, adjustable, cast-iron (with additional extension pieces, if necessary), as manufactured by the Olympic Foundry Company, East Jordan Iron Works, or approved equivalent, with a minimum inside diameter of 5 inch. The word “WATER” shall be cast in relief on the top of all valve box covers. In addition, the letters “NC” shall be cast in place on valve box covers for those valves that are normally closed. Valve box covers shall have a deep skirt per City of Auburn Standard Detail W-18.

9-30.3(7) Combination Air Release/Air Vacuum

(September 2021, City of Auburn GSP)

The first sentence of the second paragraph is revised to read:

The body and cover shall be ductile iron.

9-30.3(8) Tapping Sleeve and Valve Assembly

(January 2017, City of Auburn GSP)

Supplement this section with the following:

Tapping sleeves and valves shall conform to the following:

1. For wet taps on mains 12 inch diameter and larger or size-on-size, the tapping sleeve shall be the full M.J. type, cast-iron, twin seal as manufactured by Mueller, Tyler, Taylor, M & H, or epoxy-coated fabricated-steel, as manufactured by JCM, Rockwell or approved equivalent;

2. For wet taps on mains 10 inch diameter and smaller, or at least 2 inch diameter smaller than the main size, the tapping sleeve shall be the wraparound style, stainless steel or epoxy-coated fabricated-steel, or cast-iron M.J. as manufactured by Romac, Ford, M & H, Rockwell, Smith Blair, or approved equivalent.

9-30.5 Hydrants

(September 2020, City of Auburn GSP)

Supplement this section with the following:

Fire hydrants shall have two 2½-inch hose ports (National Standard Thread) and one 4½-inch pumper port (National Standard Thread) with caps and no chains, 1¼ inch pentagonal operating nut (counterclockwise) opening, O-ring-type stuffing box, automatic barrel drain, and 5¼ inch valve opening. Hydrants shall be equipped with a 5 inch Storz adapter with blind cap, or approved equivalent. Hydrants shall conform to the latest revision of AWWA Specification C502 for dry-barrel fire hydrants for ordinary water service. Hydrants shall be Mueller “Super Centurion 250” or M & H Style 129.

9-30.6 Water Service Connections (2 inches and Smaller)

9-30.6(3) Service Pipes

9-30.6(3)B Polyethylene Tubing

(October 2023, City of Auburn GSP)

Replace this section with the following:

Polyethylene tubing shall meet the requirements of AWWA C901. Tubing shall be high molecular mass with a 200 psi rating. Tubing used for 1 and 2 inch shall be SDR 9 (copper tube size) with stainless steel liners in all couplings and wrapped a #10 insulated copper tracer wire wrapped around pipe.

9-37 VACANT

(August 2016, City of Auburn GSP)
This section, including title, is replaced with the following including subsections:

9-37 Filter Fabric

9-37.1 Filter Fabric for Infiltration Systems

(September 2021, City of Auburn GSP)

Filter fabric for permanent infiltration systems shall be a non-woven, needle punched polypropylene geotextile fabric meeting the requirements of AASHTO M-288-06 for class 3 applications.

(February 2018, City of Auburn GSP)

Supplement Division 9 with the following new section including subsections:

9-38 Submittal Approval

9-38.1 Submittals

(February 2018, City of Auburn GSP)

This section applies to all items that are required to be submitted to the Engineer for review, approval, and acceptance, including, but not limited to:

- Non-Material Submittals (i.e haul routes, Traffic Control Plans (TCP's), requests for substitution, breakdown of lump sum items, schedules, road closure requests, material product samples, color palettes or swatches, warranty documentation, Operations and Maintenance (O&M) manuals, Spill Prevention, Control, and Countermeasure (SPCC) Plan, Stormwater Pollution Prevention (SWPP) Plan, schedule of submittals, etc.);
- Material Submittals (i.e. Request for Approval of Material (RAM) or Request for use of an item on the WSDOT Qualified Product List (QPL)); and
- Material Acceptance Documentation (i.e. Certification of Material Origin (CMO), Manufacturer's Certificate of Compliance (MCC), miscellaneous certificates of compliance, mill and test reports, Catalog Cuts, Shop Drawings, Visual Acceptance, Reduced Acceptance Criteria, Sampling and Testing, etc.).

9-38.1(1) Submittal Transmittal Procedures

(February 2023, City of Auburn GSP)

Except as specified otherwise in the Contract Documents, all submittals shall be made electronically. Each electronic email shall be limited to 10 MB's in size. All electronic submittals shall be clear, sharp high contrast electronic files provided in Microsoft Word 2016, Microsoft Excel 2016, PDF, or other Engineer approved formats.

In the event the Contractor cannot meet the 10 MB's size limit for a specific submittal, the Contractor may request to submit the individual submittal to the City as a hardcopy or other submittal approach subject to Engineer approval. Such requests shall be made in writing and include an explanation of why the Contractor is requesting to make a hardcopy submittal(s). It will be at the Engineer's sole discretion whether the request to submit hard copy submittals is approved and no additional compensation or time extension shall be granted in relation to the Engineer's decision. Hardcopy submittals shall be either mailed to the City of Auburn Public Works Department at 25 West Main St, Auburn, WA 98001 or dropped off at the City

of Auburn Customer Service Center located on the 2nd floor of the One East Main St, Auburn WA 98001 building.

(City Contracts, February 2023, City of Auburn GSP)

Supplement this section with the following:

Submittals shall be transmitted via e-mail to PWSubmittals@auburnwa.gov. The e-mail subject line of electronic submittals shall include the following: <<<Project Number>>>, <<<Project Name>>> - <<<Submittal Title>>>.

(Non-City Contracts, February 2023, City of Auburn GSP)

Supplement this section with the following:

All submittals shall be made electronically and shall be transmitted via e-mail to devsubmittals@auburnwa.gov. The e-mail subject line of electronic submittals shall include the following: <<<Permit/FAC Number>>>, <<<Project Name>>> - <<<Submittal Title>>>.

9-38.1(2) Request for Submittal Approval (RSA) Form Instructions

(February 2018, City of Auburn GSP)

All submittals shall accompany a City of Auburn "Request for Submittal Approval" (RSA) form as a cover letter.

The City provided RSA form is a writable Portable Document Format (PDF) form and shall remain writable until the City returns the signed reviewed submittal. Any submittals made without this form or without all of the required information on the form filled out by the Contractor shall be rejected without review. No additional compensation or time extension shall be granted for a Contractor not supplying this form as a cover letter for their submittals or for an improperly filled out form.

The RSA form shall be completed by the Contractor as follows:

1. For any item being submitted to the City for review and approval for the first time, check the "New Submittal" box. The City will assign the item a submittal number. For items that have been previously submitted and require a re-submittal, check the "Re-submittal of No. ___" box and fill in the submittal number that was assigned by the City to the original submittal. For submittals that are providing Material Acceptance Documentation for a submittal that has been previously made, the Contractor shall check the "Material Acceptance Documentation for Submittal No.___" box and fill in the submittal number that was assigned by the City for which the Contractor is supplying the acceptance documentation for.
2. Fill in the Contract Number (I.E. ## - ##) and Contract/Project Name;
3. Fill in the Project Identifying Number (I.E. CP####);
4. Fill in the Date the Submittal was transmitted to the City;
5. Provide the Contractor's name and, if applicable, the name of Subcontractor or supplier who prepared the submittal;
6. The Contractor is strongly encouraged to submit only one material or item per RSA form, however if more than one material or item is listed on the form then provide a

General Submittal Title that is applicable to the group. If only one material or item is submitted on the form then provide the same name described in bullet point number 8 for the General Submittal Title.

- Do not group non-like materials or items on the same form.
- Do not group multiple bid item numbers for the same material. In instances where a material is applicable to multiple bid item numbers, then list that material for as many times as there are bid item numbers (For instance, if Crushed Surfacing Top Course is the material being submitted on, and this material is applicable to bid item numbers 27 and 56, then this material shall be listed twice on the RSA form).

7. When applicable, provide the Bid Item number the submittal is referencing;
8. Provide a submittal description (be specific). For material submittals, provide the Type of Material, the Manufacturer's Product/Type, or the trade name of the product;
9. When applicable, provide the Name and the Location of the Fabricator or the Manufacturer's name or the Pit Number. This should be the actual manufacturer, not the supplier or distributor,
10. Provide the Contract Specification section number(s) or the page number the submittal material is referencing, or you can list the Plan Sheet number; and
11. For material submittals, indicate whether the submittal is requesting use of the WSDOT Qualified Product List (QPL) or if the submittal is a Request for Approval of Material (RAM) that is not in the QPL, by checking the appropriate box. For non-material submittals and for material acceptance documentation these boxes shall be left blank. If the Contractor elects to use a product listed in the QPL, the submittal documentation shall be prepared in accordance with the instructions in the WSDOT QPL program and shall be the most current list available at the time the product is proposed to be used. If the Contractor elects not to use the QPL or if the material is not listed in the QPL, then supporting documentation for the RAM shall be submitted for review and approval per Section 9-38.1(3) (Request for Approval of Material (RAM) Submittal Content).

9-38.1(3) Request For Approval Of Material (RAM) Submittal Content

(February 2018, City of Auburn GSP)

This Section covers content for Requests for Approval of Material (RAM). RAM submittals shall include the following, where applicable:

1. Each submittal shall include all of the items and materials required for a complete assembly, system or Specification Section.
2. Submittals shall contain all of the physical, technical and performance data required by the specifications or necessary to demonstrate conclusively that the items comply with the requirements of the Contract Documents.
3. Include information on characteristics of electrical or utility service required and verification that such requirements have been coordinated with service provided by the work and by other interconnected elements of the work.
4. Provide verification that the physical characteristics of items submitted, including size, configurations, clearances, mounting points, utility connection points and service access points, are suitable for the space provided and are

compatible with other interrelated items that are existing or have or will be submitted.

5. Label each Product Data submittal with the information required in this Section. Highlight or mark every page of all Product Data submittals to show the specific items being submitted and all options included or choices offered.
6. Label each Shop Drawing and Sample with the information required in this Section. Highlight or mark every page of every copy of all Product Data submittals to show the specific items being submitted and all options included or choices offered.
7. Additional requirements for submittals are contained in the Technical Specification sections.
8. Designation of work as Not in Contract (NIC) or "by others" shown on the Shop Drawings, shall mean that the work will be the responsibility of the Contractor rather than the subcontractor or supplier who has prepared the Shop Drawings.

A separate letter explaining deviations shall accompany any submittal(s) that contain deviations from the requirements of the Contract Documents. The Contractor's letter shall:

1. Cite the specific Contract requirement, including the Specification Section and paragraph number, for which approval of a deviation is sought.
2. Describe the proposed alternate material, item or construction and explain its advantages and/or disadvantages to the City.
3. State the reduction in Contract Price, if any, that is offered to the City.

9-38.1(4) Shop Drawings, Product Samples, and Operation and Maintenance Manuals

(November 2022, City of Auburn GSP)

This section covers Shop Drawings, Product Samples, Color Swatches, and Operation and Maintenance (O&M) Manuals that are required to be submitted in hard copy format for review and approval.

1. Shop Drawings: Submit 1 copy electronically for review. The Contractor is responsible for distributing the City returned submittals to its superintendent, subcontractors and suppliers.
2. Product Samples and Color Swatches/Palettes: Unless stated otherwise in each individual specification section referencing a product where a sample is requested, the Contractor shall submit 1 labeled product sample or 1 set of manufacturers' full range of colors and finishes as ordered by the Engineer and at no additional cost to the Contracting Agency. Product samples or manufacturer color swatches/palettes will not be returned to the Contractor.
3. O&M Manuals: For Draft O&M Manuals, Submit 1 copy electronically for review. The Contractor is responsible for making and distributing the required number of additional copies of the City returned submittals to its

superintendent, subcontractors and suppliers. Contractor shall submit 1 copy electronically and 1 hard copy of each final and approved O&M Manual.

9-38.1(5) Engineer's Submittal Review

(November 2019, City of Auburn GSP)

Submittals will be reviewed and approved by the Engineer per the following:

- For all Non-Material Submittals, the Engineer will mark the RSA form with one of the 'Submittal Approval Codes' listed under column 'A' on the form.
- For Material Submittals requesting the use of the QPL, the Engineer will mark the RSA form with the appropriate QPL approval code found on the QPL form. The QPL approval code is represented by a four digit number.
- For Material Submittals requesting a RAM, the Engineer will mark the RSA form with one of the 'Material Acceptance Codes' listed under column 'B' on the form. If a RAM is submitted for a material that is found on the QPL, the Engineer may mark the RAM with the appropriate QPL code for that material.
- For Material Acceptance Documentation, the Engineer will mark the RSA form with one of the 'Submittal Approval Codes' listed under column 'A' on the form.

The Provisions of Section 1-06 (Control of Material) shall also apply to this section.

The City will return an electronic signed copy of each reviewed submittal to the Contractor at the email address on record with the City. The Contractor is responsible for distributing the electronic copies or making the required number of hard copies of City returned submittals to its superintendent, subcontractors and suppliers.

9-38.1(6) Submittal Approval and Acceptance Codes

(February 2018, City of Auburn GSP)

This section covers the definitions of the 'Submittal Approval' codes and 'Material Acceptance' codes found on the RSA form.

Submittal Approval Codes will indicate:

1. "NET" (NO EXCEPTIONS TAKEN) – The submittal is approved subject to its compatibility with future submissions and additional partial submissions for portions of the work not covered in this submission. Does not constitute approval or deletion of specified or required items not shown in the partial submission.
2. "MCN" (MAKE CORRECTIONS NOTED (NO RESUBMISSION REQUIRED) – The submittals is approved subject to minor corrections that shall be made by the Contractor and subject to its compatibility with future submissions and additional partial submissions for portions of the work not covered in this submission. Does not constitute approval or deletion of specified or required items not shown in the partial submission. No resubmission is required.
3. "AR" (AMEND AND RESUBMIT) – The submittal is rejected because of major inconsistencies or errors which shall be resolved or corrected by the

Contractor prior to subsequent submittal. An amended resubmission is required.

4. "RR" (REJECTED – RESUBMIT) – The submittal does not conform to the Contract Plans and Specifications in major respect. A new submission is required.

5. "NR" (NOT REVIEWED) – The submitted information is not required on project and was not reviewed by the Engineer.

The 'Material Acceptance Code' will indicate the required documentation for the material to be accepted for use on the project:

Code 1. Acceptance based upon a "Satisfactory" Test Report for samples of materials to be incorporated into project for acceptance – Material is approved and requires certified testing for acceptance.

Code 2. Submit a Manufacturer's Certificate of Compliance (MCC) for "Acceptance" prior to use of material – Material is approved and requires a MCC for acceptance.

Code 3. Submit Catalog Cuts for acceptance prior to use of material – Material is approved and requires a catalog cut(s) prior to acceptance.

Code 4. Submit Shop Drawings for "Approval" prior to fabrication of material – Material requires approved shop drawing(s) for acceptance.

Code 5. Only "Approved for Shipment," "WSDOT Inspected," or "Fabrication Approval decal" material shall be used. *(Federal Projects Only)*- Fabricated material that requires a WSDOT inspected stamp or marking for acceptance.

Code 6. Submit a Certificate of Materials Origin (CMO). *(Federal Projects Only)*- Iron or steel material and requires a CMO for acceptance.

Code 7. N/A – This code is not used for material acceptance.

Code 8. Source Approved: - Material may be proprietary. Material requires a visual inspection upon arrival to the job site for acceptance.

Code 9. Approval Withheld: Submit samples for preliminary evaluation. – Material approval is withheld pending review of product samples or manufacturer's color palettes.

Code 10. Approval Withheld: (See City remarks on the Form)

Code 11. Miscellaneous Acceptance Criteria: - Material is approved and conditionally accepted as noted.

Code 12. LAG – Approved Catalog Cut Documented with: □ Mfg. Cert. of Comp. □ Visual Inspection - Material is approved with a Catalog Cut and requires either a Manufacturer's Certificate of Compliance or a Visual Inspection for acceptance.

When a material is marked as approved, it does not necessarily constitute acceptance of the material for incorporation into the work. All of the additional acceptance actions, as noted on the RSA form or on the QPL must be completed prior to the material being accepted for use.

Change orders or force account work requires the same material approval and acceptance as any other bid item.

9-38.2 Schedule of Submittals

(City Contracts, November 2022, City of Auburn GSP)

The Contractor shall submit a preliminary Schedule of Submittals. The Schedule of Submittals shall include the intended dates for which each submittal required by the Contract Documents will be made. The Schedule of Submittals must be accepted prior to payment. Identify the items that will be included in each submittal by listing the item or group of items and the specification section and paragraph number under which they are specified. Indicate whether the submittal is required for product review of proposed equivalents, Shop Drawings, Product Data or Samples or required for product information only. It is the Contractors responsibility to anticipate and provide all submittals required for the project.

The time required to evaluate and review requests for submittals is not the same for all submittals. The Contractor shall allow a minimum of 15 working days, unless otherwise noted, for the Engineer's review. The Contractor shall also allow adequate time for manufacturer delivery at the construction site without causing delay to the work. All submittals shall be in accordance with the approved Schedule of Submittals. Submittals shall be made early enough to allow for unforeseen delays such as:

1. Failure to obtain favorable review because of inadequate or incomplete submittal or because the item submitted does not meet the requirements of the Contract Documents.
2. Delays in manufacture.
3. Delays in delivery.

End Of Division 9

GENERAL SPECIAL PROVISIONS

February 2024

City of Auburn
Engineering Services
Public Works Department
25 West Main Street
Auburn, WA 98001-4998

Approved By:

Jacob Sweeting

2/16/2024

Jacob Sweeting, P.E.
Assistant Director of Engineering Services/City Engineer

Date

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PREFACE FOR THE
CITY OF AUBURN
GENERAL SPECIAL PROVISIONS

Per Auburn City Code (ACC) 12.04.020, all public work construction contracts of the City, including but not limited to streets and sidewalks, storm water and sanitary sewer systems, and water systems, and all work within City public right-of-way performed by the City and others shall conform to the Engineering Construction Standards (ECS). The ECS apply to City capital projects and to work performed by developers and others under construction permits (CON), grading permits (GRA), storm permits (STM), other utility permits, and public facility extensions (FAC). The City of Auburn has adopted the ECS to require the standardization of design and construction elements for consistency, to assure that public safety needs are met, and to comply with Local, State, and Federal regulations.

The General Special Provisions is a sub-part of the ECS and includes the following elements:

A) By reference, Division 1 of the Washington State Department of Transportation's (WSDOT) Standard Specifications (M41-10) for Road, Bridge and Municipal Construction, 2024 edition publication (Standard Specifications). The Standard Specifications are available at https://wsdot.wa.gov/engineering-standards/all-manuals-and-standards/manuals/standard-specifications-road-bridge-and-municipal-construction. Terms and conditions in the Standard Specifications that reference the following elements apply only to City Contracts and do not apply to CON, GRA, or FAC work: Bidding, Award, Claims, Payment, Measurement, Liquidated Damages, Compensation, Sales Tax, Requests to Sublet, and other terms and conditions that are specific a contractual obligations between the City and Contractor.

B) Special Provisions are adopted by the City that supplement, delete, replace, and revise the Standard Specifications. The Special Provisions include references that indicate the applicability of the special provision, the date it was last updated, and the source of the special provision contents:

("Applicability", "Month" "Year" "Specification Source")

Where "Applicability" indicates "City Contracts" the specification applies only to capital projects under contract with the City. Where applicability indicates "Non-City Contracts" the specification only applies to projects and work that is not a capital project under contract with the City. Where "Applicability" is omitted, the specification applies to all work.

C) Additional special provisions may be adopted on a project specific basis and provided separately with the specific project and/or permit that they apply to and are referred to as Project Specific Special Provisions.

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TABLE OF CONTENTS

DIVISION 1 General Requirements 9

1-01 Definitions and Terms 9

1-01.1 General 9

1-01.3 Definitions 9

1-02 Bid Procedures and Conditions 13

1-02.1 Qualifications of Bidder 13

1-02.2 Plans and Specifications 13

1-02.4 Examination of Plans, Specifications and Site of Work 14

1-02.5 Proposal Forms 14

1-02.6 Preparation of Proposal 14

1-02.7 Bid Deposit 15

1-02.9 Delivery of Proposal 16

1-02.10 Withdrawing, Revising, or Supplementing Proposal 16

1-02.12 Public Opening of Proposals 17

1-02.13 Irregular Proposals 17

1-02.14 Disqualification of Bidders 18

1-02.15 Pre-Award Information 19

1-03 Award and Execution of Contract 19

1-03.1 Consideration of Bids 19

1-03.3 Execution of Contract 20

1-03.4 Contract Bond 20

1-03.7 Judicial Review 21

1-03.8 City Determination 22

1-04 Scope of the Work 22

1-04.2 Coordination of Contract Documents, Plans, Special Provisions, Specifications and Addenda 22

1-04.6 Variation in Estimated Quantities 23

1-04.11 Final Cleanup 24

1-05 Control of Work 24

1-05.1 Authority of the Engineer 24

1-05.4 Conformity with and Deviations from Plans and Stakes 25
1-05.7 Removal of Defective and Unauthorized Work 30
1-05.10 Guarantees 31
1-05.11 Final Inspection 31
1-05.11 Final Inspections and Operational Testing 32
1-05.11(1) Substantial Completion Date 32
1-05.11(2) Final Inspection and Physical Completion Date 33
1-05.11(3) Operational Testing 33
1-05.12 Final Acceptance 33
1-05.13 Superintendents, Labor, and Equipment of Contractor 34
1-05.14 Cooperation with Other Contractors 34
1-05.16 Water and Power 34
1-05.16 Water and Power 34
1-05.17 Construction Record Drawings 34
1-06 Control of Material 38
1-06.1 Approval of Materials Prior to Use 38
1-06.6 Recycled Materials 39
1-07 Legal Relations and Responsibilities to the Public 39
1-07.1 Laws to be Observed 39
1-07.2 State Taxes 40
1-07.2 State Taxes 40
1-07.5 Environmental Regulations 41
1-07.6 Permits and Licenses 41
1-07.11 Requirements for Nondiscrimination 42
1-07.13 Contractor's Responsibility for Work 42
1-07.15 Temporary Water Pollution Prevention 42
1-07.16 Protection and Restoration of Property 43
1-07.17 Utilities and Similar Facilities 44
1-07.18 Insurance 46
1-07.18 Insurance 48
1-07.23 Public Convenience and Safety 52
1-07.24 Rights of Way 56
1-07.29 Haul Routes 57

1-08 Prosecution and Progress 57

1-08.0 Preliminary Matters 57

1-08.0(1) Preconstruction Conference 57

1-08.0(2) Hours of Work 58

1-08.0 Preliminary Matters 58

1-08.1 Subcontracting 60

1-08.4 Notice to Proceed and Prosecution of the Work 61

1-08.5 Time for Completion 62

1-08.6 Suspension of Work 63

1-08.9 Liquidated Damages 63

1-09 Measurement and Payment 64

1-09.1 Measurement of Quantities 64

1-09.2 Weighing Equipment 65

1-09.3 Scope of Payment 65

1-09.4 Equitable Adjustment 65

1-09.6 Force Account 65

1-09.8 Payment for Material on Hand 66

1-09.9 Payments 66

1-09.11 Disputes and Claims 68

1-09.13 Claims Resolution 69

1-10 Temporary Traffic Control 69

1-10.1 General 69

1-10.2 Traffic Control Management 69

1-10.3 Traffic Control Labor, Procedures, and Devices 70

1-10.4 Measurement 71

1-10.5 Payment 71

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DIVISION 1 General Requirements

1-01 Definitions and Terms

1-01.1 General

(April 2006 City of Auburn GSP)
Add the following before the first paragraph:

Whenever the words “as directed”, “as required”, “as permitted”, or words of the like effect are used, it shall be understood that the direction, requirement or permission of the City of Auburn is intended. The words “sufficient”, “necessary”, “proper”, and the like shall mean sufficient, necessary or proper in the judgment of the City of Auburn. The words “approved”, “acceptable”, “satisfactory”, or other words of the like shall mean approved by, or acceptable to, the City of Auburn.

1-01.3 Definitions

(February 2024 City of Auburn GSP)
Supplement this section with the following:

All references in the Standard Specifications, Amendments, or WSDOT General Special Provisions, to the terms “State”, “Department of Transportation”, “Washington State Transportation Commission”, “Commission”, “Secretary of Transportation”, “Secretary”, “Headquarters”, and “State Treasurer” shall be revised to read “Contracting Agency”.

All references to the terms “State” or “state” shall be revised to read “Contracting Agency” unless the reference is to an administrative agency of the State of Washington, a State statute or regulation, or the context reasonably indicates otherwise.

All references to “State Materials Laboratory” shall be revised to read “Contracting Agency designated location”.

Business Day
A business day is any day from Monday through Friday except holidays as listed in Section 1-08.5.

City of Auburn
See Contracting Agency.

Contract Documents
See definition for “Contract”.

Current Edition
The latest specifications, standards, or requirements of the respective issuing agencies which have been published as of the date that the work is advertised for bids, shall apply; except to the extent that said standards or requirements may be in conflict with applicable laws, ordinances, or governing codes.

Equal Products
The terms “or equal”, “approved equal”, “approved equivalent” “or equivalent”, etc., as used in the Contract Documents, shall mean a manufactured article, material, method, or work, which in the opinion of the Engineer, is equally desirable or suitable for the purposes intended in the Contract Documents, as compared with similar articles specifically mentioned therein.

Project

The term Project shall mean the Work governed by the Contract Documents.

Shop Drawings
Same as “Working Drawings” as defined in the Standard Specifications.

Standard Details
Same as “Standard Plans” as defined in the Standard Specifications.

Standard Plans
The manual of standard Plans adopted by the City of Auburn is the City of Auburn Standard Details, which includes City of Auburn Standard Details and certain WSDOT Standard Plans by reference.

Standard Specifications
The Standard Specifications for Road, Bridge and Municipal Construction, 2024 edition as issued by the Washington State Department of Transportation, hereinafter referred to as the “Standard Specifications”.

Traffic
Both vehicular and non-vehicular traffic, such as pedestrians, bicyclists, wheelchairs, and equestrian traffic.

(City Contracts, January 2024 City of Auburn GSP)
Delete the heading **Completion Dates** and the three paragraphs that follow it, and replace them with the following:

Dates

Bid Opening Date
The date on which the Contracting Agency publicly opens and reads the Bids.

Award Date
The date of the City letter to the Contractor notifying the Contractor of the contract award.

Contract Execution Date
The date the Contracting Agency officially binds the Agency to the Contract.

Notice to Proceed Date
The date stated in the Notice to Proceed on which the Contract time begins.

Substantial Completion Date
The day the Engineer determines the Contracting Agency has full and unrestricted use and benefit of the facilities, both from the operational and safety standpoint, any remaining traffic disruptions will be rare and brief, and only minor incidental work, replacement of temporary substitute facilities, plant establishment periods, or correction or repair remains for the Physical Completion of the total Contract.

Physical Completion Date
The day all of the Work is physically completed on the project. All documentation required by the Contract and required by law does not necessarily need to be furnished by the Contractor by this date.

Final Acceptance Date
See Completion Date.

Completion Date
The day all the Work specified in the Contract is completed and all the obligations of the Contractor under the contract are fulfilled by the Contractor. All documentation

required by the Contract and required by law must be furnished by the Contractor before establishment of this date.

(City Contracts, February 2023 City of Auburn GSP)
Supplement this section with the following:

All references to "Final Contract Voucher Certification" shall be interpreted to mean the final payment form established by the Contracting Agency.

Additive
A supplemental unit of work or group of bid items, identified separately in the Bid Proposal, which may, at the discretion of the Contracting Agency, be awarded in addition to the base bid.

Alternate
One of two or more units of work or groups of bid items, identified separately in the Bid Proposal, from which the Contracting Agency may make a choice between different methods or materials of construction for performing the same work.

Bid Proposal Package
The documents to be submitted by the Contractor for bid consideration. The "Bid Proposal Package" includes those documents identified in the Bidder's Checklist, and may include, but not be limited to the following:

- Bidder's Checklist
- Proposal Form
- Contractor Certification Wage Law Compliance
- Responsible Bidder Information
- Proposed Equipment and Manpower Schedule
- Local Agency Subcontractor List
- Bid Bond

Contract Time
The period of time established by the terms and conditions of the Contract within which the Work must be physically completed.

Equitable Adjustment or Eq. Adj.
The term Equitable Adjustment or Eq. Adj. used in the Bid Proposal Form for Units shall mean that the City has included an estimated dollar amount for that bid item only to provide a common proposal for Bidders. All such dollar amounts are to become part of the Contractor's total bid.

Estimate
The term Estimate or Est. used in the Bid Proposal Form for Units shall mean that the City has included an estimated dollar amount for that bid item, only to provide a common proposal for Bidders. All such dollar amounts are to become part of the Contractor's total bid.

Incidental Work
The terms incidental to the project, incidental to the involved bid item(s), etc., as used in the Contract Documents shall mean that the Contractor is required to provide the specified work complete and the cost of such work shall be incidental and included in the unit contract prices as specified in Section 1-04.1 (Intent of the Contract). No additional payment will be made for this work.

Major Contract Bid Item

A major contract bid item is any bid item, unless specifically excluded in the special provisions, for which the contract price amounts to 10 percent or more of the total contract price as determined by the original proposed quantities and the unit contract prices at the time of award.

Notice of Award
The written notice from the Contracting Agency to the successful bidder signifying the Contracting Agency's acceptance of the Bid Proposal.

Notice to Proceed
The written notice from the Contracting Agency or Engineer to the Contractor authorizing and directing the Contractor to proceed with the Work and establishing the date on which the Contract time begins.

Supplemental Drawings and Instructions
Additional instructions by the Engineer at the request of the Contractor by means of drawings or documents necessary, in the opinion of the Engineer, for the proper execution of the work. Such drawings and instructions are consistent with the Contract Documents.

(Non-City Contracts, February 2023 City of Auburn GSP)
Supplement this Section with the following:

Contractor
Contractor shall refer to the applicant, permit(s) holder, and/or developer.

Contract Execution and Contract Execution Date
Contract Execution shall refer to the Notice to Proceed.

Contract Plans
The City approved plans and the Standard Details and/or Standard Plans referenced by them, which show location, character, and dimensions of the prescribed work including layouts, profiles, cross-sections, and other details.

Contract Time
The period of time established by the terms and conditions of the Contract between Notice to Proceed and Final Acceptance.

Current Edition
The latest specifications, standards, or requirements of the respective issuing agencies which have been published as of the date of the plan approval or permit issuance, as applicable, shall apply; except to the extent that said standards or requirements may be in conflict with applicable laws, ordinances, or governing codes.

Dates

Completion Date
See Final Acceptance Date

Final Acceptance Date and Final Acceptance
For public facility extension (FAC) work, the Final Acceptance Date is the date on which the Developer has satisfied the terms of the FAC Agreement such that the City accepts the public portions of the FAC work for ownership and maintenance and the warranty period begins. For non-FAC work, the Final Acceptance Date refers to the date the City has verified the work performed by the Contractor is complete and all associated permit and other requirements have been satisfied.

Physical Completion and Physical Completion Date

Physical completion refers to the City's determination that the Contractor has completed all physical Work.

Engineer
The term Engineer shall be used to mean the City Engineer or any designee thereof and does not refer to the Developer's, Permit holder's, or Contractor's engineer.

Measurement
The term Measurement, when used in reference to measuring material for payment, is used in reference to City contract bid items and is not applicable to Non-City projects and work.

Notice to Proceed and Notice to Proceed Date
The written notice from the Contracting Agency or Engineer to the Contractor authorizing and directing the Contractor to proceed with the Work and establishing the date on which the Contract time begins, or, as applicable, the issuance of permit(s) by the City that authorizes the Contractor to proceed with the Work as may be conditioned by the permit(s).

Payment
The term Payment is used in reference to City Contract bid items and is not applicable to Non-City projects and work.

1-02 Bid Procedures and Conditions

1-02.1 Prequalification of Bidders

(City Contracts, January 24, 2011 APWA GSP)
Delete this section and replace it with the following:

1-02.1 Qualifications of Bidder

Before award of a public works contract, a bidder must meet at least the minimum qualifications of RCW 39.04.350(1) to be considered a responsible bidder and qualified to be awarded a public works project.

(City Contracts, April 2006 City of Auburn GSP)
Supplement this section with the following:

The bidder shall fill out and sign the "Responsible Bidder Information" and the "Proposed Equipment and Manpower Schedule" contained in the "Bid Proposal Package" of this document. These forms must be completed and submitted with the bid.

1-02.2 Plans and Specifications

(City Contracts, August 2020 City of Auburn)
Delete this section and replace it with the following:

Information as to where Bid Documents can be obtained or reviewed will be found in the Call for Bids (Advertisement for Bids) for the work.

1-02.4 Examination of Plans, Specifications and Site of Work

1-02.4(1) General

(City Contracts, January 19, 2022 APWA GSP Option A)
The first sentence of the ninth paragraph, beginning with "Any prospective Bidder desiring…", is revised to read:

Any prospective Bidder desiring an explanation or interpretation of the Bid Documents, must request the explanation or interpretation in writing soon enough to allow a written reply to reach all prospective Bidders before the submission of their Bids.

1-02.4(2) Subsurface Information

(City Contracts, August 2022 City of Auburn GSP)
The third and fourth sentences in the first paragraph are revised to read:

The Summary of Geotechnical Conditions and the boring logs, if and when included as an appendix to the Special Provisions, shall be considered as part of the Contract. The boring logs and associated data, if and when included as an appendix to the Special Provisions, shall be considered as part of the Contract.

(City Contracts, January 2017 City of Auburn GSP)
Supplement this section with the following:

Because of the varying soil composition and ground water levels encountered in various areas and at different seasons of the year, the City of Auburn makes no representation of such conditions as they may pertain to this project. The Contractor shall be responsible for any and all cribbing, sheet piling, de-watering, or other construction methods or procedures, which may be necessary to complete the project and additional compensation will not be allowed, unless otherwise specified in this document.

1-02.5 Proposal Forms

(City Contracts, July 31, 2017 APWA GSP)
Delete this section and replace it with the following:

The Proposal Form will identify the project and its location and describe the work. It will also list estimated quantities, units of measurement, the items of work, and the materials to be furnished at the unit bid prices. The bidder shall complete spaces on the proposal form that call for, but are not limited to, unit prices; extensions; summations; the total bid amount; signatures; date; and, where applicable, retail sales taxes and acknowledgment of addenda; the bidder's name, address, telephone number, and signature; the bidder's UDBE/DBE/M/WBE commitment, if applicable; a State of Washington Contractor's Registration Number; and a Business License Number, if applicable. Bids shall be completed by typing or shall be printed in ink by hand, preferably in black ink. The required certifications are included as part of the Proposal Form.

The Contracting Agency reserves the right to arrange the proposal forms with alternates and additives, if such be to the advantage of the Contracting Agency. The bidder shall bid on all alternates and additives set forth in the Proposal Form unless otherwise specified.

1-02.6 Preparation of Proposal

(City Contracts, January 4, 2024 APWA GSP 1-02.6, Option B)

Supplement the second paragraph with the following:

4. If a minimum bid amount has been established for any item, the unit or lump sum price must equal or exceed the minimum amount stated.
5. Any correction to a bid made by interlineation, alteration, or erasure, shall be initialed by the signer of the bid.

Delete the last two paragraphs, and replace them with the following:

The Bidder shall submit with their Bid a completed Contractor Certification Wage Law Compliance form, provided by the Contracting Agency. Failure to return this certification as part of the Bid Proposal package will make this Bid Nonresponsive and ineligible for Award. A Contractor Certification of Wage Law Compliance form is included in the Proposal Forms.

The Bidder shall make no stipulation on the Bid Form, nor qualify the bid in any manner.

A bid by a corporation shall be executed in the corporate name, by the president or a vice president (or other corporate officer accompanied by evidence of authority to sign).

A bid by a partnership shall be executed in the partnership name, and signed by a partner. A copy of the partnership agreement shall be submitted with the Bid Form if any DBE requirements are to be satisfied through such an agreement.

A bid by a joint venture shall be executed in the joint venture name and signed by a member of the joint venture. A copy of the joint venture agreement shall be submitted with the Bid Form if any DBE requirements are to be satisfied through such an agreement.

(City Contracts, June 2017 City of Auburn GSP)
Supplement this section with the following:

Any correction to a bid made by interlineation, alteration, or erasure, may also be initialed by an authorized representative of the bidder.

1-02.7 Bid Deposit

(City Contracts, May 2015 City of Auburn GSP)
This section is revised as follows:

The third and fourth sentences of the first paragraph are deleted.

The last paragraph is deleted and replaced with the following:

The failure to furnish a Bid deposit of a minimum of 5 percent with the Bid shall make the Bid nonresponsive and shall cause the Bid to be rejected by the Contracting Agency.

(City Contracts, March 8, 2013 APWA GSP)
Supplement this section with the following:

Bid bonds shall contain the following:

1. Contracting Agency-assigned number for the project;
2. Name of the project;

3. The Contracting Agency named as obligee;
4. The amount of the bid bond stated either as a dollar figure or as a percentage which represents five percent of the maximum bid amount that could be awarded;
5. Signature of the bidder's officer empowered to sign official statements. The signature of the person authorized to submit the bid should agree with the signature on the bond, and the title of the person must accompany the said signature;
6. The signature of the surety's officer empowered to sign the bond and the power of attorney.

If so stated in the Contract Provisions, bidder must use the bond form included in the Contract Provisions.

If so stated in the Contract Provisions, cash will not be accepted for a bid deposit.

1-02.9 Delivery of Proposal

(City Contracts, January 2023 City of Auburn GSP)
Delete this section and replace it with the following:

The City will not consider proposals it receives after the time fixed for opening bids as specified in Section 1-02.12 (Public Opening of Proposals).

Executed Bid Proposal Package documents shall be submitted in a sealed envelope provided by the Bidder, to the following address:

Office of the City Clerk
City of Auburn
25 West Main Street
Auburn, WA 98001-4998

The sealed Bid Proposal Package shall be plainly marked with the Bidder's firm name, return address and telephone number, and in the lower left-hand corner marked with "Sealed Bid for:" followed by the project number, project name, and bid opening date and time.

Proposals may also be sent by mail. Mailed proposals shall be sealed in a second envelope, also addressed and marked as stated above. If the mail option is chosen, it is the Contractor's sole responsibility to ensure that the City receives the Proposal prior to the specified Bid Opening date and time. Proposals received after the specified Bid Opening date and time will be deemed non-responsive and will not be opened or considered.

1-02.10 Withdrawing, Revising, or Supplementing Proposal

(City Contracts, July 23, 2015 APWA GSP)
Delete this section, and replace it with the following:

After submitting a physical Bid Proposal to the Contracting Agency, the Bidder may withdraw, revise, or supplement it if:

1. The Bidder submits a written request signed by an authorized person and physically delivers it to the place designated for receipt of Bid Proposals, and
2. The Contracting Agency receives the request before the time set for receipt of Bid Proposals, and
3. The revised or supplemented Bid Proposal (if any) is received by the Contracting Agency before the time set for receipt of Bid Proposals.

If the Bidder's request to withdraw, revise, or supplement its Bid Proposal is received before the time set for receipt of Bid Proposals, the Contracting Agency will return the unopened Proposal package to the Bidder. The Bidder must then submit the revised or supplemented package in its entirety. If the Bidder does not submit a revised or supplemented package, then its bid shall be considered withdrawn.

Late revised or supplemented Bid Proposals or late withdrawal requests will be date recorded by the Contracting Agency and returned unopened. Mailed, emailed, or faxed requests to withdraw, revise, or supplement a Bid Proposal are not acceptable.

1-02.12 Public Opening of Proposals

(City Contracts, January 2023 City of Auburn GSP)
Supplement the Section with the following:

Bid Proposal Packages will be opened and publicly read aloud by the City Clerk's Office in the Auburn City Hall located at 25 West Main Street, Auburn WA at the bid opening date and time specified in the Invitation for Bids.

City of Auburn bid openings will be held virtually and telephonically. Access to the Virtual Meeting and phone number to listen to the public bid opening is included in the Bid Proposal Package.

1-02.13 Irregular Proposals

(City Contracts, January 4, 2024 APWA GSP)

Delete this section and replace it with the following:

1. A Proposal will be considered irregular and will be rejected if:
   a. The Bidder is not prequalified when so required;
   b. The Bidder adds provisions reserving the right to reject or accept the Award, or enter into the Contract;
   c. A price per unit cannot be determined from the Bid Proposal;
   d. The Proposal form is not properly executed;
   e. The Bidder fails to submit or properly complete a subcontractor list (WSDOT Form 271-015), if applicable, as required in Section 1-02.6;
   f. The Bidder fails to submit or properly complete a Disadvantaged Business Enterprise Certification (WSDOT Form 272-056), if applicable, as required in Section 1-02.6;
   g. The Bidder fails to submit Written Confirmations (WSDOT Form 422-031) from each DBE firm listed on the Bidder's completed DBE Utilization Certification that they are in agreement with the bidder's DBE participation commitment, if applicable, as required in Section 1-02.6, or if the written confirmation that is submitted fails to meet the requirements of the Special Provisions;
   h. The Bidder fails to submit DBE Good Faith Effort documentation, if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to demonstrate that a Good Faith Effort to meet the Condition of Award in accordance with Section 1-07.11;
   i. The Bidder fails to submit a DBE Bid Item Breakdown (WSDOT Form 272-054), if applicable, as required in Section 1-02.6, or if the documentation that is submitted fails to meet the requirements of the Special Provisions;

j. The Bid Proposal does not constitute a definite and unqualified offer to meet the material terms of the Bid invitation.

2. A Proposal may be considered irregular and may be rejected if:
   a. The Proposal does not include a unit price for every Bid item;
   b. Any of the unit prices are excessively unbalanced (either above or below the amount of a reasonable Bid) to the potential detriment of the Contracting Agency;
   c. The authorized Proposal Form furnished by the Contracting Agency is not used or is altered;
   d. The completed Proposal form contains unauthorized additions, deletions, alternate Bids, or conditions;
   e. Receipt of Addenda is not acknowledged;
   f. A member of a joint venture or partnership and the joint venture or partnership submit Proposals for the same project (in such an instance, both Bids may be rejected); or
   g. If Proposal form entries are not made in ink.

1-02.14 Disqualification of Bidders

(City Contracts, May 17, 2018 APWA GSP, Option A)
Delete this section and replace it with the following:

A Bidder will be deemed not responsible if the Bidder does not meet the mandatory bidder responsibility criteria in RCW 39.04.350(1), as amended.

The Contracting Agency will verify that the Bidder meets the mandatory bidder responsibility criteria in RCW 39.04.350(1). To assess bidder responsibility, the Contracting Agency reserves the right to request documentation as needed from the Bidder and third parties concerning the Bidder's compliance with the mandatory bidder responsibility criteria.

If the Contracting Agency determines the Bidder does not meet the mandatory bidder responsibility criteria in RCW 39.04.350(1) and is therefore not a responsible Bidder, the Contracting Agency shall notify the Bidder in writing, with the reasons for its determination. If the Bidder disagrees with this determination, it may appeal the determination within two (2) business days of the Contracting Agency's determination by presenting its appeal and any additional information to the Contracting Agency. The Contracting Agency will consider the appeal and any additional information before issuing its final determination. If the final determination affirms that the Bidder is not responsible, the Contracting Agency will not execute a contract with any other Bidder until at least two business days after the Bidder determined to be not responsible has received the Contracting Agency's final determination.

(City Contracts, April 2014 City of Auburn GSP)
Supplement this section with the following:

The City of Auburn reserves the right to determine the lowest responsible bidder based on factors other than just price, including but not limited to the following:

1. Liability exposure;
2. References and past performance;
3. Judgments entered against the bidder within the last 5 years that shows a history of failing to meet the terms of the contract;
4. History of claims with other agencies on similar projects;

5. Inadequate or ambiguous specifications;
6. Specifications have been revised;
7. Lowest responsible bid deemed not the best price obtainable;
8. Bids not independently arrived or submitted in bad faith (i.e., price fixing);
9. A determination made that all the necessary requirements of the bid process have not been met;
10. Insufficient competition; and,
11. Other claims or other indications that cancellation or rejection of all bids is clearly in the best interest of the City.

For the purpose of this criterion, 'bidder' shall include the registered construction company submitting the bid, as well as the owner(s) of the company, and any other construction companies the owner(s) may currently or previously have owned.

1-02.15 Pre-Award Information

(City Contracts, December 30, 2022 APWA GSP)
Revise this section to read:

Before awarding any contract, the Contracting Agency may require one or more of these items or actions of the apparent lowest responsible bidder:

1. A complete statement of the origin, composition, and manufacture of any or all materials to be used,
2. Samples of these materials for quality and fitness tests,
3. A progress schedule (in a form the Contracting Agency requires) showing the order of and time required for the various phases of the work,
4. A breakdown of costs assigned to any bid item,
5. Attendance at a conference with the Engineer or representatives of the Engineer,
6. Obtain, and furnish a copy of, a business license to do business in the city or county where the work is located.
7. Any other information or action taken that is deemed necessary to ensure that the bidder is the lowest responsible bidder.

1-03 Award and Execution of Contract

1-03.1 Consideration of Bids

(City Contracts, January 23, 2006 APWA GSP)
Revise the first paragraph to read:

After opening and reading proposals, the Contracting Agency will check them for correctness of extensions of the prices per unit and the total price. If a discrepancy exists between the price per unit and the extended amount of any bid item, the price per unit will control. If a minimum bid amount has been established for any item and the bidder's unit or lump sum price is less than the minimum specified amount, the Contracting Agency will unilaterally revise the unit or lump sum price, to the minimum specified amount and recalculate the extension. The total of extensions, corrected where necessary, including sales taxes where applicable and such additives and/or alternates as selected by the Contracting Agency, will be used by the Contracting Agency for award purposes and to fix the Awarded Contract Price amount and the amount of the contract bond.

(City Contracts, September 2021 City of Auburn GSP)
Add the following new section:

1-03.1(2) Additive and Deductive Schedules

The City reserves the right to select any, all, or none of the additive and/or deductive bid schedules provided on the Proposal Form. The Contractor must complete each additive and/or deductive bid schedule to be considered a responsive bid. The Contract award will be made based on the lowest responsible and responsive total bid, including any selected additive and/or deductive bid schedules, as determined by the City.

1-03.3 Execution of Contract

(City Contracts, January 2024 City of Auburn GSP)
Revise this section to read:

Within 15 calendar days after the award date, the successful bidder shall return an insurance certification as required by Section 1-07.18, and a satisfactory bond as required by law and Section 1-03.4. Within 20 calendar days after the award date, the successful bidder shall return the signed Contracting Agency-prepared contract. Before execution of the contract by the Contracting Agency, the successful bidder shall provide any pre-award information the Contracting Agency may require under Section 1-02.15.

Until the Contracting Agency executes a contract, no proposal shall bind the Contracting Agency nor shall any work begin within the project limits or within Contracting Agency-furnished sites. The Contractor shall bear all risks for any work begun outside such areas and for any materials ordered before the contract is executed by the Contracting Agency.

If the bidder experiences circumstances beyond their control that prevents return of the contract documents within the calendar days after the award date stated above, the Contracting Agency may grant up to a maximum of 7 additional calendar days for return of the documents, provided the Contracting Agency deems the circumstances warrant it.

1-03.4 Contract Bond

(City Contracts, September 2019 City of Auburn GSP)
Delete the first paragraph and replace it with the following:

The successful bidder shall provide executed payment and performance bond(s) for the full contract amount. The bond shall be a combined payment and performance bond and shall:

1. Be on Contracting Agency-furnished form(s);
2. Be signed by an approved surety (or sureties) that:
   a. Is registered with the Washington State Insurance Commissioner, and
   b. Appears on the current Authorized Insurance List in the State of Washington published by the Office of the Insurance Commissioner,
3. Guarantee that the Contractor will perform and comply with all obligations, duties, and conditions under the Contract, including but not limited to the duty and obligation to indemnify, defend, and protect the Contracting Agency against all losses and claims related directly or indirectly from any failure:
   a. Of the Contractor (or any of the employees, subcontractors, or lower tier subcontractors of the Contractor) to faithfully perform and comply with all contract obligations, conditions, and duties, or
   b. Of the Contractor (or the subcontractors or lower tier subcontractors of the Contractor) to pay all laborers, mechanics, subcontractors, lower tier

subcontractors, material person, or any other person who provides supplies or provisions for carrying out the work;

4. Be conditioned upon the payment of taxes, increases, and penalties incurred on the project under titles 50, 51, and 82 RCW; and
5. Be accompanied by a power of attorney for the Surety's officer empowered to sign the bond; and
6. Be signed by an officer of the Contractor empowered to sign official statements (sole proprietor or partner). If the Contractor is a corporation, the bond must be signed by the president or vice president, unless accompanied by written proof of the authority of the individual signing the bond to bind the corporation (i.e., corporate resolution, power of attorney, or a letter to such effect signed by the president or vice president).

(City Contracts, January 2015 City of Auburn GSP)
Supplement this section with the following:

The "Contract Bond" shall remain in force for one year following the "Completion Date" of the Contract to insure Contract defects during the one-year guarantee period in compliance with Section 1-05.10 (Guarantees).

(City Contracts, May 17, 2018 APWA GSP)
Add the following new section:

1-03.4(1) Retainage in Lieu of Contract Bond

For contracts of $150,000 or less, the Contractor may, at the Contractor's option, authorize the Contracting Agency to retain 10% of the contract amount in lieu of furnishing a performance and/or payment bond. If the Contractor elects this option, the retainage shall be held for a period of thirty (30) days after the date of final acceptance, or until receipt of all necessary releases from the Departments of Revenue and of Labor and Industries and settlement of any liens filed under RCW 60.28, whichever is later. The Contractor must advise the Contracting Agency in writing of the Contractor's election to authorize retainage in lieu of a bond, at the time of execution of the Contract.

In choosing this option, the Contractor agrees that if the Contractor, its heirs, executors, administrators, successors, or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions and agreements in the Contract, and shall faithfully perform all the provisions of such contract and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of the Contract that may hereafter be made, at the time and in the manner therein specified, and shall pay all laborers, mechanics, subcontractors, and material suppliers, and all persons who shall supply such person or persons, or subcontractors, with provisions and supplies for the carrying on of such work, on his or her part, and shall indemnify and save harmless the Contracting Agency, its officers and agents from any claim for such payment, then the funds retained in lieu of a performance bond shall be released at the time provided above; otherwise, the funds shall be retained until the Contractor fulfills the said obligations.

1-03.7 Judicial Review

(City Contracts, December 30, 2022 APWA GSP)
Revise this section to read:

All decisions made by the Contracting Agency regarding the Award and execution of the Contract or Bid rejection shall be conclusive subject to the scope of judicial review permitted under Washington Law. Such review, if any, shall be timely filed in the Superior Court of the county where the Contracting Agency headquarters is located, provided that where an action is asserted against a county, RCW 36.01.050 shall control venue and jurisdiction.

(City Contracts, August 2021 City of Auburn)
Add the following new section:

1-03.8 City Determination

The City reserves the right to determine the following:

1. Whether a proposal is irregular under the terms of Section 1-02.13, and
2. Whether a bidder is not responsible under Section 1-02.14.

1-04 Scope of the Work

1-04.2 Coordination of Contract Documents, Plans, Special Provisions, Specifications and Addenda

(Non-City Contracts, January 2023 City of Auburn GSP)
Revise the second paragraph to read:

Any inconsistency in the parts of the contract shall be resolved by following this order of precedence (e.g., 1 presiding over 2, 2 over 3, 3 over 4, and so forth):

1. Public Facility Extension Agreement (for public facility extension work)
2. City issued permit terms and conditions
3. Permit/FAC Plans
4. City of Auburn Engineering Construction Standards Part 1: Special Provisions
5. City of Auburn Engineering Construction Standards Part 2: Standard Details
6. Standard Specifications
7. WSDOT Standard Plans for Road, Bridge, and Municipal Construction

(City Contracts, January 2023 City of Auburn GSP)
Revise the second paragraph to read:

Any inconsistency in the parts of the contract shall be resolved by following this order of precedence (e.g., 1 presiding over 2, 2 over 3, 3 over 4, and so forth):

1. Addenda
2. Proposal Form
3. Project Specific Special Provisions
4. Contract Plans
5. City of Auburn Engineering Construction Standards Part 1: Special Provisions
6. City of Auburn Engineering Construction Standards Part 2: Standard Details
7. Standard Specifications
8. WSDOT Standard Plans for Road, Bridge, and Municipal Construction

(February 2023 City of Auburn GSP)
Supplement the section with the following:

The Contractor shall have the Contract Documents available at the job site during construction.

(January 2017 City of Auburn GSP)
Add the following new section:

1-04.3(1) Contractor-Discovered Discrepancies

The Contractor shall carefully study and compare all the components of the Contract Documents and other instructions, and check and verify all field measurements. The Contractor shall, prior to ordering material or performing work, report in writing to the Engineer any error, inconsistency, or omission in respect to design or mode of construction. If the Contractor, in the course of this study or in the accomplishment of the work, finds any discrepancy between the Plans and the physical condition of the locality as represented in the Plans, or any such errors or omissions in respect to the design or mode of construction in the Plans or in the layout as given by points and instructions, it shall be the Contractor's duty to inform the Engineer immediately in writing, and the Engineer will promptly do the same. Any work done after such discovery, until correction of the Plans or authorization of extra work is given, if the Engineer finds that extra work is involved, will be done at the Contractor's risk. If extra work is involved, the procedure shall be as provided in Section 1-04.4, Changes.

(Non-City Contracts, February 2023 City of Auburn GSP)
Delete Section 1-04.4 in its entirety and replace with the following:

1-04.4 Changes

Changes in Work shall be per Chapter 2 of the Engineering Design Standards.

1-04.4(1) Minor Changes

(City Contracts, May 30, 2019 APWA GSP)
Delete the first paragraph and replace it with the following:

Payments or credits for changes amounting to $25,000 or less may be made under the Bid item "Minor Change". At the discretion of the Contracting Agency, this procedure for Minor Changes may be used in lieu of the more formal procedure as outlined in Section 1-04.4, Changes. All "Minor Change" work will be within the scope of the Contract Work and will not change Contract Time.

(January 2017 City of Auburn GSP)
The first two sentences of the second paragraph are deleted.

1-04.5(1)A Disputes Review Board

(City Contracts, August 2021 City of Auburn GSP)
Delete this Section and its Subsections in their entirety.

1-04.6 Variation in Estimated Quantities

(City Contracts, December 30, 2022 APWA GSP, Option B)
Revise the first paragraph to read:

Payment to the Contractor will be made only for the actual quantities of Work performed and accepted in conformance with the Contract. When the accepted quantity of Work performed

under a unit item varies from the original Proposal quantity, payment will be at the unit Contract price for all Work unless the total accepted quantity of the Contract item, adjusted to exclude added or deleted amounts included in change orders accepted by both parties, increases or decreases by more than 25 percent from the original Proposal quantity, and if the total extended bid price for that item at time of award is equal to or greater than 10 percent of the total contract price at time of award. In that case, payment for contract work may be adjusted as described herein:

1-04.11 Final Cleanup

(February 2018 City of Auburn GSP)
The third sentence of the first paragraph is revised to read:

The City Right-of-Way, material sites, and all ground the Contractor occupied to do the Work shall be left neat and presentable.

(February 2018 City of Auburn GSP)
Supplement the section with the following:

Final cleanup shall also include cleaning out all newly installed storm drain pipe and structures and any ditches that may have been filled during the work, replacing damaged surfacing, and putting the site in a neat, orderly condition and, in respect to structures, cleaning all windows and leaving buildings broom clean.

1-05 Control of Work

1-05.1 Authority of the Engineer

1-05.1(1) Oral Orders

(August 2021 City of Auburn GSP)
Supplement this section with the following:

No oral agreement or conversation with any officer, agent, or employee of the City, either before or after execution of the Contract, shall affect or modify any of the terms or obligations contained in any of the documents comprising the Contract. Such oral agreement or conversation shall be considered as unofficial information and in no way binding upon the City, unless subsequently put in writing and signed by the City.

1-05.1(2) Request for Information (RFI)

(City Contracts, January 2023 City of Auburn GSP)
Supplement this section with the following:

Requests for Information (RFIs) shall be made electronically and shall be transmitted via email to PWSubmittals@auburnwa.gov. The email subject line of electronic RFIs shall include the following: Project Number, Project Name, and RFI Title. Each email shall be limited to 10 MB in size.

In the event the Contractor cannot meet the 10 MB size limit for a specific RFI, the Contractor may request to submit the individual RFI as a hardcopy. Hardcopy RFIs shall be either mailed to the City of Auburn Public Works Department at 25 West Main St, Auburn, WA 98001 or dropped off at the City of Auburn Customer Service Center located on the 2nd floor of the One East Main St, Auburn WA 98001 building.

All RFIs shall accompany the City of Auburn "CIP Construction Request for Information (RFI)" form as a cover letter with enough information provided for the Engineer to respond accordingly.

1-05.4 Conformity with and Deviations from Plans and Stakes

(September 2016 City of Auburn GSP)
Revise the second sentence of the second paragraph to read:

The allowable tolerance for the Contractor's work shall not exceed 0.02 feet from lines, grades, depths and cross-sections shown on the Plans unless otherwise specified in these contract documents.

(January 2023 City of Auburn GSP)
Delete the fourth through seventh paragraphs of this section.

(City Contracts, July 23, 2015 APWA GSP, Option 1)
Supplement this section with the following:

Roadway and Utility Surveys

The Engineer shall furnish to the Contractor one time only all principal lines, grades, and measurements the Engineer deems necessary for completion of the work. These shall generally consist of one initial set of:

1. Slope stakes for establishing grading;
2. Curb grade stakes;
3. Centerline finish grade stakes for pavement sections wider than 25 feet; and
4. Offset points to establish line and grade for underground utilities such as water, sewers, and storm drains.

On alley construction projects with minor grade changes, the Engineer shall provide only offset hubs on one side of the alley to establish the alignment and grade.

(City Contracts, April 2018 City of Auburn GSP)
Supplement this section with the following:

The Contractor shall establish all survey controls, both horizontal and vertical, as necessary to assure proper placement of all project elements based on the primary control points provided by the Engineer. Survey work shall be within the following tolerances:

Stationing	±0.01 foot
Alignment	±0.01 foot (between successive points)
Superstructure Elevations	±0.01 foot (from plan elevations)
Substructure Elevations	±0.05 foot (from plan elevations)

During the progress of the work, the Contractor shall make available to the Engineer all field books including survey information, footing elevations, cross sections and quantities.

The Contractor shall be fully responsible for the close coordination of field locations and measurements with appropriate dimensions of structural members being fabricated.

(City Contracts, September 2016 City of Auburn GSP)
The Contractor shall inform the Engineer at least 3 working days in advance where they intend to work, thus enabling the Engineer to set the engineering control point, lines, and

grades with a minimum of delay and interference. The Engineer may require additional advance notice dependent upon survey requirements and scheduling.

Delays caused by lack of stakes or as a result of the Contractor failing to be specific when requesting survey staking shall not be the basis for additional time or claims for additional compensation by the Contractor.

(City Contracts, July 23, 2015 APWA GSP, Option 2)
Supplement this section with the following:

Bridge and Structure Surveys

For all structural work such as bridges and retaining walls, the Contractor shall retain, as a part of Contractor's organization, an experienced team of surveyors.

The Contractor shall provide all surveys required to complete the structure, except the following primary survey control, which will be provided by the Engineer:

1. Centerline or offsets to centerline of the structure.
2. Stations of abutments and pier centerlines.
3. A sufficient number of bench marks for levels to enable the Contractor to set grades at reasonably short distances.
4. Monuments and control points as shown in the Plans.

The Contractor shall establish all secondary survey controls, both horizontal and vertical, as necessary to assure proper placement of all project elements based on the primary control points provided by the Engineer. Survey work shall be within the following tolerances:

Stationing	±0.01 foot
Alignment	±0.01 foot (between successive points)
Superstructure Elevations	±0.01 foot (from plan elevations)
Substructure Elevations	±0.05 foot (from plan elevations)

During the progress of the work, the Contractor shall make available to the Engineer all field books including survey information, footing elevations, cross sections and quantities.

The Contractor shall be fully responsible for the close coordination of field locations and measurements with appropriate dimensions of structural members being fabricated.

(Non-City Contracts, January 2023 City of Auburn GSP)
Supplement this section with the following:

Bridge and Structure Surveys

For all structural work such as bridges and retaining walls, the Contractor shall retain, as a part of Contractor's organization, an experienced team of surveyors.

The Contractor shall provide all surveys required to complete the structure, including the following primary survey control:

1. Centerline or offsets to centerline of the structure.
2. Stations of abutments and pier centerlines.
3. A sufficient number of bench marks for levels to enable the Contractor to set grades at reasonably short distances.
4. Monuments and control points as shown in the Plans.

The Contractor shall establish all secondary survey controls, both horizontal and vertical, as necessary to assure proper placement of all project elements based on the primary control points. Survey work shall be within the following tolerances:

Stationing	±0.01 foot
Alignment	±0.01 foot (between successive points)
Superstructure Elevations	±0.01 foot (from plan elevations)
Substructure Elevations	±0.05 foot (from plan elevations)

During the progress of the work, the Contractor shall make available to the Engineer all field books including survey information, footing elevations, cross sections and quantities.

The Contractor shall be fully responsible for the close coordination of field locations and measurements with appropriate dimensions of structural members being fabricated.

(Non-City Contracts, April 2018 City of Auburn GSP)
Supplement this section with the following:

The Contractor shall establish all survey controls, both horizontal and vertical, as necessary to assure proper placement of all project elements. Survey work shall be within the following tolerances:

Stationing	±0.01 foot
Alignment	±0.01 foot (between successive points)
Superstructure Elevations	±0.01 foot (from plan elevations)
Substructure Elevations	±0.05 foot (from plan elevations)

During the progress of the work, the Contractor shall make available to the Engineer all field books including survey information, footing elevations, cross sections and quantities.

The Contractor shall be fully responsible for the close coordination of field locations and measurements with appropriate dimensions of structural members being fabricated.

(February 2023 City of Auburn GSP)
Add the following new subsection to this section:

1-05.4(1) Monuments

The Contractor shall work to preserve the existing monumentation as provided in RCW 58.09.130 and WAC 332-120. The Contractor shall notify the Engineer immediately if it becomes apparent that a survey marker will be disturbed due to construction. The Contractor shall allow ample time for the Engineer and/or Contractor, as applicable, to acquire adequate information so that the monument may be replaced by the Contractor in its original position after construction.

(City Contracts, February 2023 City of Auburn GSP)
Add the following new subsection to this section:

1-05.4(2) Contracting Agency Provided Construction Staking

1-05.4(2)A General

As used in this Section 1-05.4, the words, “stake,” “mark,” “marker,” or “monument” will be deemed to include any kind of survey marking, whether or not set by the Contracting Agency.

1-05.4(2)B Control Stakes

The Engineer will supply construction stakes and marks establishing lines, slopes and grades in accordance with this Section of these Special Provisions. The Contractor shall assume full responsibility for detailed dimensions, elevations, and excavation slopes measured from these Engineer furnished stakes and marks.

A claim by the Contractor for extra compensation by reason of alterations or reconstruction work allegedly due to error in the Engineer's line and grade will not be allowed unless the original control points set by the Engineer still exist, or unless the Contractor can provide other satisfactory substantiating evidence to prove the error was caused by incorrect Engineer furnished survey data. Three consecutive points set on line or grade shall be the minimum points used to determine any variation from a straight line or grade. Any such variation shall, upon discovery, be reported to the Engineer.

The Contractor shall provide a work site clear of equipment, stockpiles and obstructions which has been prepared and maintained to permit construction staking to proceed in a safe and orderly manner. The Engineer will stake a finite amount of work in a single day in accordance with Section 1-05.4(1)C of these Special Provisions.

Stakes that constitute reference points for all construction work will be conspicuously marked with an appropriate color of flagging tape. It will be the responsibility of the Contractor to inform its employees and subcontractors of the importance and necessity to preserve the stakes.

1-05.4(2)C Survey Requests

It shall be the Contractor's responsibility to properly schedule survey work and coordinate staking requests with construction activities. The Engineer may be reasonably expected to stake any one of the following items, in the quantity shown, in a single day:

Roadway grading	+/-1500 lineal feet of centerline
Storm or sanitary sewer	Approximately 8-10 structures
Water main	+/-1500 lineal feet of pipe
Curb and gutter	+/-1300 lineal feet (one side only)
Base and top course	+/-1000 lineal feet of centerline
Slope staking	+/-800-1200 lineal feet (top and toe)
Illumination/signalization	Approximately 15-20 structures

Actual quantities may vary based on the complexity of the project, line of sight considerations, traffic interference, properly prepared work site, and other items that could affect production.

The Contractor shall be aware that length does not always translate directly into stationing. For example, a survey request for storm sewer pipe from Station 3+00 to 8+00 is 500 lineal feet in length. There may be 1000 lineal feet, or more, of storm sewer pipe, if the pipe is placed on both sides of the roadway and interconnected.

The Contractor shall provide staking requests at least three (3) working days before the Engineer needs to begin the staking operation. If the work site is obstructed so that survey work cannot be done, a new survey request shall be submitted by the Contractor so that the

survey work can be rescheduled once the site is properly prepared. An additional 3 working days may be required to complete the rescheduled work.

The Contractor shall work to preserve stakes and marks set by the Engineer. The Contracting Agency will deduct from payments due the Contractor all costs to replace such stakes, marks, carelessly or willfully damaged or destroyed by the Contractor's operation. A new survey request shall be submitted by the Contractor to replace the damaged or destroyed stakes. An additional 3 working days may be required to complete the request.

If the removal of a control stake or monument is required by the construction operations of the Contractor or its subcontractors, and advance notice of at least three (3) working days is given to the Engineer, the Engineer will reference, remove, and later replace the stakes at no cost to the Contractor.

The Contractor is not entitled to an extension of time, as provided for in Section 1-08.8 as a result of any replacement of control stakes.

1-05.4(2)D Staking Services

The Contractor shall determine appropriate construction stake offset distances to prevent damage to stakes by its construction equipment.

The Engineer shall furnish to the Contractor, one time only, all principal lines, grades and measurements the Engineer deems necessary for completion of the work. These shall generally consist of one initial set of:

1. Cut or fill stakes for establishing grade and embankments,
2. Curb or gutter grade stakes,
3. Centerline finish grade stakes for pavement sections wider than 25 feet as set forth in Section 1-05.5(5), subsection 2, and
4. Offset points to establish line and grade for underground utilities such as water, sewers, storm drains, illumination and signalization.

No intermediate stakes shall be provided between curb grade and centerline stakes.

The Contractor shall provide enough safe areas to permit the Engineer to set those points and elevations that are the responsibility of the Contracting Agency and to perform random checks of the surveying performed by the Contractor.

Roadway and Utility Surveys

The Engineer will furnish the following stakes and reference marks:

- Clearing Limits - One set of clearing limit stakes will be set at approximately 50-foot stations or as needed.
- Rough Grading - One set of rough grade stakes will be set along the construction centerline of streets at 50-foot stations as required. (If superelevations require intermediate stakes along vertical curves, the Engineer will provide staking at closer intervals.) One set of primary cut and fill stakes will be set for site work. One set of secondary final grade cut and fill stakes will be set where deemed applicable as determined by the Engineer.
- Storm Sewers - Two cut or fill stakes for each inlet, catch basin or manhole will be set at appropriate offsets to the center of the structure. After installation and backfill, inverts will be checked for correctness.
- Sanitary Sewers - Two cut or fill stakes for each manhole or cleanout location will be set at appropriate offsets to the center of the structure. After installation and backfill, inverts will be checked for correctness.

- Water Main - One set of line stakes will be furnished for water mains at 50-foot stations. Additionally, two reference stakes for each valve, hydrant, tee and angle point location will be set concurrently with these line stakes.
- Staking for Embankments - Catch points and one-line stake will be set in those cases where the vertical difference in elevation from the construction centerline to the toe or top of a cut or fill slope exceeds 3 feet. In all other areas, stakes shall be set at an appropriate offset to the street centerline to allow for the preservation of said offsets through the rough grading phase. In both cases the stakes shall be clearly marked with appropriate information necessary to complete the rough grading phase.
- Curb and Gutters - One set of curb and gutter stakes shall be set at an appropriate offset at 25-foot intervals, beginning and end points of curves and curb returns, wheelchair ramps, driveways, and sufficient mid-curve points to establish proper alignment.
- Base and Top Course – When deemed appropriate by the Engineer, one set of final construction centerline grade hubs will be set for each course, at not less than 50-foot stations. No intermediate stakes shall be provided unless superelevations require them. In those circumstances, one grade hub left and right of construction centerline at the transition stations will be set at an appropriate offset to centerline not less than 25-foot stations.
- Adjacent or Adjoining Wetlands - One set of stakes delineating adjacent wetland perimeters will be set at 25 to 50-foot stations as required.
- Illumination and Traffic Signals System - One set of stakes for luminaires and traffic signal pole foundations will be set as required. One set of stakes for vaults, junction boxes, and conduits will be set, only if curb and gutter is not in place at the time of the survey request. If curb and gutter is in place, staking for vaults, junction boxes, and conduits will be provided at an additional expense to the Contractor.

When deemed appropriate by the Engineer, cut sheets will be supplied for curb, storm, sanitary sewer and water lines. Cuts or fills may be marked on the surveyed points but should not be relied on as accurate until a completed cut sheet is supplied.

The Contractor is responsible for staking all other items deemed necessary to construct the project per the Plans and Specifications. All costs associated with Contractor staking shall be incidental to the Work and be included in the Contract unit prices.

1-05.7 Removal of Defective and Unauthorized Work

(January 2023, City of Auburn GSP)
Supplement this section with the following:

If the Contractor fails to remedy defective or unauthorized work within the time specified in a written notice from the Engineer, or fails to perform any part of the work required by the Contract Documents, the Engineer may correct and remedy such work as may be identified in the written notice, with Contracting Agency forces or by such other means as the Contracting Agency may deem necessary.

If the Contractor fails to comply with a written order to remedy what the Engineer determines to be an emergency situation, the Engineer may have the defective and unauthorized work corrected immediately, have the rejected work removed and replaced, or have work the Contractor refuses to perform completed by using Contracting Agency or other forces. An emergency situation is any situation when, in the opinion of the Engineer, a delay in its

remedy could be potentially unsafe, or might cause serious risk of loss or damage to the public.

Direct or indirect costs incurred by the Contracting Agency attributable to correcting and remedying defective or unauthorized work, or work the Contractor failed or refused to perform, shall be paid by the Contractor. Such direct costs shall include in particular, but without limitation, compensation for additional professional services required, and costs for repair and replacement of the Contractor's unauthorized work.

No adjustment in contract time will be allowed because of the delay in the performance of the work attributable to the exercise of the Contracting Agency's rights provided by this Section.

The rights exercised under the provisions of this Section shall not diminish the Contracting Agency's right to pursue any other avenue for additional remedy or damages with respect to the Contractor's failure to perform the work as required.

(City Contracts, January 2023 City of Auburn GSP)
Supplement this section with the following:

Payment will be deducted by the Engineer from monies due, or to become due, the Contractor for costs incurred by the Contracting Agency attributable to correcting and remedying defective or unauthorized work, the Contractor failed or refused to perform.

No adjustment in compensation will be allowed because of the delay in the performance of the work attributable to the exercise of the Contracting Agency's rights provided by this Section.

1-05.10 Guarantees

(September 2016 City of Auburn GSP)
Supplement this section with the following:

Unless otherwise indicated in the Contract, the work performed under these Contract Documents shall be guaranteed for a period of one year beyond the "Completion Date" thereof against defective materials, equipment, and workmanship and shall also include the landscape establishment required in the Contract per Section 8-02.3(13) (Plant Establishment). Upon receipt of notice from the City of failure of any part of the material, equipment or workmanship during the guarantee period, the affected part or parts shall be replaced with new materials or equipment by, and at the expense of, the Contractor. This guarantee shall be bonded in compliance with Section 1-03.4 (Contract Bond).

The Contractor shall be available approximately 60 calendar days prior to the expiration of the one-year guarantee period to tour the project, with the Engineer, in support of the Engineer's effort to establish a list of corrective work required under the one-year guarantee. Upon the receipt of written notice of such required corrective work, the Contractor shall pursue vigorously, diligently, and without unauthorized interruption of the City Facilities, the work necessary to correct the items listed.

1-05.11 Final Inspection

(Non-City Contracts, February 2023 City of Auburn GSP)
Replace this section with the following:

When the Contractor considers the work to be substantially complete, the Contractor shall request the Engineer to perform inspections and provide a punch list of any completed work requiring correction. The Contractor's request shall list the specific items of work that remain to be completed. After receiving the punch list and completing the corrections and outstanding work, the Contractor will request additional inspections as needed until the Engineer has determined that all Work is physically complete. This determination is one of the requirements associated with Final Acceptance.

In order for the Work to be considered physically complete, the Contractor must have completed all start-up and operational testing of systems such as machinery or other mechanical equipment; street lighting, electrical distribution or signal systems; irrigation systems; buildings; or other similar work, it may be desirable for the Engineer to have the Contractor operate and test the work for a period of time after final inspection but prior to the determining that the work is physically complete. Whenever items of work are listed in the Contract Provisions for operational testing, they shall be fully tested under operating conditions for the time period specified to ensure their acceptability. During and following the test period, the Contractor shall correct any items of workmanship, materials, or equipment which prove faulty, or that are not in first class operating condition. Equipment, electrical controls, meters, or other devices and equipment to be tested during this period shall be tested under the observation of the Engineer, so the Engineer may determine their suitability for the purpose for which they were installed. The Work is not considered physically complete until testing and corrections have been completed to the satisfaction of the Engineer.

(City Contracts, October 1, 2005 APWA GSP)
Delete the entire section and replace with the following, including subsections:

1-05.11 Final Inspections and Operational Testing

1-05.11(1) Substantial Completion Date

When the Contractor considers the work to be substantially complete, the Contractor shall so notify the Engineer and request the Engineer establish the Substantial Completion Date. The Contractor's request shall list the specific items of work that remain to be completed in order to reach physical completion. The Engineer will schedule an inspection of the work with the Contractor to determine the status of completion. The Engineer may also establish the Substantial Completion Date unilaterally.

If, after this inspection, the Engineer concurs with the Contractor that the work is substantially complete and ready for its intended use, the Engineer, by written notice to the Contractor, will set the Substantial Completion Date. If, after this inspection the Engineer does not consider the work substantially complete and ready for its intended use, the Engineer will, by written notice, so notify the Contractor giving the reasons therefore.

Upon receipt of written notice concurring in or denying substantial completion, whichever is applicable, the Contractor shall pursue vigorously, diligently and without unauthorized interruption, the work necessary to reach Substantial and Physical Completion. The Contractor shall provide the Engineer with a revised schedule indicating when the Contractor expects to reach substantial and physical completion of the work.

The above process shall be repeated until the Engineer establishes the Substantial Completion Date and the Contractor considers the work physically complete and ready for final inspection.

1-05.11(2) Final Inspection and Physical Completion Date

(City Contracts, October 1, 2005 APWA GSP)
When the Contractor considers the work physically complete and ready for final inspection, the Contractor by written notice, shall request the Engineer to schedule a final inspection. The Engineer will set a date for final inspection. The Engineer and the Contractor will then make a final inspection and the Engineer will notify the Contractor in writing of all particulars in which the final inspection reveals the work incomplete or unacceptable. The Contractor shall immediately take such corrective measures as are necessary to remedy the listed deficiencies. Corrective work shall be pursued vigorously, diligently, and without interruption until physical completion of the listed deficiencies. This process will continue until the Engineer is satisfied the listed deficiencies have been corrected.

If action to correct the listed deficiencies is not initiated within 7 days after receipt of the written notice listing the deficiencies, the Engineer may, upon written notice to the Contractor, take whatever steps are necessary to correct those deficiencies pursuant to Section 1-05.7. The Contractor will not be allowed an extension of contract time because of a delay in the performance of the work attributable to the exercise of the Engineer's right hereunder.

Upon correction of all deficiencies, the Engineer will notify the Contractor and the Contracting Agency, in writing, of the date upon which the work was considered physically complete. That date shall constitute the Physical Completion Date of the contract, but shall not imply acceptance of the work or that all the obligations of the Contractor under the contract have been fulfilled.

1-05.11(3) Operational Testing

(City Contracts, October 1, 2005 APWA GSP)
It is the intent of the Contracting Agency to have, at the Physical Completion Date, a complete and operable system. Therefore when the work involves the installation of machinery or other mechanical equipment; street lighting, electrical distribution or signal systems; irrigation systems; buildings; or other similar work, it may be desirable for the Engineer to have the Contractor operate and test the work for a period of time after final inspection but prior to the physical completion date. Whenever items of work are listed in the Contract Provisions for operational testing, they shall be fully tested under operating conditions for the time period specified to ensure their acceptability prior to the Physical Completion Date. During and following the test period, the Contractor shall correct any items of workmanship, materials, or equipment which prove faulty, or that are not in first class operating condition. Equipment, electrical controls, meters, or other devices and equipment to be tested during this period shall be tested under the observation of the Engineer, so the Engineer may determine their suitability for the purpose for which they were installed. The Physical Completion Date cannot be established until testing and corrections have been completed to the satisfaction of the Engineer.

The costs for power, gas, labor, material, supplies, and everything else needed to successfully complete operational testing, shall be included in the unit contract prices related to the system being tested, unless specifically set forth otherwise in the proposal.

Operational and test periods, when required by the Engineer, shall not affect a manufacturer's guaranties or warranties furnished under the terms of the contract.

1-05.12 Final Acceptance

(City Contracts, October 2021 City of Auburn GSP)
Revise the first paragraph to read:

The Contractor must perform all obligations under the Contract before a Completion Date and final acceptance can occur. Failure of the Contractor to perform all the obligations under the Contract shall not bar the Contracting Agency from unilaterally accepting the Contract as provided in Section 1-09.9. Progress estimates or payments shall not be construed as acceptance of any Work under the Contract.

1-05.13 Superintendents, Labor, and Equipment of Contractor

(City Contracts, September 2013 City of Auburn GSP)
Revise the seventh paragraph to read:

Whenever the Contracting Agency evaluates the Contractor's qualifications pursuant to Section 1-02.14, it will take these performance reports into account.

(August 2015 City of Auburn GSP)
Add the following new section:

1-05.14 Cooperation with Other Contractors

1-05.14(1) Cooperation with Others

Should the Engineer determine that a property owner, a utility company or the City has adequate reason to avoid access closure, sewer or water shutoff at the time scheduled, the Contractor shall reschedule their work to meet the new conditions.

(City Contracts, October 1, 2005 APWA GSP)
Add the following new section:

1-05.16 Water and Power

The Contractor shall make necessary arrangements and shall bear the costs for power and water necessary for the performance of the work, unless the contract includes power and water as a pay item, or unless provided for otherwise in these Special Provisions.

(Non-City Contracts, February 2023 City of Auburn GSP)
Add the following new section:

1-05.16 Water and Power

The Contractor shall make necessary arrangements, and shall bear the costs for power and water necessary for the performance of the work.

(January 2023 City of Auburn GSP)
Add the following new section:

1-05.17 Construction Record Drawings

The following requirements are intended to provide the project Contractor with the information necessary to furnish the City with satisfactory Construction Record Drawings:

1. The Contractor shall be responsible for tracking all relevant field changes to the approved construction drawings on a daily basis. These changes shall be clearly identified in red in a comprehensive manner on one set of full-size Plans to be known as the "Construction Record Drawings". The Construction

Record Drawings may be in electronic format (PDF); however, all requirements of this section shall be met.

2. The Construction Record Drawing set shall be used for this purpose alone, shall be kept separate from other Plan sheets, and shall be clearly marked as "Construction Record Drawings". The Construction Record Drawings, either hard copy version or electronic format, shall be accessible on site, and shall be available for review by the Contracting Agency at all times. The Contractor shall bring the hard copy Construction Record Drawings to each progress meeting or bring an accessible electronic version for review when such meetings are included in the Contract.

3. The quality of the Construction Record Drawings, in terms of accuracy, clarity, and completeness, shall be adequate to allow the Contracting Agency to modify the computer-aided drafting (CAD) Contract Drawings and electronic PDF drawings to produce a complete set of Construction As-builts for the Contracting Agency without further investigative effort by the Contracting Agency.

4. The Construction Record Drawings shall identify all existing or abandoned utilities that were encountered during construction that were not shown on the approved construction drawings.

5. The Construction Record Drawing markups shall document all changes in the Work, both concealed and visible. Items that must be shown on the markups include but are not limited to:

    - Actual dimensions, arrangement, and materials used when different than shown in the Plans.
    - Changes made by Change Order or Field Directive.
    - Changes made by the Contractor as approved by the Engineer.
    - Accurate locations of storm drainage, sanitary sewer, water mains and other water appurtenances, structures, conduits, light standards, vaults, width of roadways, sidewalks, landscaping areas, building footprints, channelization and pavement markings, etc. Include pipe invert elevations, top of castings (manholes, inlets, etc.).

The Construction Record Drawings shall identify all deviations from the approved construction drawings as follows:

Sanitary Sewer

Manholes:

- Type/size of structure
- Location to the nearest 1-foot horizontal
- Rim elevations to the nearest 0.1-foot vertical
- Invert elevations to the nearest 0.1-foot vertical
- Pipe sizes to the nearest 1-inch inside diameter

Pipes:

- Type of pipe
- Location to the nearest 1-foot horizontal
- Length between structures to the nearest 1 foot
- Slopes based on invert elevations
- Pipe sizes to the nearest 1-inch inside diameter

Side Sewers:

- Type of pipe
- Location from reference manhole to the nearest 1 foot horizontal and consistent with the TV report
- Location to the nearest 1-foot horizontal
- Length between structures to the nearest 1 foot
- Slopes based on the constructed invert elevations
- Invert elevations at right-of-way lines to the nearest 0.5-feet vertical

Storm Drainage

Manholes/Catch Basins:

- Type/size of structure
- Location to the nearest 1-foot horizontal
- Rim elevations to the nearest 0.1-foot vertical
- Invert elevations to the nearest 0.1-foot vertical
- Pipe sizes to the nearest 1-inch inside diameter

Pipes:

- Type of pipe
- Location to the nearest 1-foot horizontal
- Length between structures to the nearest 1-foot
- Slopes based on the constructed invert elevations
- Pipe sizes to the nearest 1-inch inside diameter

Water

Pipes:

- Type of pipe and joints
- Deflection of bends to the nearest 1 degree
- Location to the nearest 1-foot horizontal
- Location to the nearest 0.5-foot vertical between valves at 50-foot stations and intersection with other utilities
- Length between valves to the nearest 1 foot
- Pipe sizes to the nearest 1-inch inside diameter
- Valves, Hydrants, Blowoffs, Air Vacs, and PRV's:

- Type of facility
- Location to the nearest 1-foot horizontal

Water Meters and Services:

- Type of service material
- Location of service line to the nearest 1-foot horizontal
- Meter location to the nearest 1-foot horizontal
- Meter sizes to the nearest ¼-inch in diameter

Streets

Public Streets:

- Centerline elevations to the nearest 0.1-foot vertical at 100-foot stations
- Centerline slopes and vertical curve data based on the constructed centerline elevations
- Gutterline elevations to the nearest 0.1-foot vertical (if not a standard crown section)
- Gutterline slopes and vertical curve data based on the constructed gutterline elevations (if not a standard crown section)

Driveway and Sidewalk:

- Type of driveway (commercial or residential section)
- Centerline driveway location to the nearest 1-foot horizontal
- Driveway width to the nearest 1-foot horizontal
- Sidewalk width to the nearest 1-foot horizontal
- Curb ramp (steepest grade to the nearest 0.1% of the ramp, wings, and landing), (indication if curb ramp has associated Maximum Extents Feasible (MEF) documentation with date of MEF approval)

Channelization:

- Type of buttons, reflectors, and curbs
- General layout location to the nearest 1-foot horizontal

Signing:

- Type of signs
- Location of signs to the nearest 1-foot horizontal

Illumination:

- Location of luminaries, junction boxes and service cabinets to the nearest 1-foot horizontal
- Power meter number and address
- Fixture information (wattage, model number, AMI radio number)
- Davit arm length

Signalization:

- Location of signal poles, junction boxes, service cabinets, and controllers to the nearest 1-foot horizontal
- Power meter number and address

6. At the time the Contractor transmits the comprehensive redline Construction Record Drawings to the City, they shall certify that said drawings are in conformance to the above-referenced requirements and are an accurate depiction of built conditions;

7. The City shall receive and approve the Contractor's certified " Construction Record Drawings" as specified herein prior to achieving physical completion.

These Construction Record Drawings shall be kept current during the course of construction by the Contractor and be available for review upon request by the Engineer. The Contractor shall certify on the Construction Record Drawings that said drawings are an accurate depiction of built conditions, and in conformance with the requirements detailed above. The Contractor shall submit an electronic copy (PDF) of the final Construction Record Drawings to the Contracting Agency.

(City Contracts, January 2023 City of Auburn GSP)
Supplement this section with the following:

Contracting Agency acceptance of the Construction Record Drawings is one of the requirements for achieving Physical Completion.

Payment will be made for each of the following Bid items that are included in the Proposal:

"Construction Record Drawings (Minimum Bid $_____)", Lump Sum

Payment for this item will be made on a prorated monthly basis for work completed in accordance with this section up to 75% of the lump sum bid. The final 25% of the lump sum item will be paid upon submittal and approval of the completed Construction Record Drawings set prepared in conformance with these Special Provisions.

A minimum bid amount has been entered in the Bid Proposal for this item.

1-06 Control of Material

1-06.1 Approval of Materials Prior to Use

(City Contracts, October 2021 City of Auburn GSP)
Section 1-06.1 is supplemented with the following:

For each proposed material that is required to be submitted for approval using either the QPL or RAM process identified in Section 9-38.1(2) (Request for Submittal Approval (RSA) Form Instructions) the Contractor will be allowed to submit for approval two materials per material type at no cost. Additional materials may be submitted for approval and will be processed at a cost of $150.00 per material submitted by QPL submittal and $500.00 per material submitted by RAM. All costs for the processing additional materials will be deducted from

monies due or that may come due to the Contractor. Subject to a request by the Contractor and a determination by the Engineer the costs for processing may be waived.

1-06.1(2) Request for Approval of Material (RAM)

(February 2019 City of Auburn GSP)
The second sentence of the first paragraph is revised to read:

The RAM shall be prepared by the Contractor in accordance with the instructions identified in Section 9-38.1(2) (Request for Submittal Approval (RSA) Form Instructions) and be submitted to the Engineer for approval before the material is incorporated into the Work.

1-06.6 Recycled Materials

(City Contracts, January 4, 2016 APWA GSP)
Delete this section, including its subsections, and replace it with the following:

The Contractor shall make their best effort to utilize recycled materials in the construction of the project. Approval of such material use shall be as detailed elsewhere in the Standard Specifications.

Prior to Physical Completion the Contractor shall report the quantity of recycled materials that were utilized in the construction of the project for each of the items listed in Section 9-03.21. The report shall include hot mix asphalt, recycled concrete aggregate, recycled glass, steel furnace slag and other recycled materials (e.g. utilization of on-site material and aggregates from concrete returned to the supplier). The Contractor's report shall be provided on DOT form 350-075 Recycled Materials Reporting.

1-07 Legal Relations and Responsibilities to the Public

1-07.1 Laws to be Observed

(October 1, 2005 APWA GSP)
Supplement this section with the following:

In cases of conflict between different safety regulations, the more stringent regulation shall apply.

The Washington State Department of Labor and Industries shall be the sole and paramount administrative agency responsible for the administration of the provisions of the Washington Industrial Safety and Health Act of 1973 (WISHA).

The Contractor shall maintain at the project site office, or other well-known place at the project site, all articles necessary for providing first aid to the injured. The Contractor shall establish, publish, and make known to all employees, procedures for ensuring immediate removal to a hospital, or doctor's care, for persons, including employees, who may have been injured on the project site. Employees should not be permitted to work on the project site before the Contractor has established and made known procedures for removal of injured persons to a hospital or a doctor's care.

The Contractor shall have sole responsibility for the safety, efficiency, and adequacy of the Contractor's plant, appliances, and methods, and for any damage or injury resulting from their failure, or improper maintenance, use, or operation. The Contractor shall be solely and completely responsible for the conditions of the project site, including safety for all persons and property in the performance of the work. This requirement shall apply continuously, and not be limited to normal working hours. The required or implied duty of the Engineer to

conduct construction review of the Contractor's performance does not, and shall not, be intended to include review and adequacy of the Contractor's safety measures in, on, or near the project site.

1-07.2 State Taxes

(City Contracts, June 27, 2011 APWA GSP)
Delete this Section, including its sub-sections, in its entirety and replace it with the following:

1-07.2 State Taxes

The Washington State Department of Revenue has issued special rules on the State sales tax. Section 1-07.2(1) through 1-07.2(3) are meant to clarify those rules. The Contractor should contact the Washington State Department of Revenue for answers to questions in this area. The Contracting Agency will not adjust its payment if the Contractor bases a bid on a misunderstood tax liability.

The Contractor shall include all Contractor-paid taxes in the unit bid prices or other contract amounts. In some cases, however, state retail sales tax will not be included. Section 1-07.2(2) describes this exception.

The Contracting Agency will pay the retained percentage (or release the Contract Bond if a FHWA-funded Project) only if the Contractor has obtained from the Washington State Department of Revenue a certificate showing that all contract-related taxes have been paid (RCW 60.28.051). The Contracting Agency may deduct from its payments to the Contractor any amount the Contractor may owe the Washington State Department of Revenue, whether the amount owed relates to this contract or not. Any amount so deducted will be paid into the proper State fund.

1-07.2(1) State Sales Tax – Rule 171

WAC 458-20-171, and its related rules, apply to building, repairing, or improving streets, roads, etc., which are owned by a municipal corporation, or political subdivision of the state, or by the United States, and which are used primarily for foot or vehicular traffic. This includes storm or combined sewer systems within and included as a part of the street or road drainage system and power lines when such are part of the roadway lighting system. For work performed in such cases, the Contractor shall include Washington State Retail Sales Taxes in the various unit bid item prices, or other contract amounts, including those that the Contractor pays on the purchase of the materials, equipment, or supplies used or consumed in doing the work.

1-07.2(2) State Sales Tax – Rule 170

WAC 458-20-170, and its related rules, apply to the constructing and repairing of new or existing buildings, or other structures, upon real property. This includes, but is not limited to, the construction of streets, roads, highways, etc., owned by the state of Washington; water mains and their appurtenances; sanitary sewers and sewage disposal systems unless such sewers and disposal systems are within, and a part of, a street or road drainage system; telephone, telegraph, electrical power distribution lines, or other conduits or lines in or above streets or roads, unless such power lines become a part of a street or road lighting system; and installing or attaching of any article of tangible personal property in or to real property, whether or not such personal property becomes a part of the realty by virtue of installation.

For work performed in such cases, the Contractor shall collect from the Contracting Agency, retail sales tax on the full contract price. The Contracting Agency will automatically add this

sales tax to each payment to the Contractor. For this reason, the Contractor shall not include the retail sales tax in the unit bid item prices, or in any other contract amount subject to Rule 170, with the following exception.

Exception: The Contracting Agency will not add in sales tax for a payment the Contractor or a subcontractor makes on the purchase or rental of tools, machinery, equipment, or consumable supplies not integrated into the project. Such sales taxes shall be included in the unit bid item prices or in any other contract amount.

1-07.2(3) Services

The Contractor shall not collect retail sales tax from the Contracting Agency on any contract wholly for professional or other services (as defined in Washington State Department of Revenue Rules 138 and 244).

(January 2023 City of Auburn GSP)
Supplement this section with the following:

1-07.2(4) Location Code Number

The Location Code Number for projects located in King County is 1702, and for projects in Pierce County is 2724.

1-07.5 Environmental Regulations

(October 2021 City of Auburn GSP)
Add the following new subsection:

1-07.5(8) City of Auburn Requirements

The following list represents a portion of City of Auburn Code requirements dealing with the preservation of public natural resources that affect or are affected by the proposed work. Copies of applicable code are available in the City Clerk's office at City Hall, 25 West Main Street, Auburn, Washington 98001. The City recommends that bidders review such materials before submitting sealed proposals.

City of Auburn Code – Chapter 8.28: Defines general noise nuisances prohibited in the City of Auburn.

City of Auburn Code – Titles 14, 16, 17, 18: Reviews types of permits required for grading, landfills, mining, excavation, utility extension, building and all associated permits. Requirements of City Code and the most current edition of the Uniform Building Code adopted by the City apply in all cases. Permit applications are reviewed by the Planning Department, Building Division and/or Engineering Division.

City of Auburn Code – Chapter 18.62: Permitting required for all mine-related activities (including asphalt or concrete batching, rock crushing, and transportation to and from a mine). Permit applications are reviewed by the Planning Department.

1-07.6 Permits and Licenses

(June 2022 City of Auburn GSP)
The first sentence of the first paragraph is revised to read:

The Contractor shall become familiar with all permits and licenses obtained or to be obtained and shall be responsible for and ensure that all their requirements are met.

(City Contracts, January 2023 City of Auburn GSP)
Supplement this section with the following:

All required permits and licenses for this project shall be obtained and paid for by the Contractor. The cost associated with obtaining any permit(s) shall be included in the unit bid item prices.

(February 2023 City of Auburn GSP)
Supplement this section with the following:

Except as may be provided otherwise in the Contract, if the Contractor wishes to utilize private property for a construction staging yard, the Contractor may be required to obtain a Temporary Use Permit and other permits as may be applicable, for use of the property for those purposes.

1-07.11 Requirements for Nondiscrimination

1-07.11(2) Contractual Requirements

(December 2016 City of Auburn GSP)
Supplement this section with the following:

All contractors, subcontractors and vendors engaged in business with the City of Auburn shall comply with the following guidelines:

> All contractors, subcontractors and vendors who have 50 or more employees and have contracts with the City of Auburn totaling more than $50,000 annually shall comply with the provisions of Executive Order 11246, as amended, the implementing regulations of 41 CFR Chapter 60, and all other related federal and state laws.
>
> The City can provide language pertaining to its non-discrimination policy on purchase orders, contracts and other relevant information.

The City will not knowingly do business with any bidder, contractor, subcontractor, or vendor whose employment practices are discriminatory and not in compliance with applicable laws and regulations. The City reserves the right to determine the Contractor's, Subcontractor's, or Vendor's normal employment practices, and will take whatever action it considers appropriate should discriminatory employment practices be discovered.

1-07.13 Contractor's Responsibility for Work

1-07.13(2) Relief of Responsibility for Completed Work

(City Contracts, March 2018 City of Auburn GSP)
This section is deleted and replaced with the following:

Unless stated otherwise in the Contract, the Contractor shall bear the risk of loss or damage for all finished or partially finished work until Final Payment of the entire Contract. This includes all vandalism, theft, and acts of God or nature.

1-07.15 Temporary Water Pollution Prevention

(October 2021 City of Auburn GSP)
Supplement this section with the following:

The Contractor shall implement erosion and sediment control (ESC) measures as necessary to prevent erosion and to stop sediment-laden water from leaving the site and entering the storm drain system. Measures shall be in accordance with, and conform to, the City of Auburn Surface Water Management Manual and Section 8-01 (Erosion Control and Water Pollution Control) of the Contract Specifications.

1-07.16 Protection and Restoration of Property

(December 2016 City of Auburn GSP)
Supplement this section with the following:

The Contractor shall not trespass upon private property and shall be responsible for all injury or damage to persons or property, directly or indirectly, resulting from the Contractor's operations in completing this work. The Contractor shall comply with the laws and regulations of the City of Auburn, County, State, and Federal governments relating to the safety of persons and property and will be held responsible for, and required to make good, all injury and damage to persons or property caused by the Contractor's operations.

Sprinkler irrigation systems that encroach within the limits of improvements shall be modified as necessary to ensure operation "equal or better than" the original condition upon completion of the improvements. This work will include, but not be limited to, cutting and capping existing pipe, relocating existing risers and sprinkler heads, new pipe heads and connections, and testing of the system.

The Contractor shall give a minimum of 7 working days prior written notification to the owners of any ditches, landscaping, irrigation lines and appurtenances that interfere with the work. The Contractor shall be liable for any damage to irrigation facilities by the Contractor's operations and shall restore such damaged facilities to "equal or better than" original condition.

Asphalt concrete pavement or bituminous surfacing outside the project area that is disturbed by the work shall be restored to its original condition. Asphalt pavement restoration shall comply with the provisions of Section 5-02 (Bituminous Surface Treatment) and 5-04 (Hot Mix Asphalt) of the Contract Specifications.

Existing cement concrete curb, gutter and sidewalk structures disturbed by the Contractor's operations shall be replaced to match existing. Cement concrete shall be Class 3000 with entrained air in conformance with Section 6-02 (Concrete Structure) of the Contract Specifications.

Existing street shoulders disturbed by the Contractor's operation shall be resurfaced with 6 inches of compacted Gravel Borrow and 2 inches of compacted Crushed Surfacing Top Course sloped ½ inches per foot away from the paved street. Street shoulder restoration shall be in conformance with Section 4-04.3(11) (Shoulder Ballast) of the Contract Specifications.

All other surfaces, mailboxes, fences, signs, lawn irrigation systems, etc., disturbed by the project, shall be promptly replaced or relocated to original or better condition. Gravel driveways disturbed by the work shall be resurfaced with a compacted 2-inch layer of Crushed Surfacing Top Course. All ditches shall be reconstructed as indicated on the drawings.

The Contractor shall restore all disturbed landscaping in conformance with Section 8-02 (Roadside Restoration) of the Contract Specifications.

1-07.16(1) Private/Public Property

(December 2022 City of Auburn GSP)
Add the following new section:

1-07.16(1)D Protection and Restoration of Existing Markers and Monuments

All existing survey monuments and property corner markers shall be protected from movement by the Contractor. RCW 58.24.040(8) and WAC 332-120 and their rules shall apply to all existing survey markers and/or monuments that must be removed for construction purposes. When survey markers and/or monuments are disturbed, they are to be referenced by survey ties and then replaced by the Contractor. All existing property corner markers disturbed or removed by the Contractor's operations which, in the opinion of the Engineer, were not required to be removed for construction purposes shall be replaced, at the Contractor's own expense, by a Professional Land Surveyor registered in the State of Washington. This includes the City of Auburn benchmark system. Any damaged monuments must be reset to second order, first class specifications.

1-07.16(2) Vegetation Protection and Restoration

(August 2, 2010 WSDOT GSP)
Section 1-07.16(2) is supplemented with the following:

Vegetation and soil protection zones for trees shall extend out from the trunk to a distance of 1 foot radius for each inch of trunk diameter at breast height.

Vegetation and soil protection zones for shrubs shall extend out from the stems at ground level to twice the radius of the shrub.

Vegetation and soil protection zones for herbaceous vegetation shall extend to encompass the diameter of the plant as measured from the outer edge of the plant.

1-07.17 Utilities and Similar Facilities

(June 2018 City of Auburn GSP)
Supplement this section with the following.

For the purpose of determining vertical clearance requirements for overhead power and communication lines, all public and private streets within the City of Auburn shall be considered conventional highways and are subject to the requirements stated in WAC 468-34-290 unless otherwise determined by the City Engineer.

(February 2023 City of Auburn GSP)
Supplement this section with the following.

The Contractor is responsible for determining the exact location of existing underground utilities. The Contract Plans may show locations of various known existing above ground and underground amenities and obstructions. If shown, the location of known existing underground utilities are indicated based on available information and may not be exact.

A list of utilities and known contact persons will be available at the pre-construction conference for the Contractor's convenience.

The Contractor is responsible for any breakage of utilities or services resulting from their operations.

The Contractor is responsible for the complete repair (including materials) of any City-owned utility damaged by the work (including water services), whether or not shown on the Contract Plans. Copper water service lines, if damaged, must be replaced in kind by one continuous service line from the water main to the meter. Splicing will not be permitted. The Contractor shall repair any damage caused by broken water mains or services. The Contractor shall have sufficient materials and qualified personnel available to effect immediate repairs of water and sewer lines that may be damaged by the work.

The Contractor shall be responsible for securing private locate services where One-Number Locator Services do not cover (such as property outside the public right of way).

1-07.17(1) Utility Construction, Removal, or Relocation by the Contractor

(City Contracts, April 2017 City of Auburn GSP)
Supplement this section with the following:

The temporary removal, replacement, bracing or holding of any utility or structure, including power and telephone poles, required to accomplish the work, shall be included in the contract price(s) for the bid item(s) involved. Raising, lowering or horizontal relocation of existing water services not requiring additional material, where such relocation is required to accommodate other work, shall be included in the contract price(s) for the bid item(s) involved.

(February 2023 City of Auburn GSP)
Add the following new section:

1-07.17(1)A Disruptions to City Water Services

All water service shutdowns caused by construction activities shall be requested by the Contractor a minimum of 4 working days in advance of the proposed shutdown, shall be approved by the City a minimum of 2 working days before the shutdown, and shall be performed by City Water Utility staff. The Contractor shall schedule Work such that all water service disruptions are limited to 4 hours. The City does not guarantee a complete dry system following any water shutdown.

(City Contracts, February 2023 City of Auburn GSP)
Supplement this section with the following:

All costs for dewatering following a water shutdown shall be included in the unit bid prices of the work involved.

(November 2019 City of Auburn GSP)
Add the following new section:

1-07.17(1)B Utility Potholing

1-07.17(1)B(1)General

The Contractor shall physically locate, uncover, and document the location of underground utilities at the locations identified in the plans. The purpose of utility potholing is to allow sufficient time ahead of pipe laying operations to identify underground conflicts, allow ample time to make minor adjustments in pipe grade and/or alignment, and generally facilitate the Contractor's work schedule.

The Contractor shall submit a potholing plan/schedule to the Engineer for review and/or approval per Section 9-38 (Submittal Approval) prior to commencing potholing or pipe laying operations. The plan shall show the proposed location and clearly state the purpose for each proposed potholing location. The Engineer may add or delete potholing locations.

In no way shall the work described under Utility Potholing relieve the Contractor of any of the responsibilities described in Section 1-07.17 (Utilities and Similar Facilities) of the Standard Specifications and these Special Provisions.

(City Contracts, February 2017 City of Auburn GSP)
Add the following new section:

1-07.17(1)B(2)Measurement

(February 2023 City of Auburn GSP)
"Utility Potholing" will be measured per each pothole excavated that meets all of the following conditions:

1. The pothole was excavated at least 96 hours ahead of pipe laying or other contract work relevant to the pothole.
2. The pothole is shown on the pothole plan submittal approved by the Engineer.
3. The pothole data, including soil type, utility material and size, horizontal location within 1/2 foot, and vertical location within 1/10 foot, is provided in writing to the Engineer at least 72 hours ahead of pipe laying or other contract work relevant to the pothole.
4. Pothole is not within 10 feet of any other pothole. No adjustment shall be made for pothole depth or size. No measurement will be made for potholes that do not meet the above criteria.

(City Contracts, January 2017 City of Auburn GSP)
Add the following new section:

1-07.17(1)B(3)Payment

Payment will be made for each of the following Bid items that are included in the Proposal:

"Utility Potholing", Per Each

Payment for "Utility Potholing" will include all costs for locating, uncovering, and documenting the underground location of utilities, as well as all subsurface and surface restoration measures.

1-07.18 Public Liability and Property Damage Insurance

Delete this section in its entirety, and replace it with the following:

1-07.18 Insurance

(Non-City Contracts, February 2024City of Auburn GSP)
The Contractor will procure and maintain for the duration of this Agreement, insurance against claims for injuries to persons or damages to property which may arise from, or in connection with the performance of work by the Contractor, the Contractor's agents, representatives, employees, and subcontractors. The Contractor is responsible for the cost of insurance.

The Contractor's maintenance of insurance, its scope of coverage, and limits as required herein, will not be construed to limit the liability of the Contractor to the coverage provided by the insurance, or otherwise limit the City's recourse to any remedy available at law or in equity.

The Contractor's required insurance will be of the types and coverage as stated below:

A. Automobile Liability insurance covering all owned, non-owned, hired and leased vehicles. Coverage will be at least as broad as Insurance Services Office (ISO) form CA 00 01. Automobile Liability insurance will include a minimum combined single limit for bodily injury and property damage of $1,000,000 per accident.

B. Commercial General Liability insurance will be at least as broad as ISO occurrence form CG 00 01 and will cover liability arising from premises, operations, stop gap liability, independent contractors, products-completed operations, personal injury and advertising injury, and liability assumed under an insured contract. The Commercial General Liability insurance will be endorsed to provide a per project general aggregate limit, using ISO form CG 25 03 05 09 or an equivalent endorsement. There will be no exclusion for liability arising from explosion, collapse, or underground property damage. The City will be named as an additional insured under the Contractor's Commercial General Liability insurance policy with respect to the work performed for the City using ISO Additional Insured endorsement CG 20 10 10 01 and Additional Insured-Completed Operations endorsement CG 20 37 10 01, or substitute endorsements providing at least as broad coverage. The limits for the Commercial General Liability insurance policy will be no less than $1,000,000 each occurrence, $2,000,000 general aggregate, and a $2,000,000 products- completed operations aggregate limit.

C. Workers' Compensation coverage as required by the Industrial Insurance laws of the State of Washington.

D. Builders Risk insurance covering interests of the City, the Contractor, Subcontractors, and Sub-subcontractors in the work. Builders Risk insurance is only required for Work that includes public buildings or public structures with an estimated value of $1,000,000 or more, and as determined to be required by the City Engineer. Builders Risk insurance will be on a special perils policy form and will insure against the perils of fire and extended coverage and physical loss or damage including flood, earthquake, theft, vandalism, malicious mischief, and collapse. The Builders Risk insurance will include coverage for temporary buildings, debris removal, and damage to materials in transit or stored off-site. This Builders Risk insurance covering the work will have a deductible of $5,000 for each occurrence, which will be the responsibility of the Contractor. Higher deductibles for flood and earthquake perils may be accepted by the City based on a written request by the Contractor and written acceptance by the City. Any increased deductibles accepted by the City will remain the responsibility of the Contractor. The Builders Risk insurance will be maintained until the City has granted substantial completion of the project. Builder's Risk Insurance will be written in the amount of the completed value of the project with no coinsurance provisions.

The Contractor's Automobile Liability, Commercial General Liability, and Builders Risk (if required) insurance policies will be primary insurance as respect to the City. Any Insurance,

self-insurance, or self-insured pool coverage maintained by the City will be in excess of the Contractor's insurance.

The Contractor will assume full responsibility for all loss or damage from any cause whatsoever to any tools, Contractor's employee owned tools, machinery, equipment, or motor vehicles owned or rented by the Contractor or the Contractor's agents, suppliers, contractors, or subcontractors as well as to any temporary structures, scaffolding, and protective fences.

The Contractor and the City waive all rights against each other, any of their Subcontractors, Sub-subcontractors, agents, and employees, each of the other, for damages caused by fire or other perils to the extent covered by Builders Risk insurance or other property insurance obtained pursuant to the Insurance Requirements Section of this Contract or other property insurance applicable to the work.

Insurance is to be placed with insurers with a current A.M. Best rating of not less than A: VII.

Contractor will furnish the City with original certificates and a copy of the amendatory endorsements, including but not necessarily limited to the additional insured endorsements, evidencing the Automobile Liability and Commercial General Liability insurance before beginning work. Before any exposure to loss may occur, the Contractor will file with the City a copy of the Builders Risk insurance policy that includes all applicable conditions, exclusions, definitions, terms, and endorsements related to this project. The City may request that the Contractor furnish certified copies of all required insurance policies, including endorsements, required in this contract and evidence of all subcontractors' coverage.

The Contractor will cause each and every Subcontractor to provide insurance coverage that complies with all applicable requirements of the Contractor-provided insurance, except the Contractor will have sole responsibility for determining the limits of coverage required to be obtained by Subcontractors. The Contractor will ensure that the City is an additional insured on every Subcontractor's Commercial General liability insurance policy using an endorsement at least as broad as ISO Additional Insured endorsement CG 20 38 04 13.

The Contractor will provide the City and all Additional Insureds for this work with written notice of any policy cancellation within two business days of their receipt of that notice.

Should the Contractor fail to maintain the insurance as required the City may, after giving five business days' notice to the Contractor, take actions to protect the interests of the City, which may include, but are not limited to one or more of the following: order suspension of all construction activities, revoke permits issued to the Contractor and its contractors, pursue remedy through the Contractor's surety, and terminate the FAC Agreement associated with the work (if applicable).

1-07.18 Insurance

(City Contracts, January 4, 2024 APWA GSP)

1-07.18(1) General Requirements

A. The Contractor shall procure and maintain the insurance described in all subsections of section 1-07.18 of these Special Provisions, from insurers with a current A. M. Best rating of not less than A-: VII and licensed to do business in the State of Washington. The Contracting Agency reserves the right to approve or reject the insurance provided, based on the insurer's financial condition.

B. The Contractor shall keep this insurance in force without interruption from the commencement of the Contractor's Work through the term of the Contract and for thirty (30) days after the Physical Completion date, unless otherwise indicated below.

C. If any insurance policy is written on a claims-made form, its retroactive date, and that of all subsequent renewals, shall be no later than the effective date of this Contract. The policy shall state that coverage is claims made and state the retroactive date. Claims-made form coverage shall be maintained by the Contractor for a minimum of 36 months following the Completion Date or earlier termination of this Contract, and the Contractor shall annually provide the Contracting Agency with proof of renewal. If renewal of the claims made form of coverage becomes unavailable, or economically prohibitive, the Contractor shall purchase an extended reporting period ("tail") or execute another form of guarantee acceptable to the Contracting Agency to assure financial responsibility for liability for services performed.

D. The Contractor's Automobile Liability, Commercial General Liability and Excess or Umbrella Liability insurance policies shall be primary and non-contributory insurance as respects the Contracting Agency's insurance, self-insurance, or self-insured pool coverage. Any insurance, self-insurance, or self-insured pool coverage maintained by the Contracting Agency shall be excess of the Contractor's insurance and shall not contribute with it.

E. The Contractor shall provide the Contracting Agency and all additional insureds with written notice of any policy cancellation, within two business days of their receipt of such notice.

F. The Contractor shall not begin work under the Contract until the required insurance has been obtained and approved by the Contracting Agency

G. Failure on the part of the Contractor to maintain the insurance as required shall constitute a material breach of contract, upon which the Contracting Agency may, after giving five business days' notice to the Contractor to correct the breach, immediately terminate the Contract or, at its discretion, procure or renew such insurance and pay any and all premiums in connection therewith, with any sums so expended to be repaid to the Contracting Agency on demand, or at the sole discretion of the Contracting Agency, offset against funds due the Contractor from the Contracting Agency.

H. All costs for insurance shall be incidental to and included in the unit or lump sum prices of the Contract and no additional payment will be made.

I. Under no circumstances shall a wrap up policy be obtained, for either initiating or maintaining coverage, to satisfy insurance requirements for any policy required under this Section. A **"**wrap up policy**"** is defined as an insurance agreement or arrangement under which all the parties working on a specified or designated project are insured under one policy for liability arising out of that specified or designated project**.**

1-07.18(2) Additional Insured

All insurance policies, with the exception of Workers Compensation, and of Professional Liability and Builder's Risk (if required by this Contract) shall name the following listed entities as additional insured(s) using the forms or endorsements required herein:

- the Contracting Agency and its officers, elected officials, employees, agents, and volunteers

The above-listed entities shall be additional insured(s) for the full available limits of liability maintained by the Contractor, irrespective of whether such limits maintained by the Contractor are greater than those required by this Contract, and irrespective of whether the Certificate of Insurance provided by the Contractor pursuant to 1-07.18(4) describes limits lower than those maintained by the Contractor.

For Commercial General Liability insurance coverage, the required additional insured endorsements shall be at least as broad as ISO forms CG 20 10 10 01 for ongoing operations and CG 20 37 10 01 for completed operations.

1-07.18(3) Subcontractors

The Contractor shall cause each subcontractor of every tier to provide insurance coverage that complies with all applicable requirements of the Contractor-provided insurance as set forth herein, except the Contractor shall have sole responsibility for determining the limits of coverage required to be obtained by subcontractors.

The Contractor shall ensure that all subcontractors of every tier add all entities listed in 1-07.18(2) as additional insureds, and provide proof of such on the policies as required by that section as detailed in 1-07.18(2) using an endorsement as least as broad as ISO CG 20 10 10 01 for ongoing operations and CG 20 37 10 01 for completed operations.

Upon request by the Contracting Agency, the Contractor shall forward to the Contracting Agency evidence of insurance and copies of the additional insured endorsements of each subcontractor of every tier as required in 1-07.18(4) Verification of Coverage.

1-07.18(4) Verification of Coverage

The Contractor shall deliver to the Contracting Agency a Certificate(s) of Insurance and endorsements for each policy of insurance meeting the requirements set forth herein when the Contractor delivers the signed Contract for the work. Failure of Contracting Agency to demand such verification of coverage with these insurance requirements or failure of Contracting Agency to identify a deficiency from the insurance documentation provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

Verification of coverage shall include:

1. An ACORD certificate or a form determined by the Contracting Agency to be equivalent.
2. Copies of all endorsements naming Contracting Agency and all other entities listed in 1-07.18(2) as additional insured(s), showing the policy number. The Contractor may submit a copy of any blanket additional insured clause from its policies instead of a separate endorsement.
3. Any other amendatory endorsements to show the coverage required herein.
4. A notation of coverage enhancements on the Certificate of Insurance shall not satisfy these requirements – actual endorsements must be submitted.

Upon request by the Contracting Agency, the Contractor shall forward to the Contracting Agency a full and certified copy of the insurance policy(s). If Builders Risk insurance is

required on this Project, a full and certified copy of that policy is required when the Contractor delivers the signed Contract for the work.

1-07.18(5) Coverages and Limits

The insurance shall provide the minimum coverages and limits set forth below. Contractor's maintenance of insurance, its scope of coverage, and limits as required herein shall not be construed to limit the liability of the Contractor to the coverage provided by such insurance, or otherwise limit the Contracting Agency's recourse to any remedy available at law or in equity.

All deductibles and self-insured retentions must be disclosed and are subject to approval by the Contracting Agency. The cost of any claim payments falling within the deductible or self-insured retention shall be the responsibility of the Contractor. In the event an additional insured incurs a liability subject to any policy's deductibles or self-insured retention, said deductibles or self-insured retention shall be the responsibility of the Contractor.

1-07.18(5)A Commercial General Liability

Commercial General Liability insurance shall be written on coverage forms at least as broad as ISO occurrence form CG 00 01, including but not limited to liability arising from premises, operations, stop gap liability, independent contractors, products-completed operations, personal and advertising injury, and liability assumed under an insured contract. There shall be no exclusion for liability arising from explosion, collapse or underground property damage.

The Commercial General Liability insurance shall be endorsed to provide a per project general aggregate limit, using ISO form CG 25 03 05 09 or an equivalent endorsement.

Contractor shall maintain Commercial General Liability Insurance arising out of the Contractor's completed operations for at least three years following Substantial Completion of the Work.

Such policy must provide the following minimum limits:

$2,000,000	Each Occurrence
$3,000,000	General Aggregate
$3,000,000	Products & Completed Operations Aggregate
$2,000,000	Personal & Advertising Injury each offence
$2,000,000	Stop Gap / Employers' Liability each accident

1-07.18(5)B Automobile Liability

Automobile Liability shall cover owned, non-owned, hired, and leased vehicles; and shall be written on a coverage form at least as broad as ISO form CA 00 01. If the work involves the transport of pollutants, the automobile liability policy shall include MCS 90 and CA 99 48 endorsements.

Such policy must provide the following minimum limit:

$1,000,000	Combined single limit each accident

1-07.18(5)C Workers' Compensation

The Contractor shall comply with Workers' Compensation coverage as required by the Industrial Insurance laws of the State of Washington.

1-07.18(5)D Excess or Umbrella Liability

(January 4, 2016 APWA GSP)

The Contractor shall provide Excess or Umbrella Liability insurance with limits of not less than $1 million each occurrence and annual aggregate. This excess or umbrella liability coverage shall be excess over and as least as broad in coverage as the Contractor's Commercial General and Auto Liability insurance

All entities listed under 1-07.18(2) of these Special Provisions shall be named as additional insureds on the Contractor's Excess or Umbrella Liability insurance policy.

This requirement may be satisfied instead through the Contractor's primary Commercial General and Automobile Liability coverages, or any combination thereof that achieves the overall required limits of insurance.

1-07.18(5)E LHWCA Insurance

(January 4, 2016 APWA GSP)

If this Contract involves work on or adjacent to Navigable Waters of the United States, the Contractor shall procure and maintain insurance coverage in compliance with the statutory requirements of the U.S. Longshore and Harbor Workers' Compensation Act (LHWCA).

Such policy must provide the following minimum limits:

$1,000,000	Bodily Injury by Accident – each accident
$1,000,000	Bodily Injury by Disease – each employee
$1,000,000	Bodily Injury by Disease – policy limits

1-07.18(5)J Pollution Liability

(January 4, 2016 APWA GSP)

The Contractor shall provide a Contractors Pollution Liability policy, providing coverage for claims involving bodily injury, property damage (including loss of use of tangible property that has not been physically injured), cleanup costs, remediation, disposal or other handling of pollutants, including costs and expenses incurred in the investigation, defense, or settlement of claims, arising out of any one or more of the following:

1. Contractor's operations related to this project.
2. Remediation, abatement, repair, maintenance or other work with lead-based paint or materials containing asbestos.
3. Transportation of hazardous materials away from any site related to this project.

All entities listed under 1-07.18(2) of these Special Provisions shall be named by endorsement as additional insureds on the Contractors Pollution Liability insurance policy.

Such Pollution Liability policy shall provide the following minimum limits:

$1,000,000 each loss and $2,000,000 annual aggregate

1-07.23 Public Convenience and Safety

(January 2023 City of Auburn GSP)

Supplement this section with the following:

The use of any project area by vehicles or pedestrians before project acceptance is not to be construed as utilization by the City of Auburn.

1-07.23(1) Construction Under Traffic

(January 2020 City of Auburn GSP)
Supplement this section with the following:

All unattended excavations shall be barricaded at all times.

Failure to provide proper barricading and lighting will be cause for the City to call in a barricading company to install proper barricades and lights and charge the Contractor for all costs incurred.

At the end of each working day, the Contractor shall place temporary patches or steel plates over unfinished portions of trenches crossing traveled ways. Material for temporary patches shall be hot or cold mix asphalt concrete. The cost for temporary patches or steel plates shall be included in the appropriate unit bid prices for the work involved.

Traffic control devices that are in conflict with required construction traffic devices or construction work shall be covered, removed and temporarily stored, or temporarily relocated by the Contractor.

Flagging, signs, and all other traffic control devices shall be in accordance with Section 1-10.3 (Traffic Control Labor, Procedures, and Devices).

Signal downtime will not be allowed Monday thru Friday between the hours of 6:00 AM and 9:00 AM and between 3:00 PM and 6:00 PM.

(October 2021 City of Auburn GSP)
Supplement this section with the following:

Temporary 'Traffic Signal Revision' signs and signal placards installed per Section 1-10.3(3)N (Temporary Signage for Roadway Traffic Revisions) shall remain in place at each site for a minimum of 6 weeks once work at each individual site is complete and the new signal revisions are operational. Once all physical work is complete at each site and all traffic signals have been deemed operational by the Engineer, the Contract will be placed into suspension until such time when the temporary traffic revision signage and placards can be removed.

(February 2023 City of Auburn GSP)
Add the following new section:

1-07.23(1)A Dust and Mud Control and Street Cleaning

The Contractor is responsible for controlling dust and mud within the project limits. All streets outside the project limits used by the Contractor during the execution of this Contract shall be kept clean. The Contractor shall be prepared to use the proper equipment necessary to render the streets free of all mud, debris, and foreign materials. Any damage caused by dust or mud accumulation on the streets and in the storm sewer system shall be the sole responsibility of the Contractor.

The Contractor's cleaning actions must comply with the City of Auburn's Surface Water Management Manual (SWMM). A copy of the City's SWMM manual can be found on the City's website at auburnwa.gov under publications and forms.

The Contractor shall provide for a clean surface on all surfaced roadways upon completion of each day's activities. Equipment required for this operation shall be on the job site or available at all times. Failure to have this equipment on the job site or available may necessitate a shutdown of the project.

(City Contracts, February 2023 City of Auburn GSP)
Supplement this section with the following:

Payment for dust and mud control and street cleaning shall be included in the unit contract prices for the bid items for which the dust, mud control, and street cleaning work is associated with, and no additional compensation will be made, except for "Water" per M gal., if shown as a bid item in the Proposal.

No compensation shall be made to the Contractor to implement additional erosion control measures that are caused by dust and mud control activities.

(February 2023 City of Auburn GSP)
Add the following new section:

1-07.23(1)B Daily Cleanup and Maintenance Items

The Contractor shall clean all roadways, streets and appurtenances, including sidewalks which are open for public use, of all material or debris that has been dropped or otherwise deposited thereon, as a result of Contractor's on- and off-site operations, at the conclusion of each working day, and at such other times as deemed necessary by the Engineer to ensure the safety of the traveling public and to prevent inconvenience to the public and owners of private property adjacent to the project.

If the Engineer determines that roadways, streets, sidewalks, and appurtenances are not properly cleaned to prevent public inconvenience, or the condition of the excavation or disposal sites so warrant, the Contractor shall provide facilities to remove clay or other deposits from tires, between wheels, and outside of truck beds before trucks and other equipment will be allowed to travel over paved streets.

Upon written notice written notice from the Engineer, any violation of the above requirements will be sufficient grounds for the Engineer to order the roadways, streets and appurtenances cleaned or sprinkled by others at the Contractor's costs.

(City Contracts, February 2023 City of Auburn GSP)
Supplement this section with the following:

The City may deduct all costs of such cleaning or sprinkling from any money due, or to become due, to the Contractor.

1-07.23(2) Construction and Maintenance of Detours

(February 2023 City of Auburn GSP)
Supplement this section with the following:

The Contractor shall submit a written procedure to the Engineer for approval per Section 9-38 (Submittal Approval) for routing and maintenance of traffic.

Streets may be closed to through traffic, unless otherwise specified in Section 1-07.23(1)C (Closure Restrictions), with Engineer approval. The Contractor shall obtain written approval from the Engineer at least 15 working days prior to an anticipated street closure. Street closures shall be such that they provide for maximum public safety and public convenience.

They shall be opened to through traffic at such time as the work has been completed, or as the Engineer may direct.

Street closures and detours shall provide for the following:

1. Reasonable access to, and egress from, the properties adjacent to the project at all times.
2. At least one-way traffic on all existing roadways within the project limits during working hours and at the end of each working day provisions for the safe passage of two-way traffic during the non-working hours.
3. If the Contractor requires delays or limited term street closure beyond that provided for herein, the request shall be submitted, in writing, for the approval of the Engineer before the anticipated delay or closure. The delay or closure request shall state the reason, the locations, the time and date, and the duration of the required delay or closure.
4. The Contractor is required, at its own expense, to remove all excess materials, debris, or other obstruction caused by their operation, from the streets or alleys as the work progresses, whether within the project limits or along haul routes. The Contractor shall repair or replace any streets, sidewalks, roads, or culverts damaged by their operations, to the satisfaction of the Engineer and other concerned parties.
5. The Contractor must maintain convenient access for local traffic to driveways, houses, and buildings along the work route. Such access shall be maintained as near as possible to that which existed before construction began. The Contractor shall provide 10 working days advance notice to all property owners and tenants of street and alley closures or other restrictions, which may interfere with their access. When the abutting owners' access across right-of-way lines is to be eliminated and replaced under the Contract by another access, the existing access shall not be closed until the replacement access facility is available.

The Contractor shall be responsible for making detailed notifications of detours and closures as follows:

1. The Contractor shall provide at least 10 working days advance written notification to the local public transportation organization(s), transit service organizations, Auburn School District Transportation Department, Valley Regional Fire Authority Fire Marshal's Office, and Auburn Police Department before the beginning of operations, so that these agencies may reroute their emergency vehicles around the construction zone. If the Fire Authority or Police Department determine that rerouting is not possible, the Contractor shall allow reasonable access through the construction zone at all times.

2. The Contractor shall notify all affected owners and agencies of all closures, detours and traffic interruptions at least 10 working days in advance of such closure. Notification shall be in writing and must include the beginning and ending times and dates of traffic disruption(s), names of streets or locations of alleys to be affected, detour routes, etc. The Contractor shall give the Engineer written certification of all notifications before all traffic disruptions. On large projects requiring extended traffic disruption, the Contractor shall make additional notifications, as conditions require.

(City Contracts, February 2023 City of Auburn GSP)

Supplement this section with the following:

If the Contractor neglects to remove materials or obstructions and return streets, sidewalks, driveways, and roads in suitable condition for traffic within 1 working day after having received written notice from the Engineer, the work may be done by the City of Auburn and the cost thereof charged to the Contractor and deducted from money due, or to become due, to the Contractor.

(City Contracts, August 2021 City of Auburn GSP)
Add the following new section:

1-07.23(4) Payment

Payment for all Contract requirements specified in Section 1-07.23 (Public Convenience and Safety) and subsections thereof, shall be included in the appropriate unit bid prices for the Work involved, unless otherwise specified.

1-07.24 Rights of Way

(City Contracts, September 2016 City of Auburn GSP)
Delete this section and replace it with the following:

Street right-of-way lines, limits of easements, and limits of construction permits are indicated in the Plans. The Contractor's activities shall be confined within these limits, unless arrangements for use of private property are made.

Whenever easements or rights of entry have not been acquired prior to advertising, these areas are so noted on the Plans. The Contractor shall not proceed with any portion of the work in areas where right-of-way, easements or rights of entry have not been acquired until the Engineer certifies to the Contractor that the right of way or easement is available or that the right of entry has been received. If the Contractor is delayed due to acts of omission on the part of the City in obtaining easements, rights of entry or right of way, the Contractor will be entitled to an extension of time. The Contractor agrees that such delay shall not be a breach of contract.

Whenever any of the work is accomplished on or through property other than public right of way, the Contractor shall meet and fulfill all covenants and stipulations of any easement agreements obtained by the City from the owner of the private property. If easement agreements were obtained by the City as part of this project, they are included in the Appendix. Copies of the easement agreements not obtained prior to advertising will be made available to the Contractor once obtained by the City.

The Contractor shall give 48 hours' notice to each property owner prior to entry of each property. This includes entry onto easements and private property where private improvements must be adjusted.

The Contractor shall be responsible for providing, without expense or liability to the City, any additional land and access thereto that the Contractor may desire for temporary construction staging facilities, Contractor's convenience, storage or materials, or other Contractor needs. However, before using any private property, whether adjoining the work or not, the Contractor shall submit to the City a completed "Property Owner Permission for Construction" form. The "Property Owner Permission for Construction" form is available at the City of Auburn Public Works Department. If the Contractor utilizes private property for temporary construction facilities, storage of materials and equipment, employee parking or other Contractor needs, a "Temporary Use Permit" shall be secured from the City of Auburn in accordance with Section 18.46A.070 of the Auburn City Code. The Contractor must file a written release with

the City from all private property owners upon whose property the Contractor's operations has encroached before completion, unless such work was specified in the Contract.

(January 2023 City of Auburn GSP)
Add the following new section:

1-07.29 Haul Routes

Prior to moving any materials or equipment on public streets, the Contractor shall submit a haul route plan to the Engineer for approval per Section 9-38 (Submittal Approval). The plan must be submitted 10 working days prior to hauling. The Engineer must approve the haul route plan before hauling begins.

If the Contractor hauls materials or equipment without an approved haul route plan or not in accordance with an approved haul route, the Contractor may be assessed penalties per Section 1-08.9(1) (Penalties). The assessment of penalties is at the sole discretion of the Engineer.

1-08 Prosecution and Progress

(Non-City Contracts, February 2023 City of Auburn GSP)
Add the following new section:

1-08.0 Preliminary Matters

1-08.0(1) Preconstruction Conference

(Non-City Contracts, December 2019 City of Auburn GSP)
Prior to beginning construction work a preconstruction conference will be scheduled between the Contractor, the Engineer and such other interested parties as may be invited.

The purpose of the preconstruction conference will be:

1. To review the initial progress schedule;
2. To establish a working understanding among the various parties associated or affected by the work;
3. To establish and review procedures for notifications, approvals, submittals, etc.;
4. To establish normal working hours for the work;
5. To review safety standards and traffic control; and
6. To discuss such other related items as may be pertinent to the work.

The Contractor shall prepare and submit electronically 1 working day prior to the preconstruction conference, the following, per Section 9-38 (Submittal Approval):

1. Preliminary progress schedule.
2. SPCC Plan per Section 1-07.15(1) of the Contract Documents.

In addition, the Contractor shall prepare and submit electronically 1 working day prior to the preconstruction conference:

1. Emergency Call List; and
2. A Preliminary Schedule of Submittals

1-08.0(2) Hours of Work

(Non-City Contracts, February 2023 City of Auburn GSP)
Except in the case of emergency or unless otherwise approved by the Engineer, normal working hours shall be from between 7:00 a.m. and 6:00 p.m. Monday through Friday. If the Contractor desires different than the normal working hours stated above, the request

All working hours and days are also subject to local permit and ordinance conditions (such as noise ordinances).

If the Contractor wishes to deviate from the established working hours, the Contractor shall submit a written request to the Engineer for consideration. This request shall state what hours are being requested, and why. Requests shall be submitted for review no later than 5 working days prior to the day(s) the Contractor is requesting to change the hours.

If the requested working hour deviation is approved by the Engineer, it may be revoked at any time the City receives complaints from the public or adjoining property owners regarding the noise from the Contractor's operations.

(City Contracts, December 2021 City of Auburn GSP)
Add the following new section:

1-08.0 Preliminary Matters

1-08.0(1) Preconstruction Conference

Following notice of award of the contract by the City, a preconstruction conference will be scheduled between the Contractor, the Engineer, and such other interested parties as may be invited.

The purpose of the preconstruction conference will be:

1. To review the initial progress schedule;
2. To establish a working understanding among the various parties associated or affected by the work;
3. To establish and review procedures for progress payments, notifications, approvals, submittals, etc.;
4. To establish normal working hours for the work;
5. To review safety standards and traffic control; and
6. To discuss such other related items as may be pertinent to the work.

The Contractor shall prepare and submit electronically 1 working day prior to the preconstruction conference, the following, per Section 9-38 (Submittal Approval):

1. A breakdown of all lump sum payment items, except for the lump sum payment items for:
    - Traffic Control Supervisor; and
    - Mobilization; and
    - Record Drawings
2. Preliminary progress schedule.
3. SPCC Plan per Section 1-07.15(1) of the Contract Documents.

In addition, the Contractor shall prepare and submit electronically 1 working day prior to the preconstruction conference:

1. Requests to Sublet for all remaining subcontractors not included in the bid submittal which must be approved prior to payment;
2. Emergency Call List; and
3. Schedule of equipment and labor rates for force account payment, as outlined in Section 1-09.6 (Force Account).

(City Contracts, December 8, 2014 APWA GSP)
Add the following new section:

1-08.0(2) Hours of Work

Except in the case of emergency or unless otherwise approved by the Engineer, the normal working hours for the Contract shall be any consecutive 8-hour period between 7:00 a.m. and 6:00 p.m. Monday through Friday, exclusive of a lunch break. If the Contractor desires different than the normal working hours stated above, the request must be submitted in writing prior to the preconstruction conference, subject to the provisions below. The working hours for the Contract shall be established at or prior to the preconstruction conference.

All working hours and days are also subject to local permit and ordinance conditions (such as noise ordinances).

If the Contractor wishes to deviate from the established working hours, the Contractor shall submit a written request to the Engineer for consideration. This request shall state what hours are being requested, and why. Requests shall be submitted for review no later than 5 working days prior to the day(s) the Contractor is requesting to change the hours.

If the Contracting Agency approves such a deviation, such approval may be subject to certain other conditions, which will be detailed in writing. For example:

1. On non-Federal aid projects, requiring the Contractor to reimburse the Contracting Agency for the costs in excess of straight-time costs for Contracting Agency representatives who worked during such times. (The Engineer may require designated representatives to be present during the work. Representatives who may be deemed necessary by the Engineer include, but are not limited to: survey crews; personnel from the Contracting Agency's material testing lab; inspectors; and other Contracting Agency employees or third party consultants when, in the opinion of the Engineer, such work necessitates their presence.)
2. Considering the work performed on Saturdays, Sundays, and holidays as working days with regard to the contract time.
3. Considering multiple work shifts as multiple working days with respect to contract time even though the multiple shifts occur in a single 24-hour period.
4. If a 4-10 work schedule is requested and approved the non working day for the week will be charged as a working day.
5. If Davis Bacon wage rates apply to this Contract, all requirements must be met and recorded properly on certified payroll.

(City Contracts, February 2016 City of Auburn GSP)

Supplement this section with the following:

If the requested working hour deviation is approved by the Engineer, it may be revoked at any time the City receives complaints from the public or adjoining property owners regarding the noise from the Contractor's operations. The Contractor shall have no claim for damages or delays should such permission be revoked for any reason.

Reimbursements by the Contractor to the Contracting Agency for overtime work will be deducted from amounts due, or to become due, to the Contractor. The Contractor by these specifications does hereby authorize the Engineer to deduct such costs from the amount due or to become due to the Contractor.

1-08.1 Subcontracting

(City Contracts, December 2016 City of Auburn GSP)
Supplement this section with the following:

Until the City has received and approved the "Request to Sublet" form provided by the City and filled out by the Contractor for a specific Subcontractor, said Subcontractor shall not begin any work within the project limits or within the City furnished sites. The Contractor and Subcontractor shall bear all risks for any work begun outside such areas and for any materials ordered by said Subcontractor before the "Request to Sublet" specific to said Subcontractor is approved.

1-08.3 Progress Schedule

1-08.3(1) Progress Schedule Types

(City Contracts, December 2016 City of Auburn GSP)
Supplement this section with the following:

The City requires the use of a Type A Progress Schedule as detailed in Section 1-08.3(2)A (Type A Progress Schedules) for this project.

1-08.3(2) General Requirements

(City Contracts, May 2020 City of Auburn GSP)
Supplement this section with the following:

The Contractor shall submit electronically a Preliminary Progress Schedule (first 30 working days) to the Engineer no later than 1 working day prior to the date of the Pre-construction Conference. This preliminary schedule shall show work to be performed during the first 30 working days of the Contract. Acceptance of the Preliminary Progress Schedule shall be required prior to the execution of the Contract by the City.

The Engineer will periodically check actual progress of the work against the progress schedule. If the proposed construction schedule cannot be met, the Engineer will require the Contractor to submit a revised schedule to the Engineer for acceptance. The approved revisions will thereafter, in all respects, apply in lieu of the original schedule.

Failure of the Contractor to follow the progress schedule submitted and accepted, including revisions thereof, shall relieve the City of any and all responsibility for furnishing and making available all or any portion of the project site from time to time, and will relieve the City of any responsibility for delays to the Contractor in the performance of the work.

1-08.3(2)A Type A Progress Schedules

(City Contracts, March 2018 City of Auburn GSP)

Replace this section with the following:

The Contractor shall submit a Type A Progress Schedule in accordance with Section 9-38 (Submittal Approval) of the Contract Specifications. The Progress Schedule shall show the total working days and shall be submitted prior to the first working day of the Contract. The schedule may be a critical path method (CPM) schedule, bar chart, or other standard schedule format. Regardless of which format is used, the schedule shall identify the critical path. The Engineer will evaluate the Type A Progress Schedule and approve or return the schedule for corrections within 10 calendar days of receiving the submittal.

1-08.3(5) Payment

(City Contracts, October 2021 City of Auburn GSP)
Replace this section with the following:

The cost of preparing the progress schedule, maintaining and submitting any supplementary progress schedules, and providing weekly schedules shall be included in the unit contract bid item prices for other work.

(City Contracts, January 2023 City of Auburn GSP)
Add the following new section:

1-08.3(7) Progress Meeting

At a minimum, weekly progress meetings will be conducted with the Contractor and City personnel. Additional meetings may be required for coordination of Contractor work with other contractors, agencies, or interested parties.

The determination of time, place, and frequency of required progress meetings will be established at the Preconstruction Conference for this contract.

1-08.4 Prosecution of the Work

(Non-City Contracts, February 2023 City of Auburn GSP)
Delete the first paragraph and replace it with the following:

The Contractor shall not commence with the work until the Engineer has given the Notice to Proceed. The Contractor shall give the City at least three (3) working days advance notice before beginning each phase of the work (such as excavation, street paving, etc.). The Contractor shall diligently pursue the work to be completed within the existing public Right-of-way in the agreed upon timeframe. This timeframe shall be established by the submittal and acceptance of a construction schedule addressing all items of work and their completion

(City Contracts, June 2020 City of Auburn GSP)
Delete this section in its entirety, including heading, and replace it with the following:

1-08.4 Notice to Proceed and Prosecution of the Work

The Notice to Proceed Date shall be within 10 working days of the execution of the Contract by the City. The City will send a dated and signed official “Notice to Proceed” to the Contractor. The Contract time shall begin on the first working day following the “Notice to Proceed Date.”

The Contractor shall not commence with the Work until the City has executed the Contract and the Engineer has given the Notice to Proceed. The Contractor shall give the City at least 3 working days advance notice before beginning each phase of the Work (such as

excavation, street paving, etc.). The Contractor shall commence construction activities within 10 calendar days of the Notice to Proceed Date, unless otherwise approved in writing. The Contractor shall diligently pursue the work to the physical completion date within the time specified in the contract. Voluntary shutdown or slowing of operations by the Contractor shall not relieve the Contractor of the responsibility to complete the work within the time(s) specified in the contract.

1-08.5 Time for Completion

(City Contracts, September 2016 City of Auburn GSP)
Revise the last sentence of the first paragraph to read:

The days between December 25th and January 1st will classified as non-working days, provided that the Contractor actually suspends work on the Project.

(City Contracts, January 2023 City of Auburn GSP)
Revise the third and fourth paragraphs to read:

Contract time shall begin on the first working day following the Notice to Proceed Date.

Each working day shall be charged to the contract as it occurs, until the contract work is physically complete. If substantial completion has been granted and all the authorized working days have been used, charging of working days will cease. Each week the Engineer will provide the Contractor a statement that shows the number of working days: (1) charged to the contract the week before; (2) specified for the physical completion of the contract; and (3) remaining for the physical completion of the contract. The statement will also show the nonworking days and any partial or whole day the Engineer declares as unworkable. The statement will be identified as a Written Determination by the Engineer. If the Contractor does not agree with the Written Determination of working days, the Contractor shall pursue the protest procedures in accordance with Section 1-04.5. By failing to follow the procedures of Section 1-04.5, the Contractor shall be deemed as having accepted the statement as correct.

(City Contracts, March 2022 City of Auburn GSP)
Revise the sixth paragraph to read:

The Engineer will give the Contractor written notice of the completion date of the contract after all the Contractor's obligations under the contract have been performed by the Contractor. The following events must occur before the Completion Date can be established:

1. The physical work on the project must be complete; and
2. The Contractor must furnish all documentation required by the contract and required by law, to allow the Contracting Agency to process final acceptance of the contract.

The following documents must be received by the Project Engineer prior to the City issuing final payment:

a. Material Acceptance Certification Documents
b. Property owner releases per Section 1-07.24

The following documents must be received by the Project Engineer prior to establishing a completion date:

a. Certified Payrolls (per Section 1-07.9(5)).
b. Monthly Reports of Amounts Credited as DBE Participation, as required by the Contract Provisions.

c. Copies of the approved "Affidavit of Prevailing Wages Paid" for the Contractor and all Subcontractors

(City Contracts, January 2023 City of Auburn GSP)
Supplement this section with the following:

The entire project, including cleanup, shall be physically completed within the Contract working days, beginning on the day after the "Notice to Proceed" date. The City, for justified reasons, may extend the contract time in accordance with Section 1-08.8 (Extensions of Time).

Late delivery of materials may be considered a justified reason for a time extension or Procurement Suspension per Section 1-08.6 (Suspension of Work), if the Contractor can show written evidence of a prompt order date after award of the Contract, demonstrate determined effort to acquire prompt delivery in the specified time, and comply with other requirements as specified in the Contract Documents.

1-08.6 Suspension of Work

(City Contracts, November 2019 City of Auburn GSP)
Supplement this section with the following:

Contract time may be suspended for procurement of critical materials (Procurement Suspension). In order to receive a Contract suspension, the Contractor shall, submit to the Engineer evidence of purchase orders made for all materials deemed critical by the Contracting Agency for physical completion of the contract. The Contractor shall provide copies of purchase orders and supplier invoices for the critical materials. Such supplier invoices and/or purchase orders shall indicate the purchase order date and estimated delivery date for the critical materials. Contractor's requests for Contract suspensions must be made in writing and shall include a progress schedule(s) that reflects the anticipated suspension.

1-08.9 Liquidated Damages

(City Contracts, March 3, 2021 APWA GSP, Option B)
Revise the second and third paragraphs to read:

Accordingly, the Contractor agrees:

1. To pay (according to the following formula) liquidated damages for each working day beyond the number of working days established for Physical Completion, and
2. To authorize the Engineer to deduct these liquidated damages from any money due or coming due to the Contractor.

Liquidated Damages Formula

LD=0.15C/T

Where:

LD = liquidated damages per working day (rounded to the nearest dollar)

C = original Contract amount

T = original time for Physical Completion

When the Contract Work has progressed to Substantial Completion as defined in the Contract, the Engineer may determine the Contract Work is Substantially Complete. The Engineer will notify the Contractor in writing of the Substantial Completion Date. For overruns in Contract time occurring after the date so established, the formula for liquidated damages shown above will not apply. For overruns in Contract time occurring after the Substantial Completion Date, liquidated damages shall be assessed on the basis of direct engineering and related costs assignable to the project until the actual Physical Completion Date of all the Contract Work. The Contractor shall complete the remaining Work as promptly as possible. Upon request by the Project Engineer, the Contractor shall furnish a written schedule for completing the physical Work on the Contract.

(City Contracts, October 2021 City of Auburn GSP)
Add the following new section:

1-08.9(1) Penalties

If the Contractor implements traffic control without an approved traffic control plan or is not in compliance with an approved traffic control plan per Section 1-10 (Temporary Traffic Control), or if the Contractor hauls materials without an approved haul route or does not follow an approved haul route per Section 1-07.28 (Haul Routes), the Contractor will be assessed penalties equal to 10% of the calculated Liquidated Damages per Section 1-08.9 (Liquidated Damages) per incident or $1,500 per day, whichever is greater. A Traffic Control incident is defined as, per day, per location. A Haul Route incident is defined as one truckload of materials or equipment.

(Non-City Contracts, February 2023 City of Auburn GSP)
Add the following new section:

1-08.9(1) Penalties

If the Contractor implements traffic control without an approved traffic control plan or is not in compliance with an approved traffic control plan per Section 1-10 (Temporary Traffic Control), or if the Contractor hauls materials without an approved haul route or does not follow an approved haul route per Section 1-07.28 (Haul Routes), the City may, take actions to protect the interests of the City, which may include, but are not limited to one or more of the following: order suspension of all construction activities, revoke permits issued to the Contractor and its contractors, pursue remedy through the Contractor's surety, terminate the FAC Agreement associated with the work (if applicable), and assess penalties as defined in Auburn City Code Section 9.90.030, as applicable.

1-09 Measurement and Payment

1-09.1 Measurement of Quantities

(City Contracts, December 2016 City of Auburn GSP)
Supplement this section with the following:

The quantities shown in the Proposal and Contract forms are estimates only, being given only as a basis for bid comparisons. The basis of payment for each bid item will be the actual work performed and measured in accordance with the Contract.

Where items are specified to be paid for by the ton, the Contractor is responsible for providing a certified weight ticket to the Project Inspector for each truckload delivered. Pay quantities

will be prepared on the basis of these weight tickets, and tickets not received by the Inspector will not be honored for payment.

1-09.2 Weighing Equipment

1-09.2(1) General Requirements for Weighing Equipment

(City Contracts, September 2021 City of Auburn GSP)
Supplement this section with the following:

Electronic Truck Tickets shall be made electronically and shall be transmitted via e-mail as a PDF to PWTruckTickets@auburnwa.gov. The e-mail subject line of electronic Truck Ticket's shall include the following: Project Number, Project Name, Truck Ticket Number.

Emailed truck tickets shall be grouped and combined into one email by delivery date when possible.

In the event the Contractor cannot provide electronic truck tickets, the Contractor may request to submit them as a hardcopy. Hardcopy truck tickets shall be submitted within 2 working days of when the materials were delivered to the project site to receive payment.

1-09.2(5) Measurement

(City Contracts, December 30, 2022 APWA GSP)
Revise the first paragraph to read:

Scale Verification Checks – At the Engineer's discretion, the Engineer may perform verification checks on the accuracy of each batch, hopper, or platform scale used in weighing contract items of Work.

1-09.3 Scope of Payment

(City Contracts, September 2021 City of Auburn GSP)
Supplement this section with the following:

A separate delivery ticket for each truckload of bulk material (gravel, crushed rock, etc.) shall be furnished to the City. Truck tickets that are not submitted within 2 working days of when the materials were delivered to the project site shall not be accepted for payment.

There will be no separate payment for "haul" for any bid item or portion thereof in this Contract, unless specified otherwise. All bid items dealing directly with or implying movement of any material to or from the project area or in the project area itself are hereby understood to include full payment for all movement of material.

1-09.4 Equitable Adjustment

(City Contracts, April 2006 City of Auburn GSP)
The first paragraph, Item 2b is revised to read as follows:

b. 1-09.6 (Force Account)

1-09.6 Force Account

(City Contracts, December 30, 2022 APWA GSP)
Supplement this section with the following:

The Contracting Agency has estimated and included in the Proposal, dollar amounts for all items to be paid per force account, only to provide a common proposal for Bidders. All such dollar amounts are to become a part of Contractor's total bid. However, the Contracting

Agency does not warrant expressly or by implication, that the actual amount of work will correspond with those estimates. Payment will be made on the basis of the amount of work actually authorized by the Engineer.

(City Contracts, February 2017 City of Auburn GSP)
Supplement this section with the following:

All force account work shall be accounted for daily and entered by the Contractor onto the City of Auburn 'Daily Report of Force Account Worked' form (Force Account form). The City Inspector will sign the Force Account form in the field, however compensation for the work indicated is subject to Engineer approval. The signature on the form from the Inspector does not constitute Engineer approval. The contractor shall provide labor and equipment details for force account work to the City before work begins.

1-09.8 Payment for Material on Hand

(City Contracts, April 2017 City of Auburn GSP)
Supplement this section with the following:

Payment for materials on hand shall only be considered if, in the sole opinion of the engineer, the material is stored in a safe, secure, and controlled environment.

1-09.9 Payments

(City Contracts, March 2022 City of Auburn GSP)
Delete this section and replace it with the following:

The basis of payment will be the actual quantities of Work performed according to the contract and as specified for payment.

The Contractor shall submit a breakdown of the cost of lump sum bid items per Section 1-08.0(1) (Preconstruction Conference), to enable the Project Engineer to determine the Work performed on a monthly basis. A breakdown is not required for lump sum items that include a basis for incremental payments as part of the respective Specification. Absent a lump sum breakdown, the Project Engineer will make a determination based on information available. The Project Engineer's determination of the cost of work shall be final.

Progress payments for completed work and material on hand will be based upon progress estimates prepared by the Engineer. A progress estimate cutoff date will be established at the preconstruction conference.

The initial progress estimate will be made not later than 30 days after the Contractor commences the work, and successive progress estimates will be made every month thereafter until the Completion Date. Progress estimates made during progress of the work are tentative, and made only for the purpose of determining progress payment. The progress estimates are subject to change at any time prior to the calculation of the Final Payment.

The value of the progress estimate will be the sum of the following:

1. Unit Price Items in the Bid Form — the approximate quantity of acceptable units of work completed multiplied by the unit price.
2. Lump Sum Items in the Bid Form — based on the approved Contractor's lump sum breakdown for that item, or absent such a breakdown, based on the Engineer's determination.
3. Materials on Hand — 100 percent of invoiced cost of material delivered to Job site or other storage area approved by the Engineer.

4. Change Orders — entitlement for approved extra cost or completed extra work as determined by the Engineer.

Progress payments will be made in accordance with the progress estimate less:

1. Retainage per Section 1-09.9(1); on non FHWA-funded projects
2. The amount of Progress Payments previously made; and
3. Funds withheld by the Contracting Agency for disbursement in accordance with the Contract Documents.

Progress payments for work performed shall not be evidence of acceptable performance or an admission by the Contracting Agency that any work has been satisfactorily completed. The determination of payments under the contract will be final in accordance with Section 1-05.1.

Failure to perform any of the obligations under the Contract by the Contractor may be decreed by the Contracting Agency to be adequate reason for withholding any payments until compliance is achieved.

The Contractor shall sign electronically using the software provided by the Contracting Agency and return the Final Pay Estimate as indicated in this section.

Upon completion of all Work and after final inspection (Section 1-05.11), the amount due the Contractor under the Contract will be paid based upon the final estimate made by the Engineer and presentation of a Final Pay Estimate to be signed by the Contractor. The Contractor's signature on such Final Pay Estimate shall be deemed a release of all claims of the Contractor unless a Certified Claim is filed in accordance with the requirements of Section 1-09.11 and is expressly excepted from the Contractor’s certification on the Final Pay Estimate.

If the Contractor fails, refuses, or is unable to sign and return the Final Pay Estimate or any other documentation required before Contract Completion and final acceptance can occur, the Contracting Agency reserves the right to establish a Completion Date (for the purpose of meeting the requirements of RCW 60.28) and unilaterally accept the Contract. Unilateral Contract Completion and final acceptance will occur only after the Contractor has been provided the opportunity, by written request from the Engineer, to voluntarily submit such documents. If voluntary compliance is not achieved, formal notification of the impending unilateral establishment of a Completion Date and final acceptance will be provided by certified letter or email with delivery confirmation from the Contracting Agency to the Contractor, which will provide 30 calendar days for the Contractor to submit the signed Final Pay Estimate. The 30 calendar day period will begin on the date the certified letter or email with delivery confirmation is received by the Contractor, whichever occurs first. The date the Contracting Agency unilaterally signs the Final Pay Estimate shall then constitute the Completion Date and the final acceptance date (Section 1-05.12). The reservation by the Contracting Agency to unilaterally accept the Contract will apply to Contracts that are Physically Completed in accordance with Section 1-08.5, or for Contracts that are terminated in accordance with Section 1-08.10. Unilateral final acceptance of the Contract by the Contracting Agency does not in any way relieve the Contractor of their responsibility to comply with all Federal, State, tribal, or local laws, ordinances, and regulations that affect the Work under the Contract.

Payment to the Contractor of partial estimates, final estimates, and retained percentages shall be subject to controlling laws.

The Contractor shall submit to the City, no later than 3 working days after the 20th day of each month, all documentation for payment for work completed during the previous period. All monthly pay requests are subject to approval and verification by the Engineer. Typical payment periods are from the 21st day to the 20th day of each month.

Errors, omissions, revisions or corrections in the original submittal for payment may result in delayed payment. The Contractor is responsible for maintaining adequate records of bid item quantities for the work completed for each monthly pay period. These quantities will be subject to approval and verification by the Engineer.

All progress payments will be mailed to the address designated in writing by the Contractor at the preconstruction conference.

Final payment does not constitute Final Acceptance of the Contract Work.

1-09.9(1) Retainage

(City Contracts, January 2023 City of Auburn GSP)
Supplement this section with the following:

In addition to the amount RCW 60.28 requires to be withheld from the progress or retained percentage payments to the Contractor, the City of Auburn may, at its sole discretion, withhold amounts sufficient to pay any property damage claim of which the City may have knowledge and regardless of the informalities of notice of such claim, arising out of the performance of this Contract, provided that the total amounts withheld for such purposes shall not exceed 3% of the Contract price. The term “property damage claim” shall not include any claim for personal injuries or any claim by persons furnishing supplies or materials or performing labor for the Contractor. The amount withheld will not be paid to the claimant by the City but will be held until either the Contractor secures a written release from the claimant, obtains a court decision that such claim is without merit, or satisfies any judgment in favor of the claimant on such claim.

1-09.11 Disputes and Claims

1-09.11(2) Claims

(City Contracts, August 2021 City of Auburn GSP)
Revise the first paragraph to read:

If the Contractor claims that additional payment is due and the Contractor has pursued and exhausted all the means provided in Sections 1-04.5 and 1-04.5(1) to resolve a dispute, the Contractor may file a claim as provided in this section. The Contractor shall submit to the Engineer written notification of intent to file a Certified Claim within 14 calendar days from the issuance of the Engineer’s determination on merit of the protest pursuant to Section 1-04.5. The Contractor agrees to waive any claim for additional payment if the written notifications provided in Section 1-04.5 are not given, or if the Engineer is not afforded reasonable access by the Contractor to complete records of actual cost and additional time incurred as required by Section 1-04.5, or if a claim is not filed as provided in this section. The fact that the Contractor has provided a proper notification, provided a properly filed claim, or provided the Engineer access to records of actual cost, shall not in any way be construed as proving or substantiating the validity of the Certified Claim.

1-09.11(3) Time Limitation and Jurisdiction

(City Contracts, September 2021 City of Auburn GSP)
Delete this section and replace it with the following:

For the convenience of the parties to the Contract it is mutually agreed by the parties that any claims or causes of action which the Contractor has against the Contracting Agency arising from the Contract shall be brought within 30 calendar days from the date the of Contract Completion and final acceptance as indicated in Section 1-09.9; and it is further agreed that any such claims or causes of action shall be brought only in the Superior Court of King County unless otherwise agreed in writing by the parties. The parties understand and agree that the Contractor's failure to bring suit within the time period provided, shall be a complete bar to any such claims or causes of action. It is further mutually agreed by the parties that when any claims or causes of action which the Contractor asserts against the Contracting Agency arising from the Contract are filed with the Contracting Agency or initiated in court, the Contractor shall permit the Contracting Agency to have timely access to any records deemed necessary by the Contracting Agency to assist in evaluating the claims or action.

1-09.13 Claims Resolution

(City Contracts, August 2021 City of Auburn GSP)
Section 1-09.13 (Claims Resolution) is deleted.

1-10 Temporary Traffic Control

1-10.1 General

(City Contracts, February 2023 City of Auburn GSP)
Supplement this section with the following:

The Contractor is responsible for distributing City provided informational flyers to affected property owners. The flyers shall be hand-delivered to these properties before the start of construction and shall include the name of the project, funding source, general contractor, approximate date for start and completion of construction activities. The Contractor shall provide traffic control for City provided inspection, testing, and survey as requested by the Engineer.

(Non-City Contracts, February 2023 City of Auburn GSP)
Supplement this section with the following:

When specified on the Plans, issued as a permit condition, or otherwise directed by the City, the Contractor is responsible for distributing informational flyers to affected property owners. The flyers shall be hand-delivered to these properties before the start of construction and shall include the name of the project, general contractor contact information, approximate date for start and completion of construction activities. The Contractor shall provide traffic control for City provided inspection, testing, and survey as requested by the Engineer.

1-10.2 Traffic Control Management

1-10.2(2) Traffic Control Plans

(City Contracts, February 2023, City of Auburn GSP)
Supplement this section with the following:

When traffic control Plans and/or pedestrian accommodation Plans are included with the Contract Documents, they have been furnished as a guide to be used by the Contractor and serve as a "starting point" for the Contractor's development of the traffic control Plans and pedestrian accommodation Plans for the project.

(February 2023, City of Auburn GSP)
Supplement this section with the following:

The Contractor shall prepare Traffic Control Plans that conform to the established standards for plan development as shown in the MUTCD, 2009 Edition, Part VI, and the WSDOT Work Zone Traffic Control Guidelines, latest edition. A separate pedestrian traffic control plan shall be required from the Contractor if normal pedestrian travel is affected by the Contractors actions. The Contractor shall submit the Traffic Control Plan and/or Pedestrian Accommodation Plan to the Engineer for review and approval at least 5 working days in advance of the time the traffic control devices, including signs, are scheduled to be installed and utilized. Traffic Control Plans and Pedestrian Accommodation Plans shall be submitted per Section 9-38.1 (Submittals) and shall include the City's Traffic Control Plan Checklist with each submittal. The Engineer must approve the Traffic Control Plan before any onsite work begins on the project. Any modifications or deviations from the approved Traffic Control Plan will require review and approval by the Engineer. The Contractor's failure to obtain approval on Traffic Control Plans may result in penalties being assessed per Section 1-08.9(1) (Penalties).

Outside edges of the traveled way may be delineated with traffic safety drums or tubular markers providing that the requirements of Section 1-07.23(1) (Construction Under Traffic) are met. Barricades shall be in accordance with the applicable Standard Plans.

1-10.3 Traffic Control Labor, Procedures, and Devices

1-10.3(1) Traffic Control Labor

1-10.3(1)B Other Traffic Control Labor

(February 2023 City of Auburn GSP)
Supplement this section with the following:

When working within signalized intersections, the Contractor shall schedule and coordinate the use of City provided uniformed police officers to control traffic. Contractor is responsible for all coordination with the City of Auburn Police Department to secure a uniformed police officer as required. This coordination shall be done a minimum of 3 working days in advance of the day a uniformed police officer is necessary. When the City of Auburn Police Department is not able to secure a uniformed police officer, the Contractor shall provide uniformed officers from outside police agencies and shall contract for those services directly. Contractor shall notify the Engineer prior to the use of outside agency police services.

(City Contracts, February 2023 City of Auburn GSP)
Supplement this section with the following:

When included in the Proposal, the City will reimburse the Contractor for the cost of uniformed police officers services as indicated in Section 1-10.5 (Payment) of these Special Provisions. If not included in the Proposal, cost of uniformed police services shall be incidental to the Contract and no additional payment shall be made.

1-10.3(3) Traffic Control Devices

1-10.3(3)A Construction Signs

(City Contracts, December 2016 City of Auburn GSP)
Supplement this section with the following:

When included in the Proposal, the Contractor shall provide and install "Construction Site Sign(s)" in accordance with the contract documents 2 working days in advance of any on site construction activities. Installation of the signs shall be in accordance with Section 1-10.3(3) (Construction Signs) and the applicable City of Auburn Standard Detail.

(April 2018 City of Auburn GSP)
Add the following new section:

1-10.3(3)N Temporary Signage for Roadway Traffic Revisions

Temporary "Traffic Revision Ahead" (W20-901) signs with two warning flags shall be installed in advance of roadway projects that include traffic revisions. Temporary "New Signal Ahead" (W20-902) signs with two warning flags shall be installed in advance of the intersection on all approaches to the new signal. Temporary "Traffic Signal Revision" (W20-903) signs with two warning flags shall be installed in advance of each intersection approach with signal modifications. A 12-inch x 12-inch warning placard shall be affixed to the top of each signal head being modified. Warning signs shall be mounted on 4"x 4" wooden posts and placed per plan and MUTCD requirements. The Contractor shall remove all temporary signs and posts no earlier than 3 months and no later than 6 months following completion of the traffic revisions. Posthole voids shall be restored with native material.

1-10.4 Measurement

1-10.4(2) Item Bids with Lump Sum for Incidentals

(City Contracts, January 2023 City of Auburn GSP)
Revise the fifth and sixth paragraphs to read:

"Sequential Arrow Sign" will be measured by the day for each 24-hour day or partial day in use. Signs not specifically approved for use will not be measured for separate payment.

"Portable Changeable Message Sign" will be measured by the day for each 24-hour day or partial day in use. Signs not specifically approved for use will not be measured for separate payment.

1-10.5 Payment

1-10.5(2) Item Bids With Lump Sum for Incidentals

(City Contracts, January 2023 City of Auburn GSP)
Supplement this section with the following:

Payment will be made for each of the following Bid items when included in the Proposal:

"Flaggers (Min. Bid _____ per hour)", Per Hour

"Traffic Control Labor (Min. Bid _____ per hour)", Per Hour

"Other Temporary Traffic Control", Per Lump Sum

"Sequential Arrow Sign", Per Day

"Portable Changeable Message Sign", Per Day

"Outside Agency Uniformed Police Flagging Labor", Estimate

"Construction Site Sign(s)", Per Each

Payment for "Traffic Control Supervisor" will be made on a prorated monthly basis for work completed.

The unit contract price bid per hour for "Flaggers (Min. Bid _____ per hour)" when applied to the number of units measured for this item in accordance with Section 1-10.4(2), shall be full compensation for all costs incurred by the Contractor in performing the Work defined in Section 1-10.3(1)A. Should the Contractor determine that the cost for this work is greater than the minimum price shown, the Contractor may bid a higher price. Should the Contractor write in a unit price less than the minimum price shown, the minimum unit price shown shall govern and become part of the bid.

The lump sum contract price for "Other Temporary Traffic Control" shall be full compensation for all costs incurred by the Contractor in performing the Work defined in Section 1-10, and which costs are not compensated by one of the items listed in this section.

The unit contract price bid per day for "Sequential Arrow Sign" shall be full compensation for all costs incurred by the Contractor in performing the contract work described in Section 1-10.3(3)B (Sequential Arrow Signs) and for procuring all Sequential Arrow Signs required for the project and for transporting these signs to and from the project.

The unit contract price bid per day for "Portable Changeable Message Sign" shall be full compensation for all costs incurred by the Contractor in performing the contract work described in Section 1-10.3(3)C (Portable Changeable Message Sign) and for procuring all portable changeable message signs required for the project and for transporting these signs to and from the project.

The unit contract price for "Construction Site Sign(s)" shall be full payment for all equipment, labor and materials needed to furnish, install, maintain, relocate (if required), and remove and dispose of at Physical Completion.

City of Auburn Uniformed Police Officers necessary for the project will be provided at no cost to the Contractor by the City of Auburn. Payment for use of "Outside Agency Uniformed Police Flagging Labor" will be per Section 1-09.4 (Equitable Adjustment) of the Standard Specifications.

Costs for scheduling and coordinating all uniformed police officers by the Contractor shall be included in the lump sum contract price for Traffic Control Supervisor and no additional compensation will be made.

END OF DIVISION 1

Water Operations
Cross-Connection Control Program

Purpose:

This document establishes minimum standards for the City of Auburn Cross-Connection Control Program to protect the public water system, as defined in WAC 246-290-010, from contamination via cross-connections. It describes minimum Cross-Connection Control Program operating policies, provides guidelines for installation, testing and maintenance of approved backflow prevention assemblies, permitting process, inspection and survey requirements for existing and new water service connections.

The City's proactive and ongoing Cross-Connection Control Program is an effort to protect the health of its consumers by preventing contaminants and pollutants from entering the public water supply. Washington State Department of Health, Division of Drinking Water requires all public water systems to implement a Cross-Connection Control Program. Elements of the city's Cross-Connection Control Program must be documented and included in the Comprehensive Water System Plan. Washington Administrative Code WAC 246.290.490 mandates Cross-Connection Control Programs contain the following minimum elements:

- Element 1: The purveyor shall adopt a local ordinance, resolution, code, bylaw, or other written legal instrument that:
  (i) Establishes the purveyor's legal authority to implement a cross-connection control program;
  (ii) Describes the operating policies and technical provisions of the purveyor's cross connection control program; and
  (iii) Describes the corrective actions used to ensure that consumers comply with the purveyor's cross-connection control requirements.

  The City of Auburn has adopted ordinance 5851 amending Auburn City Code Chapter 13.12 entitled "Protection of Water Supply" which establishes the City's authority for implementing the Cross-Connection Control Program.

The Federal Safe Drinking Water Act of 1974 and the statutes of the State of Washington, Title 43 RCW, require purveyors to protect the public water supply from contamination.

Enforcement of this Cross-Connection Control Program in the area(s) served by the City of Auburn Water will be in accordance with:

- *Washington Administrative Code WAC 246-290-490, Cross-Connection Control, effective April 9, 1999;*
- *Auburn City Code, ACC1.20.010 Right of entry for Inspection*
- *Auburn City Code, ACC13.06.260 Service Premises Isolation*
- *Auburn City Code, ACC13.12 Protection of Water Supply;*
- *City of Auburn Water Division, Cross-Connection Control Program;*

and/or any subsequent revisions, together with any future manuals of standard practice pertaining to Cross-Connection Control approved by Washington State Department of Health, Division of Drinking Water.

Consumers and/or premises violating any provisions of this document and/or subsequent revisions shall be subject to enforcement action such as, but not limited to, discontinuance (TURN OFF) of water service to the premises and/or a maximum penalty of $250.00 each day.

- Element 2: The purveyor shall develop and implement procedures and schedules for evaluating new and existing service connections to assess the degree of hazard posed by the consumer's premises to the purveyor's distribution system and notifying the consumer within a reasonable time frame of the hazard evaluation results. At a minimum, the program shall meet the following:
  (i) For connections made on or after April 9, 1999, procedures shall ensure that an initial evaluation is conducted before water service is provided;
  (ii) For all other connections, procedures shall ensure that an initial evaluation is conducted in accordance with a schedule acceptable to the department; and
  (iii) For all service connections, once an initial evaluation has been conducted, procedures shall ensure that periodic reevaluations are conducted in accordance with a schedule acceptable to the department and whenever there is a change in the use of the premises.

  The City's Cross-Connection Control Program evaluation of new and existing connections is as follows: New connections must comply with the City's Construction Standards for water, Design Standards 7.01.2.1 Domestic Service, 7.01.2.2 Other Services (Irrigation), and 7.01.5.2 Fire Sprinkler Systems, Backflow Assembly Installation Standards (Technical Memo), and evaluated by the City's Cross-Connection Control Specialist during the permit and plan review process and before service is provided. Water service connection(s) to new consumers and/or premises shall be locked off until the City's Cross-Connection Control Specialist has conducted a risk assessment, and determine if the backflow

protection is commensurate with the degree of hazard. Existing connections are given a risk assessment by the City's Cross-Connection Specialist to determine if the backflow protection is commensurate with the degree of hazard. A preliminary assessment (site survey) is conducted of all industrial, commercial, multi-family, private water systems consumers and/or non-residential premises for the purpose of determining the need for premises isolation. The City has identified possible Table 13 (high hazard) facilities within its jurisdiction and has a prioritize list for surveying each site. Consumers and/or premises identified as Table 13 (high hazard) facility require premises isolation with an Approved Air Gap and/or Reduced Pressure Backflow Assembly. Consumers and/or premises identified as a (low hazard) facility require premises isolation with an Approved Double Check Valve Assembly if the City's Cross-Connection Control Specialist (CCS) deems necessary. The consumer and/or premises have the option to install an Approved Air Gap and/or Reduced Pressure Backflow Assembly to avoid future plumbing changes of the premises isolation assembly if the City's Cross-Connection Control Specialist (CCS) deems necessary.

After the initial risk assessment of new and existing connections is conducted, a re-evaluation of the service connection is conducted every threee (3) years for Table 13 facilities and every five (5) years for industrial, commercial, multi-family, private water systems and/or non-residential premises.

The cost/fees of installation, initial and annual testing, maintenance, and repair or replacement of the backflow assembly shall be the responsibility of the consumer as a condition of water service.

- Element 3: The purveyor shall develop and implement procedures and schedules for ensuring that:
  (i) Cross-connections are eliminated whenever possible;
  (ii) When cross-connections cannot be eliminated, they are controlled by installation of approved backflow preventers commensurate with the degree of hazard; and
  (iii) Approved backflow preventers are installed in accordance with the requirements of subsection (6) of this section.

  The City's Cross-Connection Control Program endeavors to eliminate all actual or potential physical Cross-Connections where possible, and not allow any actual or potential physical Cross-Connections unless protected by an approved air gap or backflow prevention assembly. Consumers and/or premises shall be responsible for following the provisions of the City's Cross-Connection Control Program to eliminate and/or install approved backflow protection on all Cross-Connections within their premises. The City's Cross-Connection program will inventory and track all backflow prevention assemblies on the consumers' premises used for the protection of the public water supply, but it is the consumer and/or premises responsibility to test, maintain, repair, or replace all backflow prevention assemblies within their premises.

- Element 4: The purveyor shall ensure that personnel, including at least one person certified as a CCS, are provided to develop and implement the cross-connection control program.

  The City's Cross-Connection Control Program employs State Certified personnel. The program currently staffs (2) two full time employees certified as Cross-Connection Control Specialist, Backflow Assembly Tester, and Water Distribution Manager.

- Element 5: The purveyor shall develop and implement procedures to ensure that approved backflow preventers relied upon to protect the public water system are inspected and/or tested (as applicable) under subsection (7) of this section.
  Subsection (7) Approved backflow preventer inspection and testing.
  (a) For backflow preventers that protect the public water system, the purveyor shall ensure that:
  (i) A CCS inspects backflow preventer installations to ensure that protection is provided commensurate with the assessed degree of hazard;
  (ii) Either a BAT or CCS inspects:
  (A) Air gaps installed in lieu of approved backflow prevention assemblies for compliance with the approved air gap definition; and
  (B) Backflow prevention assemblies for correct installation and approval status.
  (iii) A BAT tests approved backflow prevention assemblies for proper operation.
  (b) The purveyor shall ensure that inspections and/or tests of approved air gaps and approved backflow assemblies that protect the public water system are conducted:
  (i) When any of the following occur:
  (A) Upon installation, repair, reinstallation, or relocation of an assembly;
  (B) Upon installation or replumbing of an air gap;
  (C) After a backflow incident involving the assembly or air gap; and
  (ii) Annually thereafter, unless the purveyor requires more frequent testing for high hazard premises or for assemblies that repeatedly fail.
  (c) The purveyor shall ensure that inspections of AVBs installed on irrigation systems are conducted:
  (i) At the time of installation;
  (ii) After a backflow incident; and
  (iii) After repair, reinstallation, or relocation.
  (d) The purveyor shall ensure that approved backflow prevention assemblies are tested using procedures acceptable to the department, such as those specified in the most recently published edition of the USC Manual. When circumstances, such as, but not limited to, configuration or location of the assembly, preclude the use of USC test procedures, the purveyor may allow, on a case-by-case basis, the use of alternate (non-USC) test procedures acceptable to the department.
  (e) The purveyor shall ensure that results of backflow prevention assembly inspections and tests are documented and reported in a manner acceptable to the purveyor.

(f) The purveyor shall ensure that an approved backflow prevention assembly or AVB, whenever found to be improperly installed, defective, not commensurate with the degree of hazard, or failing a test (if applicable) is properly reinstalled, repaired, overhauled, or replaced.
(g) The purveyor shall ensure that an approved air gap, whenever found to be altered or improperly installed, is properly replumbed or, if commensurate with the degree of hazard, is replaced by an approved RPBA.

The City's Cross-Connection Control Program requires all backflow prevention assemblies installed within the consumers and/or premises be tested and/or inspected at time of installation, annually (yearly anniversary date), after a backflow incident, repair, reinstallation, or relocation. Consumers and/or premises are responsible for all cost/fee to test, maintain, repair, or replace backflow prevention assemblies within their premises. Consumers and/or premises are also responsible for submitting all test reports for backflow prevention assemblies within their premises to the City's Cross-Connection Control Program within 30 days of testing the backflow preventions assemblies. Test reports received over the 30 days grace period may be returned to the consumer and/or premises for re-testing of the backflow prevention assemblies. Person testing the backflow prevention assemblies shall be a State Certified Backflow Assembly Tester on the City's Approved List, and only test reports approved by City of Auburn shall be accepted. Test reports not approved for use by the City of Auburn shall be returned to the consumer and/or premises. Test report forms shall be complete, accurate, and legible.

Procedures for inspection and/or testing of backflow prevention assemblies for existing consumers and/or premises are as follows:

Annual Testing
The City mails notices to existing consumers and/or premises of the annual testing or re-testing of the backflow prevention assemblies within their premises. The First Notice is mailed 30 days prior to anniversary test due date. If test reports are not received by anniversary test due date then a Second Notice is mailed giving the consumer and/or premises 30 days to test the backflow prevention assemblies. A Third Notice is mailed if the test reports are not received from the consumer and/or premises by date given on second notice. The third notice gives the consumer and/or premises 7 days to test the backflow prevention assemblies. The final notification before enforcement action is a Door Hanger hand carried to the consumer(s) and/or premises. The door hanger gives the consumer and/or premises 48 hours to have the backflow prevention assemblies tested and certified to be functioning correctly. Enforcement action includes, but is not limited to, a $250.00 fine each day and/or discontinuance (TURN OFF) of water service.

Repair, Reinstallation, or Relocation Testing
The City mails notices to existing consumers and/or premises of the repair, reinstallation, or relocation for the testing of the backflow prevention assemblies within their premises. Failure notices for backflow assemblies used for high health hazards are as follows: The First Notification is mailed after receiving

written notice from the backflow assembly tester identifying the failed test, reinstallation or relocation of the backflow assembly. A valid test report showing the repairs made with passing results, and/or initial testing of the reinstalled or relocated backflow assembly must be received within 7 days of the written notice. If a valid test report is not received within the 7 days, then a Second Notification is mailed giving the consumer and/or premises 5 days to submit a valid test report showing the repairs made with passing results, and/or initial testing of the reinstalled or relocated backflow assembly. If a valid test report is not received within the 5 days, then a Third Notification is mailed giving the consumer and/or premises 3 days to submit a valid test report showing the repairs made with passing results, and/or initial testing of the reinstalled or relocated backflow assembly. The final notification before enforcement action is a Door Hanger hand carried to the consumer(s) and/or premises. The door hanger gives the consumer and/or premises 48 hours to have the backflow prevention assemblies tested and certified to be functioning correctly. Enforcement action includes, but is not limited to, a $250.00 fine each day and/or discontinuance (TURN OFF) of water service. Failure notices for backflow assemblies used for low health hazards are as follows: The First Notification is mailed after receiving written notice from the backflow assembly tester identifying the failed test, reinstallation or relocation of the backflow assembly. A valid test report showing the repairs made with passing results, and/or initial testing of the reinstalled or relocated backflow assembly must be received within 15 days of the written notice. If a valid test report is not received within the 15 days, then a Second Notification is mailed giving the consumer and/or premises 10 days to submit a valid test report showing the repairs made with passing results, and/or initial testing of the reinstalled or relocated backflow assembly. If a valid test report is not received within the 10 days, then a Third Notification is mailed giving the consumer and/or premises 5 days to submit a valid test report showing the repairs made with passing results, and/or initial testing of the reinstalled or relocated backflow assembly. The final notification before enforcement action is a Door Hanger hand carried to the consumer(s) and/or premises. The door hanger gives the consumer and/or premises 48 hours to have the backflow prevention assemblies tested and certified to be functioning correctly. Enforcement action includes, but is not limited to, a $250.00 fine each day and/or discontinuance (TURN OFF) of water service.

Procedures for inspection and/or testing of backflow prevention assemblies for new consumers and/or premises are as follows:

Initial Testing & Inspection of Backflow Prevention Assemblies
The consumer, contractor, and/or premises is required to comply with the City's Construction Standards, Design Standards, Backflow Assembly Installation Standards (Technical Memo), and evaluated by the City's Cross-Connection Control Specialist during the permit and plan review process and before service is provided. A Backflow Assembly Plumbing Permit (BFL) shall be issued for all backflow prevention assemblies installed within the City's water distribution system. The backflow prevention assemblies shall be tested by a State Certified Backflow Assembly Tester, approved to test within the City's water distribution system. The City's Cross-Connection Control Specialist shall inspect the

installation on the backflow prevention assemblies and collect all valid test reports certifying the backflow prevention assemblies are functioning correctly. The Backflow Assembly Plumbing Permit (BFL) is then finalized in CRW. The City's Cross-Connection Control Specialist may require corrections and/or additions during the inspection process. If so, corrections and/or additions shall be completed to the satisfaction of the City's Cross-Connection Control Specialist before occupancy of the facility.

City Owned Backflow Assemblies:
The Cross-Connection Control Program currently test and maintain 160 backflow prevention assemblies within City owned facilities. The City employs (4) four Certified Backflow Assembly Testers, (2) two in the Parks Department and (2) two in Water Operations. The backflow prevention assemblies are tested and inspected annually , or more often if needed (type B hydrant meter carts are tested before being sent out with the contractor).

February 2005 Hydrant Meter Permit Regulations:
Water quality, accountability, safety, infrastructure reliability and security were the catalyst for creation of the Hydrant Meter Permit Regulations for private party customer withdrawal of water from fire hydrants. (See regulations for requirements)

- Element 6: The purveyor shall develop and implement a backflow prevention assembly testing quality control assurance program, including, but not limited to, documentation of BAT certification and test kit calibration, test report contents, and time frames for submitting completed test reports.

- ***CERTIFIED BACKFLOW ASSEMBLY TESTER***
  1. *Backflow Assembly Tester MUST be currently certified to test in Washington State and approved by the City's Cross-Connection Control Program prior to testing any backflow assemblies within the City's Water Distribution System.*

  2. *Certified Backflow Assembly Tester MUST submit the following information before any Test Report Forms will be accepted:*
     - *Copy of the (Current Year) BAT Validation Card issued by Washington State Department of Health.*
     - *Copy of the Current Calibration Certificate for all testing equipment clearly stating whom the testing equipment belongs to and/or is used by.*
     - ***Original Certified Backflow Assembly Tester Agreement Form** completed, signed and dated for the (Current Year). No copies or faxes of this form will be accepted.*
       ***By signing the Tester Agreement, the BAT Tester understands and will abide with the City's Tester Program Requirements**.*
     - *Contact information including company name, address, and phone number(s)*
     - *Auburn Business Registration Number*

3. *Tester demonstrating gross negligence or suspected of being fraudulent will be investigated and reported to Washington State Department of Health Certification Office. Test Report Forms from Backflow Assembly Tester under investigation will NOT be accepted and returned to the owner of the assembly.*

4. *Failure to comply with any part of the City's Tester Program Requirements will result in the Backflow Assembly Test Report Form being rejected and returned to the owner of the assembly, and/or Backflow Assembly testing privileges discontinued within the City's Water Distribution System.*

5. *Auburn Municipal Code requires business operating within the City limits to obtain a business registration number from the permit center located at city hall.*

- ***BACKFLOW ASSEMBLY TESTING EQUIPMENT***
  1. *Backflow assembly testing equipment MUST meet all requirements set by Washington State Department of Health.*
  2. *A copy of the Current Calibration Certificate of all testing equipment clearly stating whom the testing equipment belongs to and/or is used by MUST be submitted.*
  3. *Backflow assembly testing equipment suspected of being damaged, malfunctioning and/or fraudulent will require re-calibration and/or repair. The new Calibration Certificate MUST be submitted to the City's Cross Connection Control Program before any Test Report Forms will be accepted.*

- ***BACKFLOW ASSEMBLY TESTING/INSPECTION***
  1. *Tester MUST use current Backflow Prevention Assemblies Field Test Procedures Approved for Use in Washington State. No other test procedures will be accepted.*
  2. *The City's Cross-Connection Control Program MUST be notified of Initial Testing for all New Backflow Assemblies. Tester shall provide the Backflow Assembly Plumbing Permit Number (example BFL07-0000) when notifying of Initial Testing. Backflow Assembly installed within the City's Water Distribution System requires a Backflow Assembly Plumbing Permit.*
  3. *Initial Inspection of Backflow Assembly will NOT be conducted without a valid Backflow Assembly Plumbing Permit and Test Report Form. Backflow Assembly Plumbing Permit will NOT be finalized without a valid Test Report Form and site inspection of assembly installation.*
  4. *The City's Cross-Connection Control Program MUST be notified within 24hrs, if a Reduced Pressure Backflow Assembly (RPBA), used for High Hazard Protection, FAILS an initial, annual and/or repeat test.*
  5. *Backflow assemblies MUST have all test ports plugged in areas subject to flooding.*

- ***BACKFLOW ASSEMBLY TEST REPORT FORMS***
  1. *Private Test Report Form MUST use the same format as the City's Test Report Form. Test Report Form NOT approved will be returned to the owner of the assembly.*
  2. *Backflow Assembly Test Report Form MUST be submitted to the City's Cross Connection Control Program within 30 days of completing the test. Test Report Form over 30 days will NOT be accepted and returned to the owner of the assembly.*
  3. *Backflow Assembly Test Report Form MUST be **Complete, Accurate and Legible.***
  4. *Test Report Form MUST have documentation of any repairs, cleaning or flushing of backflow assembly.*
  5. *Test Report Form will be returned to the owner of the Backflow Assembly if the tester fails to comply with any part of the City's Tester Program Requirements.*
  6. *Test Report Form suspected of being fraudulent will be investigated and reported to Washington State Department of Health Certification Office.*
  7. *Test Report Form received from any BAT tester under investigation will be rejected and returned to the owner of the backflow assembly.*

- ***APPROVED BACKFLOW ASSEMBLY TESTER***
  1. *The City's Cross-Connection Control Program MUST mail BAT Requirement Letter to previously registered tester no later than December 31st of each year. Tester not previously registered with the City's Cross Connection Control Program will receive a BAT Requirement Letter upon request.*
  2. *Tester will NOT be allowed to test backflow assembly within the City's Water Distribution System until all required information is received.*
  3. *Tester NOT registered with the City's Cross-Connection Control Program by the Washington State Department of Health renewal cut-off date, will NOT be allowed to test backflow assembly within the City's Water Distribution System until all required information is received.*
  4. *Tester NOT registered with the City's Cross-Connection Control Program by the Washington State Department of Health renewal cut-off date, will NOT be listed on the City's Approved Tester List given to customers upon request.*
  5. *Tester NOT registered with the City's Cross-Connection Control Program by the Washington State Department of Health renewal cut-off date, will NOT have Test Report Form accepted by the City's Cross-Connection Control Program and returned to the owner of backflow assembly.*
  6. *The City's Cross-Connection Control Program will only list the testers Name, Phone Number(s), and BAT Certification Number on the City's Approved Tester List given to customers upon request.*
  7. *The City's Cross-Connection Control Program will list testers in the order received. Testers will NOT be listed until all information requested is submitted. The City's Approved Tester List does not indicate any preference, is completely at our discretion and subject to space availability.*
  8. *The City's Approved Tester List is updated on the 1st of every month.*
  9. *The City's Approved Tester List is available as a hard copy or on h-drive under Cross-Connection in electronic form.*

10. *Tester may request approval to test within the City's Water Distribution System and NOT listed on the City's Approved Tester List.*

- ***BACKFLOW ASSEMBLY TESTER RECORDS & RECORD KEEPING***
  1. *Information from paperwork MUST be recorded in Tokay.*
  2. *All certification paperwork received from Tester for the (Current Year) MUST be stapled together and placed into a file folder marked with the company name the Tester is employed by.*
  3. *All paperwork MUST be stapled in the following order:*
     - *Original Tester Agreement Form for the (Current Year)*
     - *Copy of the DOH/BAT Validation Card for the (Current Year)*
     - *Copy of the Test Equipment Calibration for the (Current Year)*
  4. *All certification paperwork received from Tester MUST be kept for a minimum of two years.*
  5. *Paperwork such as questionable Test Report Form, Annual Tester Requirement Letter and/or Department of Health Complaint Form MUST be kept on file for as long as the Tester is Currently Registered in Washington State. (Verify annually on WETRC website)*
  6. *The following information MUST be recorded in Tokay:*
     - *Assigned Code for new and existing Testers*
     - *Tester Status (active/inactive)*
     - *Company Name, Address and Phone Number(s)*
     - *BAT Certification Number issued by the Department of Health*
     -
     - *Expiration date for BAT Validation*
     - *Test equipment serial number and calibration date*
     - *Tester Agreement and Customer List Status*
     - *Certification Status*
  7. *When all required paperwork is received and recorded, then the Tester name, certification number and phone number(s) is placed on the "City's Approved Tester List distributed to customers upon request".* ***(This is only for Tester requesting to be on the City's Approved Tester List)***
  8. *Tester NOT requesting to be on the City's Approved Tester List will only be track by Tokay.*

- ***BACKFLOW ASSEMBLY TESTER INVESTIGATION/COMPLAINT***
  1. *Cross Connection Specialist MUST notify Supervisor(s) for approval before starting investigation.*
  2. *Send a Certified Letter to the Tester informing them of the intended investigation. (This letter will require the Tester to Stop Testing Backflow Assemblies within the City's Water Distribution System until the investigation is complete and the Tester has been cleared by the City's Cross Connection Control Program in writing (No time frame will be set for investigation).*
  3. *Remove the Tester name, certification number and phone number(s) from the City's Approved Tester List and place status in Tokay as Inactive.*

4. *Review all Test Report Forms received from Tester for the (Current Year) to look for other discrepancies.*
5. *Compare previous history of Test Report Forms for each backflow assembly in question.*
6. *Conduct an on-site investigation and test of each backflow assembly in question.*
7. *Take pictures and documentation of each backflow assembly in question.*
8. *Review current Backflow Prevention Assemblies Field Test Procedures Approved for Use in Washington State to verify test procedures.*
9. *Review current Backflow Prevention Assemblies Approved for Installation in Washington State to verify status of backflow assembly.*
10. *Review findings of investigation with Supervisor(s) and acquire approval to discuss with Tester and Washington State Department of Health*
11. *Review finding of investigation with Tester.*
12. *Tester may submit a written rebuttal to the finding of the investigation after the review with the City's Cross Connection Control Program.*
13. *Review finding of investigation with Washington State Department of Health Certification office. (Fill out State Complaint Form) The State will conduct its own investigation and deliver its finding in writing.*
14. *Review the States finding with Supervisor(s) to determine status of Tester.*
    - *Tester Cleared – Send Certified Letter reinstating testing privileges within the City's Water Distribution System.*
    - *Tester Not Cleared – Send Certified Letter revoking testing privileges within the City's Water Distribution System for as long as the Tester is Currently Registered in Washington State.*
15. *All paperwork from the investigation MUST be kept on file for as long as the Tester is Currently Registered in Washington State*

Tester(s) not complying with any part of the aforementioned requirements shall be removed from the City's Approved Tester List. Test report forms shall be returned to the consumer and/or premises of the backflow prevention assemblies tested. The City reserves the right to deny a Backflow Assembly Tester from performing testing within the City's water distribution system. Tester(s) are responsible for obtaining all certifications needed to perform duties and responsibilities for testing and maintaining backflow prevention assemblies.

- Element 7: Develop and implement (when appropriate) procedures for responding to backflow incidents.
  The City's Cross-Connection Control Program has outlined a Backflow Incident Response Procedure to be followed if the City's water supply becomes contaminated or polluted due to a backflow incident.

BACKFLOW INCIDENT RESPONSE PLAN
(Supplement to the Emergency Plan)

General:

This backflow incident response plan is a supplement to the City's Response Emergency Plan. The City of Auburn Water Division is hereinafter referred to as the Purveyor.

- *Whenever the initial evaluation of a water quality complaint indicates that a backflow incident has occurred (potable water supply has been contaminated/polluted), may have occurred, or the reason for the complaint can not be explained as a "normal" aesthetic problem, a backflow incident investigation should be immediately initiated. Whenever a water main break or power outage (pumped systems) causes a widespread loss of water pressure (backsiphonage conditions) it is prudent to initiate a check of distribution water quality as a precursor to the need for a backflow incident investigation. It is wise to be conservative when dealing with public health matters.*

- *Within 24 hours of knowledge of any incident of possible contamination of the potable water supply, both in the distribution system and/or in the customer's plumbing system, the state and local county personnel should be notified (see list of emergency telephone numbers in the Public Works Emergency Response M. & O. Manual).*

- *A backflow incident investigation is often a team effort. The investigation should be made or (initially) led by a Certified Cross-Connection Control Specialist employed by the Purveyor. The investigation team should include local health and plumbing inspectors.*

General guidance on how to respond to a backflow incident may be obtained from the manual BACKFLOW INCIDENT INVESTIGATION PROCEDURES, First Edition, 1996, published by the Pacific Northwest Section, American Water Works Association, P. O. Box 19581, Portland, Oregon, 97280, telephone (877) 767-2992 (toll free).

Short-List of Tasks:
The following points are included for initial guidance for dealing with a backflow incident; the above referenced manual BACKFLOW INCIDENT INVESTIGATION PROCEDURES should be consulted as soon as possible, along with the completion of DOH form 331-457-F (see attached).

1. *As soon as possible, notify customers not to consume or use water. Start the notification with the customers nearest the assumed source of contamination (usually the customer(s) making the water quality complaint).*

   The customer should be informed about the reason for the backflow incident investigation, and the Purveyor's efforts to restore water quality as soon as possible. State that the customer will be informed when he may use water, the

need to boil water used for consumption until a satisfactory bacteriological test result is obtained from the lab, etc.

Where a customer cannot be contacted immediately, the Purveyor shall place a written notice on the front door handle, and a follow-up visit will be made to confirm that the customer received notice about the break and possible contamination of the water supply.

2. *Give consideration to the distribution system as a potential source of the contaminant (e.g., air valve inlet below ground).*

3. *Do not start flushing the distribution system until the source of contamination is identified. Flushing may aggravate the backflow situation and will likely remove the contaminant before a water sample can be collected to fully identify the contaminant.*

4. *Conduct a house-to-house survey to search for the source of contamination and the extent that the contaminant has spread through the distribution system. A check of water meters may show a return of water (meter running backward).*

5. *Isolate the portions of the system that are suspected of being contaminated by closing isolating valves; leave one valve open to ensure that positive water pressure is maintained throughout the isolated system.*

6. *Be sure to notify all affected customers in the isolated area, then the other customers in the system.*

7. *The public health and plumbing authorities should deal with all customers that may have consumed the contaminant, or had their plumbing systems contaminated.*

8. *Develop and implement a program for cleaning the contaminated distribution system.*

9. *For the customer where a cross-connection responsible for the system contamination is located, the Purveyor should discontinue water service until the Purveyor ordered corrective action is completed by the customer.*

Identification of the source and type of contaminant, and cleaning of a distribution system could take several days.

Most chemical or physical contaminants can be flushed from the water distribution system or customer's plumbing system with adequate flushing velocity. This may not be the case where scale and corrosion deposits (e.g., tuberculation on old cast iron mains) provides a restriction to obtaining adequate flushing velocity, or a chemical deposit or bacteriological slime (biofilm) on which the chemical contaminant may adhere.

To remove a chemical or physical contaminant, it may be necessary to provide a physical cleaning, using foam swabs (pigs), and/or to alter the form or the chemical contaminant, e.g., through oxidation using chlorination, or addition of detergents.

When adding any chemical (including chlorine) to remove a contaminant, it is essential that the chemistry of the contaminant is-fully understood. The wrong chemical reaction could make the contaminant more toxic, more difficult to remove, or both.

Where both a chemical and bacteriological contamination has occurred, disinfection should follow the removal of the chemical contaminant.

Where any bacteriological contamination is suspected, field disinfection should be done. To disinfect water mains using the "slug" or "continuous flow" method, a field unit should be used for chlorine injection, such as a chemical feed - metering or proportioning pump for sodium hypochlorite.

NOTE: Refer to the City's Backflow Incident Response Manual for additional information.

- Element 8: The purveyor shall include information on cross-connection control in the purveyor's existing program for educating consumers about water system operation. The public education program may include periodic bill inserts, public service announcements, pamphlet distribution, notification of new consumers and consumer confidence reports.

Public education is a key part of the City's Cross-Connection Control Program. Through public education, the City informs consumers of:

1. *The public health impacts of actual or potential Cross-Connection hazards.*
2. *The consumer's responsibility to protect the public water supply from contamination.*
3. *The City's requirement to comply with Washington State Department of Health regulations.*
4. *The City's policies on Cross-Connection Control.*

The following educational material is provided to the City's water consumers and available at City Hall, Maintenance & Operations, and by mail if requested.

- *Annual Consumer Confidence Report CCR*
- *City of Auburn internet home page, Water Quality*
- *Brochure – AWWA Caution Your Hose May Be Hazardous To Your Health*
- *Brochure – USC Working Together For Safe Water*
- *Brochure – AWWA Residential Fire Sprinkler Systems And Backflow Prevention*
- *Brochure – AWWA Lawn Irrigation Systems And Backflow Prevention*
- *Brochure – AWWA Help Protect Your Drinking Water From Contamination (Household Hazards)*
- *Brochure – AWWA Protect Your Water Heater From Thermal Expansion*
- *Brochure – AWWA Cross-Connections Can Create Health Hazards*

- *Comic Books – ABPA Buster Backflow, book 1 & 2*

The Cross-Connection Control Program annually participates at "Kids Day" where displays and information are presented to the City's water consumers.

- Element 9: The purveyor shall develop and maintain cross-connection control Records including, but not limited to, the following:
  (i) A master list of service connections and/or consumer's premises where the purveyor relies upon approved backflow preventers to protect the public water system from contamination, the assessed hazard level of each, and the required backflow preventer(s);
  (ii) Inventory information on backflow preventers that protect the public water system including:
  (A) Approved air gaps installed in lieu of approved assemblies including exact air gap location, assessed degree of hazard, installation date, history of inspections, inspection results, and person conducting inspections;
  (B) Approved backflow assemblies including exact assembly location, assembly description (type, manufacturer, model, size, and serial number), assessed degree of hazard, installation date, history of inspections, tests and repairs, test results, and person performing tests; and
  (C) Approved AVBs used for irrigation system applications including location, description (manufacturer, model, and size), installation date, history of inspection(s), and person performing inspection(s).
  (iii) Cross-connection program summary reports and backflow incident reports required under subsection (8) of this section.
  Subsection 8 – Recordkeeping and reporting
  (a) Purveyors shall keep cross-connection records for the following time frames:
    (ii) Records pertaining to the master list of service connections and/or consumer's premises required in subsection (3)(j)(i) of the section shall be kept as long as the premises pose a cross-connection hazard to the purveyor's distribution system;
    (iii) Records regarding inventory information required in subsection (3)(j)(ii) of this section shall be kept for five years or for the life of the approved backflow preventer whichever is shorter: and
    (iv) Records regarding backflow incidents and annual summary reports required in subsection (3) (j) (iii) of this section shall be kept for five years.
  (b) Purveyors may maintain cross-connection control records in original form or transfer data to tabular summaries.
  (c) Purveyor may maintain records or data in any media, such as paper, film, or electronic format.
  (d) The purveyor shall complete the cross-connection control program summary report annually. Report forms and guidance on completing the report are available from the department.

(e) The purveyor shall make all records and reports required in subsection (3) (j) of this section available to the department or its representative upon request.

The City's Cross-Connection Control Program currently uses electronic software to track all private, and city owned assemblies within Auburn Water's jurisdiction, including city owned assemblies fed by other water jurisdictions. Identifying level of hazard, location, installation date, inspection history, test and repair history, test results, and inspecting personnel on backflow prevention assemblies used for the protection of the City's water supply and/or backflow prevention assemblies used on fixtures in lieu of premises isolation.

Annual summary report:

WAC 246.290.490, part 8d – The purveyor shall complete the cross-connection control program summary report annually.

- *The annual summary report is reviewed and signed by the Water Operations Manager, and submitted to the Department of Health via mail, or secured web site.*
- *Copies of the annual summary report are available in the Cross-Connection Program Manual.*

Records & Reports:

Purveyors must develop and maintain records of their Cross-Connection Control program, as mandated by WAC 246.290.490. At a minimum, purveyors must maintain the following records:

- *Master list of service connections and/or premises where backflow prevention assemblies are installed to protection the public water system.*
- *Assessed hazard level of each backflow prevention assembly.*
- *Inventory information on approved air gaps, including location, degree of hazard, installation date, inspection history & results, and personnel conducting inspection.*
- *Backflow prevention assembly inventory information including location, assembly description, installation date & history, test & repair history, test results, and personnel conducting inspection.*
- *Program summary and backflow incident reports.*

- Element 10: Purveyors who distribute and/or have facilities that receive reclaimed water within their water service area shall meet any additional cross-connection control requirements imposed by the department in a permit issued under chapter 90.46 RCW.

No reclaimed water within the purveyor's water system.

General Program Requirements:

WAC246-290-490(1) (c): The purpose of the purveyor's cross-connection program shall be to protect the public water system, as defined in WAC 246-290-010, from contamination via cross-connections.

This is covered under Element 1 of the City's Cross Connection Control Program.

WAC 246-290-490(1) (d): The purveyor's responsibility for cross-connection control shall begin at the water supply source, include all the public water treatment, storage, and distribution facilities, and end at the point of delivery to the consumer's water system, which begins at the downstream end of the service connection or water meter located on the public right-of-way or utility-held easement.

The City's Cross Connection Control Program is not responsible for Cross Connection Control inside the consumer's building and/or property. The jurisdiction falls under the Local Administrative Authority as per the Uniform Plumbing Code for Cross Connection Control 603.0

WAC 246-290-490(1) (e): Under this section, purveyors are not responsible for eliminating or controlling cross-connections within the consumer's water system. Under chapter 19.27 RCW, the responsibility for cross-connection control within the consumer's water system, i.e., within the property lines of the consumer's premises, lies with the authority having jurisdiction.

The City's Cross Connection Control Program is responsible for eliminating and/or controlling Cross Connections from the consumer's water system to the public water system. Service connections from the water main shall have backflow protection that is commensurate with the degree of hazard as accessed by the City's Cross Connection Control Specialist. Examples of service connections include but are not limited to, domestic water, irrigation water and fire protection water.

WAC 246-290-490(2) (a) The purveyor shall develop and implement a cross-connection control program that meets the requirements of this section, but may establish a more stringent program through local ordinances, resolutions, codes, bylaws, or operating rules.

This is covered under Element 1 of the City's Cross Connection Control Program.

WAC 246-290-490(2) (b) Purveyors shall ensure the good engineering and public health protection practices are used in the development and implementation of cross-connection control programs. Department publications and the most recently published editions of references, such as, but not limited to, those listed

below, may be used as guidance for cross-connection program development and implementation:

(i) Manual of Cross-Connection Control published by the Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California (USC Manual); or

(ii) Cross-Connection Control Manual, Accepted Procedure and Practice published by the Pacific Northwest Section of the American Water Works Association (PNWS-AWWA Manual)

(iii) Guidance document: *Cross-Connection Control for Small Water Systems* published by the department.

The following reference guides and publications were used in the development of the City's Cross-Connection Control Program;

- *Washington Administrative Code WAC 246-290, Group A Public Water Systems, effective April 27, 2003*
- *Cross-Connection Control Manual Accepted Procedures ad Practice 6th Edition, December 1995*
- *Cross-Connection Control Manual Supplement 1st Edition, December 1995*
- *Cross-Connection Control for Small water Systems Guidance Document, September 2003*
- *Backflow Incident Investigation Procedures 1st Edition, December 1996*
- *Environmental Protection Agency Cross-Connection Control Manual, revised February 2003*
- *American Society of Sanitary Engineering, Performance Requirements for Outdoor Enclosures for Backflow Prevention Assemblies*
- *Backflow Prevention Assemblies Field Test Procedures Approved for use in Washington State, July 1998*
- *Uniform Plumbing Code 2000 Edition, September 1999*
- *Backflow Prevention Assemblies Approved for Installation in Washington State, published annually*
- *University of Southern California Manual of Cross-Connection Control 9th Edition, December 1993*
- *American Water Works Association Recommended Practice for Backflow Prevention and Cross-Connection Control M14 3rd Edition, 2004*
- *American water Works Association Distribution System Requirements for Fire Protection M31 3rd Edition, 1998*

WAC 246-290-490(2) (c) The purveyor may implement the cross-connection control program, or any portion thereof, directly or by means of a contract with another agency or party acceptable to the department.

The City's Water Division implements the Cross-Connection Control Program

WAC 246-290-490(2) (d) The purveyor shall coordinate with the authority having jurisdiction in all matters concerning cross-connection control. The purveyor shall document and describe the coordination, including delineation of responsibilities, in the written cross-connection control program required in (e) of this subsection.

- *The Local Administrative Authority shall enforce the Uniform Plumbing Code and Uniform Plumbing Code Standards for Cross-Connection Control, or subsequent revisions:*

    1. *603.0 Cross-Connection Control*
    2. *603.1 Approval of Devices or Assemblies*
    3. *603.2 Backflow Prevention Devices, Assemblies, and Methods*
    4. *603.3 General Requirements*
    5. *603.4 Specific Requirements*

    Amended 2000 UPC, effective July 1, 2002

The control of Cross-Connections requires cooperation between the water purveyor, local administrative authority, health officer and the consumer.

The City of Auburn Water Division shall make available to all Local Administrative agencies the information maintained in the purveyors Cross-Connection Control program files, which may include, but is not limited to:

1. *A master list of all premises that have been isolated from the purveyor water system in accordance with the purveyors' cross-connection control program.*

2. *Information concerning any internal cross-connections that come to the attention of the purveyor during risk assessment evaluations of premises.*

3. *Notification of any termination of water service for failure to comply with the requirements of WAC 246-290-490, Auburn City Code 13.12, and/or the City of Auburn Water Department Cross-Connection Control Program and/or any subsequent revisions.*

UPC 603.3.3 For devices and assemblies other than those regulated by the Washington Department of health in conjunction with the local water purveyor for the protection of the public water systems, the Administrative Authority shall ensure that the owner or responsible person shall have the backflow prevention assembly tested by a Washington State Department of Health certified backflow assembly tester:

- *At the time of installation, repair, or relocation; and*
- *At least on an annual schedule thereafter, unless more frequent testing is required by the Administrative Authority.*

WAC 246-290-490(2) (e) The purveyor shall include a written description of the cross-connection control program in the water system plan required under WAC

246-290-100 or the small water system management program required under WAC246-290-105. The cross-connection control program shall include the minimum program elements described in subsection (3) Minimum elements of a cross-connection control program

The city's cross connection control program is included in the Water system plan

WAC 246-290-490(2) (f) The purveyor shall ensure that cross-connection between the distribution system and a consumer's water system are eliminated or controlled by the installation of an approved backflow preventer commensurate with the degree of hazard. This can be accomplished by implementation of a cross-connection program that relies on:

(i) Premises isolation as defined in WAC 246-290-010; or

(ii) Premises isolation and in-premises protection as defined in WAC 246-290-010

The City's Cross Connection Control Program relies on premises isolation to protect the public water system. All domestic water service with the exception of single family residential shall be required to install a Reduced Pressure Backflow Assembly (RPBA). Fire protection systems and landscape irrigation system with chemical addition or injection shall be required to install a Reduced Pressure Backflow Assembly (RPBA). Backflow assembly type may be reduced to a lesser by submitting plumbing, irrigation and fire protection plans for the City's Cross Connection Specialist to review and conduct a hazard evaluation and risk assessment posed on the public water system. All changes shall be approved by the City's Cross Connection Specialist in writing.

WAC 246-290-490(2) (g) Purveyor with cross-connection control programs that rely both on premises isolation and in-premises protection:

(i) Shall comply with the premises isolation requirements specified in subsection (4) (b) of this section; and

(ii) May reduce premises isolation requirements and rely on in-premises protection for premises other than the type not addressed in subsection (4) (b) of this sections, if the conditions in (h) of this subsection are met:
(A) The in-premises backflow preventers provide a level of protection commensurate with the purveyor's assessed degree of hazard;
(B) Backflow preventers which provide the in-premises backflow protection meet the definition of approved backflow preventers as described in WAC 246-290-010;
(C) The approved backflow preventers are installed, inspected, tested (if applicable), maintained, and repaired in accordance with subsections (6) and (7) of this section;
(D) Records of the backflow preventers are maintained in accordance with subsections (3)(j) and (8) of this section; and
(E) The purveyor has reasonable access to the consumer's premises to conduct an initial hazard evaluation and periodic reevaluations to determine whether the in-premises protection is adequate to protect the purveyor's distribution system.

The City's Cross-Connection Control Program CAN NOT rely on in-premises protection to protect the distribution system for the following reasons:

- *Consumer can make plumbing changes at any time without notifying the city.*
- *Backflow preventers installed inside consumers buildings and/or premises are under the control of the Authority having Jurisdiction.*
- *Not enough staff to conduct initial inspections and re-inspections of consumer's premises.*

WAC 246-290-490(2) (h) The purveyor shall take appropriate corrective action as authorized by the legal instrument required by subsection (3)(b) of this section, when:
(i) A cross-connection exists that is not controlled commensurate to the degree of hazard assessed by the purveyor; or
(ii) A consumer fails to comply with the purveyor's requirements regarding the installation, inspection, testing, maintenance or repair of approved backflow preventers required by this chapter.

The City's Cross-Connection Control Program enforcement action includes, but is not limited to, a $250.00 fine each day and/or discontinuance (TURN OFF) of water service.

WAC 246-290-490(2) (i) The purveyor's corrective action may include, but is not limited to:
(i) Denying or discontinuing water service to a consumer's premises until the cross connection hazard is eliminated or controlled to the satisfaction of the purveyor;
(ii) Requiring the consumer to install an approved backflow preventer for premises isolation commensurate with the degree of hazard; or
(iii) The purveyor installing an approved backflow preventer for premises isolation commensurate with the degree of hazard.

The City's Cross-Connection Control Program enforcement action includes, but is not limited to, a $250.00 fine each day and/or discontinuance (TURN OFF) of water service.

WAC 246-290-490(2) (j) Except in the event of an emergency, purveyors shall notify the authority having jurisdiction prior to denying or discontinuing water service to a consumer's premises for one or more of the reasons listed in (h) of this subsection.

The City's Cross-Connection Control Program shall notify the Local Administrative Authority prior to denying and/or discontinuing water service except in the event of an emergency and/or backflow incident.

WAC 246-290-490(2) (k) The purveyor shall prohibit the intentional return of used water to the purveyor's distribution system. Used water includes, but is not

limited to, water used for heating,cooling, or other purposes within the consumer's water system.

The City's Cross Connection Control Program relies on premises isolation to protect the public water system. All domestic water service with the exception of single family residential shall be required to install a Reduced Pressure Backflow Assembly (RPBA). Fire protection systems and landscape irrigation system with chemical addition or injection shall be required to install a Reduced Pressure Backflow Assembly (RPBA). Backflow assembly type may be reduced to a lesser by submitting plumbing, irrigation and fire protection plans for the City's Cross Connection Specialist to review and conduct a hazard evaluation and risk assessment posed on the public water system. All changes shall be approved by the City's Cross Connection Specialist in writing.

WAC 246-290-490(3) (a) To be acceptable to the department, the purveyor's cross-connection control program shall include the minimum elements identified in the subsection.

The City's Cross Connection Control Program includes the Ten Elements as required by the WAC.

WAC 246-290-490(4) (a) The purveyor shall ensure that a Cross Connection Control Specialist:

(i) Assesses the degree of hazard posed by the consumer's water system upon the purveyor's distribution system; and

(ii) Determines the appropriate method of backflow protection for premises isolation in accordance with Table 8

Table 12
Appropriate Methods of Backflow Protection for Premises Isolation

Degree of Hazard	*Application Condition*	*Appropriate Approved Backflow Preventer*
High health cross-connection hazard	*Backsiphonage or backpressure backflow*	*AG, RPBA or RPDA*
Low health cross-connection hazard	*Backsiphonage or backpressure backflow*	*AG, RPBA, RPDA, DCVA or DCDA*

WAC246-290-490(4) (b) Premises isolation requirements.
(i) The purveyor shall ensure that an approved air gap, RPBA, or RPDA is installed for premises isolation for service connections to premises posing a high health cross-connection hazard including, but not limited to, those premises listed in Table 9, except those premises identified as severe in (b)(ii) of this subsection.
(ii) For service connections to premises posing a severe health cross-connection hazard including wastewater treatment plants, radioactive material processing plants, and nuclear reactors, the purveyor shall ensure that either an:
(A) Approved air gap is installed for premises isolation; or
(B) Approved RPBA or RPDA is installed for premises isolation in

combination with an in-plant approved air gap.
(iii) If the purveyor's CCS determines that no hazard exists for a connection serving premises of the type listed in Table 9, the purveyor may grant an exception to the facility

The city's cross connection control specialist will not grant exemptions to facility's recognized by the state as a table 13.

(iv) The purveyor shall document, on a case-by-case basis, the reasons for granting an exception under (b)(i) of this subsection and include the documentation in the cross-connection control program annual summary report required in subsection (8) of this section.

Table 13

High Health Cross-Connection Hazard Premises Requiring Premises Isolation by AG or RPBA/RPDA

- *Agricultural (farms and dairies)*
- *Beverage bottling plants*
- *Car washes*
- *Chemical plants*
- *Commercial laundries and dry cleaners*
- *Premises where both reclaimed water and potable water are provided*
- *Film processing facilities*
- *Food processing plants*
- *Hospitals, medical centers, nursing homes, veterinary, medical and dental clinics, and blood plasma centers;*
    1. *Hospitals (include psychiatric hospitals and alcohol and drug treatment centers)*
    2. *Same day surgery centers*
    3. *Out-patient clinics and offices*
    4. *Alternative health out-patient clinics and offices*
    5. *Psychiatric out-patient clinics and offices*
    6. *Chiropractors*
    7. *Hospice care centers*
    8. *Kidney dialysis centers*
    9. *Blood centers*
    10. *Dental clinics and offices*
    11. *Nursing homes*
    12. *Boarding homes*
    13. *Residential treatment centers*
    14. *Mortuaries*
    15. *Morgues and autopsy (not in hospitals)*
    16. *Veterinarian offices, clinics, and hospitals*
- *Premises with separate irrigation systems using the purveyor's water supply and with chemical addition*

- *Laboratories*
- *Metal plating industries*
- *Mortuaries*
- *Petroleum processing or storage plants*
- *Piers and docks*
- *Radioactive material processing plants or nuclear reactors**
- *Survey access denied or restricted*
- *Wastewater lift stations and pumping stations*
- *Wastewater treatment plants**
- *Premises with an unapproved auxiliary water supply interconnected with the potable water supply (private well, pond, tanks, etc.)*

WAC 246-290-490(4) (c) Backflow protection for single-family residences.

(i) For single-family residential service connections, the purveyor shall comply with the requirements of (b) of this subsection when applicable.

(ii) If the requirements of (b) of this subsection do not apply and the requirements specified in subsection (2)(g)(ii) of this section are met, the purveyor may rely on backflow protection provided at the point of hazard in accordance with WAC 51-56-0600 of the UPC for hazards such as, but not limited to:
(A) Irrigation systems;
(B) Swimming pools or spas;
(C) Ponds; and
(D) Boilers.
For example, the purveyor may accept an approved AVB on a residential irrigation system, if the AVB is properly installed under the UPC.

The City's Cross Connection Control Program is not responsible for Cross Connection Control inside the consumer's property. The jurisdiction falls under the Local Administrative Authority as per the Uniform Plumbing Code for Cross Connection Control 603.0

WAC 246-290-490(4) (d) Backflow protection for fire protection systems.
(i) Backflow protection is not required for residential flow-through or combination fire protection systems constructed of potable water piping and materials.
(ii) For service connections with fire protection systems other than flow-through or combination systems, the purveyor shall ensure that backflow protection consistent with WAC 51-56-0600 of the UPC is installed. The UPC requires minimum protection as follows:
(A) An RPBA or RPDA for fire protection systems with chemical addition or using unapproved auxiliary water supply; and
(B) A DCVA or DCDA for all other fire protection systems.
(iii) For connections made on or after April 9, 1999, the purveyor shall ensure that backflow protection is installed before water service is provided.
(iv) For existing fire protection systems:
(A) With chemical addition or using unapproved auxiliary supplies, the

purveyor shall ensure that backflow protection is installed within ninety days of the purveyor notifying the consumer of the high health cross connection hazard or in accordance with an alternate schedule acceptable
(B) Without chemical addition, without on-site storage, and using only the purveyor's water (i.e., no unapproved auxiliary supplies on or available to the premises), the purveyor shall ensure that backflow protection is installed in accordance with a schedule acceptable to the purveyor or at an earlier date if required by the code official administering the State Building Code as defined in chapter 51-04 WAC.
(C) When establishing backflow protection retrofitting schedules for fire protection systems that have the characteristics listed in (d)(iv)(B) of this subsection, the purveyor may consider factors such as, but not limited to, impacts of assembly installation on sprinkler performance, costs of *retrofitting, and difficulty of assembly installation.*

The City's Cross-Connection Control Program evaluation of new and existing fire protection system connections is as follows: New connections must comply with the City's Construction Standards for water, Design Standards 7.01.5.2 Fire Sprinkler Systems, Backflow Assembly Installation Standards (Technical Memo), along with any additional requirements by the Fire Authority and Authority having Jurisdiction and evaluated by the City's Cross-Connection Control Specialist during the permit and plan review process and before service is provided. Fire Sprinkler System service connection(s) to new consumers and/or premises shall have a risk assessment conducted by the City's Cross-Connection Control Specialist to determine if the backflow protection is commensurate with the degree of hazard, the backflow assembly is correctly installed and a valid test of the backflow assembly is conducted before the BFL permit is finaled.
Existing Fire Sprinkler System service connections are given a risk assessment by the City's Cross-Connection Specialist to determine if the backflow protection is commensurate with the degree of hazard. If the Fire Sprinkler System has the characteristics of WAC 246-290-490 (d) (iv) (a) – i.e. chemical addition or unapproved auxiliary supplies – the consumers and/or premises shall install backflow protection commensurate with the degree of hazard within (90) ninety days of the City notifying the consumes and/or premises or within an alternate schedule acceptable to the City's Cross-Connection Control Program. If the Fire Sprinkler System does not have chemical addition or unapproved auxiliary supplies, the consumer and/or premises shall install backflow protection commensurate with the degree of hazard within (90) ninety days of the City notifying the consumers and/or premises or within an alternate schedule acceptable to the City's Cross-Connection Control Program. Factors such as, but not limited to, impact of the backflow assembly installation on the fire sprinklers performance, costs of retrofitting, and difficulty of installation are consideration for an alternate schedule.

The cost/fees of installation, initial and annual testing, maintenance, and repair or replacement of the backflow assembly shall be the responsibility of the consumer as a condition of water service.

WAC 246-290-490(4) (e) Purveyors may require backflow preventers commensurate with the degree of hazard determines by the purveyor to be installed for premises isolation for connections serving premises that have characteristics such as, but not limited to, the following:

(i) Complex plumbing arrangements or plumbing potentially subject to frequent changes that make it impracticable to assess whether cross-connection hazards exist;

(ii) A repeated history of cross-connections being established or reestablished; or

(iii) Cross-connection hazard are unavoidable or not correctable, such as, but not limited to, tall buildings.

The City's Cross-Connection Control Program requires commensurate backflow protection for consumers and/or premises with the following defined characteristics:

- *Complex plumbing arrangements –*
- *Plumbing subject to frequent changes –*
- *Repeat history of cross-connections –*
- *Unavoidable cross-connection hazards –*
- *Non-correctable cross-connection hazards –*

WAC 246-290-490(5) (a) The purveyor shall ensure that all backflow prevention assemblies relied upon by the purveyor are models included on the current list of backflow prevention assemblies approved for use in Washington state.

The City's Cross-Connection Control Program verifies new backflow assemblies installed within the distribution system are on the current DOH Approved Assemblies List.

WAC 246-290-490(5) (b) The purveyor may rely on testable backflow prevention assemblies that are not currently approved by the department, if the assemblies:

(i) Were included on the department and/or USC list of approved backflow prevention assemblies at the time of installation;

(ii) Have been properly maintained;

(iii) Are commensurate with the purveyor's assessed degree of hazard; and

(iv) Have been inspected and tested at least annually and have successfully passed the annual test

The City's Cross-Connection Control Program archives DOH Approved Assemblies List for verification.

WAC 246-290-490(5) (c) The purveyor shall ensure that an unlisted backflow prevention assembly is replaced by an approved assembly commensurate with the degree of hazard, when the unlisted assembly:

(i) Does not meet the conditions specified in (b) (i) through (iv) of this subsection;

(ii) Is moved; or

(iii) Cannot be repaired using spare parts from the original manufacturer.

This is covered under Element 5 of the City's Cross Connection Control Program.

WAC 246.290.490(6) (a) The purveyor shall ensure that approved backflow preventers are installed in the orientation for which they are approved (if applicable).

The City's Cross-Connection Control Program requires all approved backflow assemblies to be installed in the orientation for which they are approved and provides installation standards for assembly size and type. Reduced Pressure Backflow Assemblies (RPBA) installed inside of a building shall be engineered by the plumbing contractor to meet the following: "The plumbing system needs to have adequate capacity to carry continuous discharge from relief valve of RPBA".

WAC 246.290.490(6) (b) The purveyor shall ensure that approved backflow preventers are installed in a manner that:

(i) Facilitates their proper operation, maintenance, inspection, and/or in-line testing (as applicable) using standard installation procedures acceptable to the department such as those in the USC Manual or PNWS-AWWA Manual;

(ii) Ensures that the assembly will not become submerged due to weather-related conditions such as flooding; and

(iii) Ensures compliance with all applicable safety regulations.

The City's Cross-Connection Control Program requires all approved backflow assemblies to be installed in the orientation for which they are approved and meets all the City's standards, USC Manual and PNWS-AWWA Manual. Backflow assemblies under the jurisdiction of the water purveyor shall not be installed in areas subject to flooding and shall meet all applicable safety regulations.

WAC 246.290.490(6) (c) The purveyor shall ensure that approved backflow assemblies for premises isolation are installed at a location adjacent to the meter or property line or an alternate location acceptable to the purveyor.
WAC 246.290.490(6) (d) When premises isolation assemblies are installed at an alternate location acceptable to the purveyor, the purveyor shall ensure that there are no connections between the point of delivery from the public water system and the approved backflow assembly, unless the installation of such a connection meets the purveyor's cross-connection control requirements and is specifically approved by the purveyor.

The City's Cross-Connection Control Program requires all approved backflow assemblies used for premises isolation be installed at a location adjacent to the meter or property line, however if the location is not feasible then the facilities property owner and/or representative shall submit a set of plans for approval by the City's Cross-Connection Control Specialist showing the new location of the backflow assembly and the piping from the meter.

WAC 246.290.490(6) (e) The purveyor shall ensure that approved backflow preventers are installed in accordance with the following time frames:

(i) For connections made on or after April 9, 1999, the following conditions shall be met before service is provided:
(A) The provisions of subsection (3)(d)(ii) of this section; and
(B) Satisfactory completion of the requirements of subsection (7) of this section.

(ii) For existing connections where the purveyor identifies a high health cross connection hazard, the provisions of (3)(d)(ii) of this section shall be met:
(A) Within ninety days of the purveyor notifying the consumer of the high health cross-connection hazard; or
(B) In accordance with an alternate schedule acceptable to the purveyor.

(iii) For existing connections where the purveyor identifies a low cross-connection hazard, the provisions of subsection (3)(d)(ii) of this section shall be met in accordance with a schedule acceptable to the purveyor.

This is covered under Element 2 of the City's Cross Connection Control Program.

WAC 246.290.490(6) (f) The purveyor shall ensure that bypass piping installed around any approved backflow preventer is equipped with an approved backflow preventer that:

(i) Affords at least the same level of protection as the approved backflow preventer that is being bypassed; and

(ii) Complies with all applicable requirements of this section.

The City's Cross-Connection Control Program requires all bypass piping and/or parallel connections to have the same level of protection as required by the City's Cross Connection Specialist.

WAC 246.290.490(8) (f) The purveyor shall notify the department, local administrative authority, and local health jurisdiction as soon as possible, but no later than the end of the next business day, when a backflow incident is known by the purveyor to have:

(i) Contaminated the public water system; or

(ii) Occurred within the premises of a consumer served by the purveyor.

This is covered under Element 7 of the City's Cross Connection Control Program.

WAC 246.290.490(8) (g) – The purveyor shall:

- Document details of backflow incidents on a form acceptable to the department such as the backflow incident report form included in the most recent edition of the PNWS-AWWA Manual: and
- Include all backflow incident report(s) in the annual cross0connection program summary report.

This is covered under Element 7 of the City's Cross Connection Control Program.

Definitions:

"Accessible" means reference to the installation of backflow preventers; accessible shall mean that such backflow preventers shall be placed so that they can be reached for testing and/or maintenance safely.

"Approval/approved" means authorized in writing by the health authority, department, purveyor, or other agency having jurisdiction.

"Approved air gap," means a physical separation between the free-flowing end of a potable water supply pipeline and the overflow rim of an open or non-pressurized receiving vessel.

To be an air gap approved by the department, the separation must be at least:

- Twice the diameter of the supply piping measured vertically from the overflow rim of the receiving vessel, and in no case be less than one inch, when unaffected by vertical surfaces (sidewalls); and:

- Three times the diameter of the supply piping, if the horizontal distance between the supply pipe and a vertical surface (sidewall) is less than or equal to three times the diameter of the supply pipe, or if the horizontal distance between the supply pipe and intersecting vertical surfaces (sidewalls) is less than or equal to four times the diameter of the supply pipe and in no case less than one and one-half inches.

"Approved atmospheric vacuum breaker" means an AVB of make, model, and size that is approved by the department. AVBs that appear on the current approved backflow prevention assemblies list developed by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research or that are listed or approved by other nationally recognized testing agencies (such as IAPMO, ANSI, or UL) acceptable to the local administrative authority are considered approved by the department.

"Approved backflow preventer" means an approved air gap, an approved backflow prevention assembly, or an approved AVB. The terms "approved backflow preventer," "approved air gap," or "approved backflow prevention assembly" refer only to those approved backflow preventers relied upon by the purveyor for the protection of the public water system. The requirements of WAC 246-290-490 do not apply to backflow preventers installed for other purposes.

"Approved backflow prevention assembly" means an RPBA, RPDA, DCVA, DCDA, PVBA, or SVBA of make, model, and size that is approved by the department. Assemblies that appear on the current approved backflow prevention assemblies list developed by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research or other entity acceptable to the department are considered approved by the department.

"As-built drawing" means the drawing created by an engineer from the collection of the original design plans, including changes made to the design or to the system that reflects the actual constructed condition of the water system.

"Assessment of risk" shall express the results of an evaluation (site survey) of a health, system, or plumbing hazard. The evaluation (site survey) required in making a determination of the type of backflow preventer needed to isolate a specific cross-connection (e.g., a plumbing fixture), or a group of cross-connections contained within a facility or complex of facilities (e.g. a shopping mall) is comprised of the following steps:

- Determine the degree of potential health hazard risk to the public water system. (In assessing the purveyor's risk of contamination of the public water system, if knowledge of the degree of hazard posed by a substance is not known, the purveyor must assume that it is high. Generally, almost all substance other than potable water is considered a health hazard of some degree).
- Determine the high or low probability that a cross-connection may occur.
    1. The probability increases that an existing cross-connection will go undetected as the complexity of a piping system increases.
    2. Piping changes will create new cross-connections, or change the operating conditions from backsiphonage to backpressure conditions.
    3. A backflow preventer could be by-passed or removed from service.
    4. A substance could be changed or increased in strength.
    5. A substance may deteriorate, and thus become a health hazard.
    6. A substance, when combined with the chemicals in the potable water supply, or when exposed to certain piping material, may react and form a compound that poses a health hazard, such as CO2 mixing with water to from carbolic acid that leaches copper from a service pipe.
    7. A substance, if it contains a bacteriological contaminant, could become a health hazard long after it enters the potable water supply, though bacteria re-growth.
- Determine the risk level acceptable to the purveyor, and
- Determine the reliability required of the backflow preventer.

"Auxiliary water supply" means any water supply on, or available to, a premise in addition to the purveyor's approved public potable water supply.

"Auxiliary water supply – approved" means an auxiliary water supply which has been investigated and approved by the health authority, meets water quality regulations, and is accepted by the water purveyor.

"Auxiliary water supply – unapproved" means an auxiliary water supply, which is not approved by the health authority and the water purveyor.

"Backflow" means the undesirable reversal of flow of water or other substances through a cross-connection into the public water system or consumer's potable water system.

"Backflow assembly tester" means a person holding a valid BAT certificate issued in accordance with chapter 246-292 WAC.

"Backflow prevention assembly" means the nomenclature "assembly" refers to a backflow preventer which are designed to be in-line tested and repaired, and to meet the head loss and flow requirements of the recognized approval authority. The "assembly" consists of the backflow prevention unit, two resilient seated shutoff valves, and test cock(s).

"Backflow prevention device" means the nomenclature "device" refers to a backflow preventer that is not designed for in-line testing.

"Backpressure" means a pressure (caused by a pump, elevated tank or piping, boiler, or other means) on the consumer's side of the service connection that is greater than the pressure provided by the public water system and which may cause backflow.

"Backsiphonage" means backflow due to a negative or reduced pressure within the purveyor's potable water supply.

"Combination fire protection system" means a fire sprinkler system that:

- Is supplied only by the purveyor's water.
- Does not have a fire department pumper connection; and
- Is constructed of approved potable water piping and materials that serve both the fire sprinkler system and the consumer's potable water system.

"Consumer" means any person receiving water from a public water system from either the meter, or the point where the service line connects with the distribution system if no meter is present. For purposes of cross-connection control, "consumer" means the owner or operator of a water system connected to a public water system through a service connection.

"Consumer's water system" as used in WAC 246-290-490, means any potable and/or industrial water system that begins at the public water system point of delivery; that is, at the immediate downstream side of the water meter, and is located on the consumer's premises. The consumer's water system includes all auxiliary sources of supply, storage, treatment, and distribution facilities, piping, plumbing, and fixtures under the control of the consumer.

"Contaminant" means a substance present in drinking water that may adversely affect the health of the consumer or the aesthetic qualities of the water.

"Cross-connection" means any actual or potential physical connection between a public water system or the consumer's water system and any source of non-potable liquid, solid, or gas that could contaminate the potable water supply by backflow.

"Cross-connection control program" means the administrative and technical procedures the purveyor implements to protect the public water system from contamination via cross-connections as required in WAC 246-290-490.

"Cross-connection control specialist" means a person holding a valid Washington State Cross-Connection Control Specialist certificate issued in accordance with Chapter 246-292 WAC.

"Cross-connection control summary report" means the annual report required by the department that describes the status of the purveyor's cross-connection control program.

"Check valve" the term "check valve" is a generic term used for a variety of valves that specifically allow flow in one direction only. The variety of such valves includes slanting disc checks, silent check, (wafer or globe), automatic control checks, rubber flapper checks, double disc swing checks, swing checks (internally or externally weighted), and a spring-loaded check. A check valve in an approved assembly must be an approved check valve (components of double check valve assemblies, reduced pressure backflow assemblies, pressure vacuum breakers, and spill resistant vacuum breaker) that is drip-tight in the normal direction of flow when the inlet pressure is at least one p.s.i.

"Confined space," means any space having a limited means of egress and not intended for continuous occupancy, which is subject to the accumulation of toxic or flammable contaminants or an oxygen deficient atmosphere.

"Containment" means to restrict or limit the flow of contaminated or polluted water to the meter or service connection where the public water enters the private (consumer's) water system. The two systems are separated by a backflow preventer commensurate with the degree of hazard.

"Contamination" means an impairment of the quality of the potable water, which creates an actual hazard to the public health through poisoning or through the spread of diseases by sewage, industrial fluids or waste. Also defined as severe or high hazard. The term "contamination" used in EPA and drinking water regulations "maximum contamination level" bestows a different meaning than that used in describing a cross-connection hazard.

"Department" means the Washington State Department of Health or health officer as identified in a joint plan of operation in accordance with WAC 246-290-030 (1).

"Design and construction standards" means department design guidance and other peer reviewed documents generally accepted by the engineering profession as containing fundamental criteria for design and construction of water facility projects. Design and construction standards are comprised of performance and sizing criteria and reference general construction materials and methods.

"Direct service connection," means a service hookup to a property that is contiguous to a water distribution main and where additional mains or extensions are not needed to provide service.

"Distribution system" means all piping components of a public water system that serve to convey water from transmission mains linked to source, storage and treatment facilities to the consumer excluding individual services.

"Dual distribution system" means a facility with two water systems, one potable and the other non-potable. The purpose of the non-potable water system is to reduce the cost of the potable water supply.

"Double check detector assembly" (DCDA) means an approved assembly consisting of two approved double check valve assemblies, set in parallel, equipped with a meter on the bypass line to detect small amounts of water leakage or use.

"Double check valve assembly" (DCVA) means an approved assembly consisting of two independently operating check valves, loaded to the closed position by springs or weights, and installed as a unit with, and between, two resilient seated shutoff valves and having suitable connections for testing.

"Emergency" means an unforeseen event that causes damage or disrupts normal operations and requires immediate action to protect public health and safety.

"Fire Flow" means the maximum rate and duration of water flow needed to suppress a fire under WAC246.293.640 or as required under local fire protection authority standards.

"Fire Suppression Storage" means the volume of stored water available during fire suppression activities to satisfy minimum pressure requirements per WAC 246.290.230.

"First Consumer" means the first service connection associated with any source (i.e., the point where water is first withdrawn for human consumption, excluding connections where water is delivered to another water system covered by these regulations).

"Flow-through fire protection system" means a fire sprinkler system that:

- Is supplied only by the purveyor's water;
- Does not have a fire department pumper connection;
- Is constructed of approved potable water piping and materials to which sprinkler heads are attached; and
- Terminates at a connection to a toilet or other plumbing fixture to prevent the water from becoming stagnant.

"Guideline" means a department document assisting the purveyor in meeting a rule requirement.

"Health officer" means the health officer of the city, county, city-county health department or district, or an authorized representative.

"High health cross-connection hazard" means a cross-connection, which could impair the quality of potable water and create an actual public health hazard through poisoning or spread of disease by sewage, industrial liquids or waste.

"High health hazard" means a physical or toxic hazard, which could be detrimental to ones, health.

"Human Consumption" means the use of water for drinking, bathing or showering, hand washing, food preparation, cooking, or oral hygiene.

"Internally-loaded check valve" means a check valve which is internally loaded, either by springs or weights, to the extent it will be drip tight with a 1 p.s.i. differential in the direction of flow.

"Industrial piping system" refers to that piping system that transmits, confines, or stores any fluids that are not approved potable water. Such a system would include all pipes, tanks, fixtures, equipment and other extensions of the non-potable water system.

"In-premises protection" means a method of protecting the health of consumers served by the consumer's potable water system, located within the property lines of the consumer's premises by the installation of an approved air gap or backflow prevention assembly at the point of hazard, which is generally a plumbing fixture.

"Local administrative authority" means the local official, board, department, or agency authorized to administer and enforce the provisions of the Uniform Plumbing Code as adopted under chapter 19.27 RCW.

"Low health cross-connection hazard" means a cross-connection that could cause an impairment of the quality of potable water to a degree that dose not create a hazard to the public health, but does adversely and unreasonably affect the aesthetic qualities of such potable waters for domestic use.

"Non-potable fluid" means any water, other liquid, gas, or other substance, which is not safe for human consumption, or is not a part of the public potable water supply as described by the health authority.

"Non-potable piping system" means a piping system, which is made of non-potable material. Such materials are to be considered non-potable if they can affect either the aesthetics or degradation of the healthfulness of the water. Examples of such pipe are black iron and certain plastics.

"Plumbing hazard" is a cross-connection in a consumer's potable water system.

"Potable water" means water, which is safe for human consumption, free from harmful or objectionable materials, as described by the health authority/department.

"Premises isolation" means a method of protecting a public water system by installation of approved air gap or approved backflow prevention assemblies at or near the service connection or alternative location acceptable to the purveyor (at the point where the water

purveyor no longer has legal jurisdiction and/or authority to control the water system) to isolate the consumer's water system from the purveyor's distribution system.

"Pressure vacuum breaker assembly" (PVBA) means an approved assembly consisting of a spring loaded check valve loaded to the closed position, an independently operating air inlet valve loaded to the open position and installed as a unit with and between two resilient seated shutoff valves and with suitable connections for testing. It is designed to protect against backsiphonage only.

"Private hydrant" means any hydrant, which is not owned, operated or maintained by the local water purveyor or his agent.

"Process water" means water that is directly connected to, or could come in contact with, an extreme high hazard situation, and must never be consumed by humans.

"Public health hazard" means a condition, device or practice which is conducive to the introduction of waterborne disease organisms, or harmful chemical, physical, or radioactive substance into a potable water system and which presents an unreasonable risk to health.

"Public water system" is defined and referenced under WAC 246-290-020.

"Purchased source," means water a purveyor purchases from a public water system not under the control of the purveyor for distribution to the purveyor's consumers.

"Purveyor" means an agency, subdivision of the state, municipal corporation, firm, company, mutual or cooperative association, institution, partnership, or person or other entity owning or operating a public water system. Purveyor also means the authorized agents of such entities.

"Reasonable risk" means the amount of risk acceptable to a prudent and reasonable water purveyor using reasonable diligence.

"Reclaimed water," means wastewater that has been treated for non-potable water use within the same facility or premise. Examples of use would be irrigation and industrial use.

"Reduced pressure backflow assembly" (RPBA) means an approved assembly consisting of two independently operating check valves, spring loaded to the closed position, separated by a spring loaded differential pressure relief valve loaded to the open position, and installed as a unit with and between two resilient seated shutoff valves and having four suitable test cocks for checking the water tightness of the check valves and the operation of the relief valve.

"Reduced pressure detector assembly" (RPDA) means an approved assembly consisting of two approved reduced pressure backflow assemblies, set in parallel, equipped with a meter on the bypass line to detect small amounts of water leakage or use. This unit must

be purchased as a complete assembly. The assembly may be allowed on fire line water services in place of an approved reduced pressure backflow assembly upon approval by the local water purveyor.

"Regional public water supplier" means a water system that provides drinking water to one, or more, other public water systems.

"Resident" means an individual living in a dwelling unit served by a public water system.

"Safe drinking water act" was legislation that was enacted by the United States Congress in 1974 to ensure that the public is provided with safe drinking water, thereby protecting the public welfare.

"Safe drinking water" means water which has sufficiently low concentrations of microbiological, inorganic chemical, organic chemical, radiological or physical substance so that individuals drinking such water at normal levels of consumption will not be exposed to disease organisms or other substances which may produce harmful physiological effects.

"Service connection" means a connection to a public water system designed to provide potable water to a single-family residence, or other residential or non-residential population.

"Toxicity" means the degree to which a substance is toxic that is poisonous, in relating to affecting the potability of the water supply.

"Unapproved auxiliary water supply" means a water supply (other than the purveyor's water supply) on or available to the consumer's premises that is either not approved for human consumption by the health agency having jurisdiction or is not otherwise acceptable to the purveyor.

"Unreasonable risk to health" means a risk to health, which is not necessary or acceptable to the water purveyor and/or consumer; a term used to distinguish what type of backflow prevention should be required.

"Uniform Plumbing Code" means the code adopted under RCW 19.27.031(4) and amended under chapter 51-46 WAC. This code establishes statewide minimum plumbing standards applicable within the property lines of the consumer's premises.

"USC FCCCHR" is the abbreviation for the University of Southern California Foundation for Cross Connection Control and Hydraulic Research. It is an agency, which test and approves backflow prevention assemblies by approved standards.

"Used water," means water which has left the control of the purveyor. In most cases, the potable water has moved past (downstream of) the water meter and/or the property line.

Application Form—CCC Program

Backflow Incident Report Form

331-457-F • June 2024

Note: Use this form to comply with WAC 246-290-490(8)(g).

Part 1: Public Water System (PWS) Information

PWS ID		PWS Name		County	Choose an item.

Part 2: Backflow Incident Information

A. Incident Identification

Incident Date	Date	Incident Time	Enter Time	*Incident ID (ODW Use Only)*	Internal ID#

B. Information on Premises where Backflow Originated

Name of Premises	Click or tap here to enter text.		
Premises Physical Address	Click or tap here to enter text.		
City	Enter Text	Zip Code	Click or tap here to enter text.
Premises Type	Non-Residential ☐	Residential ☐	
Premises category/description (Table 13 formerly Table 9 category,* if applicable)	Click or tap here to enter text.		
Most Recent Hazard Evaluation Prior To Incident *(mm/dd/yyyy)*	Click or tap here to enter text.	None ☐	
PWS's Assessed Hazard Level	Click or tap here to enter text.		
Premises Isolation Required by PWS? Yes ☐ No ☐	PWS Relies on In-Premises Protection? Yes ☐ No ☐		
Type of Backflow Preventer Required by PWS	Click or tap here to enter text.		
Other Hazard Evaluation Information	Click or tap here to enter text.		

**See WAC 246-290-490(4)(b)(i).*

C. Backflow Discovery Method

How was the backflow discovered? Check all that apply.	Direct observation Meter running backwards Water use decrease Disinfectant residual monitoring Water quality monitoring	☐ ☐ ☐ ☐ ☐	Water quality complaint Illness/injury complaint Result of Investigation Other (Describe)	☐ ☐ ☐ Click or tap here to enter text.
By whom was the incident reported to the PWS?	PWS Personnel Premises Owner/Occupant Other PWS Customer Backflow Assembly Tester	☐ ☐ ☐ ☐	Other (Please Specify)	Click or tap here to enter text.

D. Contaminant Information

Contaminant Type (Check all that apply.)	Microbiological	☐	Chemical	☐	Physical	☐
Describe contaminant (for example, the organism name, chemical, etc.). Please attach lab analysis or MSDS, if available.	Click or tap here to enter text.					

E. Extent and Effects of Contamination

Estimated extent of contamination	Contained within Premises Entered PWS Distribution System	☐ ☐
Estimated number of connections affected	Residential Non-residential	Click or tap here to enter text. Click or tap here to enter text.
Estimated population affected or at risk	Residential Non-residential	Click or tap here to enter text. Click or tap here to enter text.
Number of water quality complaints	Click or tap here to enter text.	

Describe water quality complaints	Click or tap here to enter text.
Number of illnesses reported	Click or tap here to enter text.
Describe Illnesses/irritation (specifics, if known)	Click or tap here to enter text.
Number of physical injuries (i.e., burns) or irritations (e.g., rashes) cases reported	Click or tap here to enter text.

Part 3: Public Water System (PWS) Information

A. Source of Contamination

Source of contaminant or fixture type (Check all that apply.)

Air conditioner/heat exchanger	☐	Industrial/commercial process water/fluid	☐
Auxiliary water supply	☐	Medical/dental fixture	☐
Beverage machine	☐	Reclaimed water system	☐
Boiler, hot water system	☐	Swimming pools, spa	☐
Chemical injector/aspirator	☐	Wastewater (sewage) system	☐
Fire protection system	☐	Other (specify)	Click or tap here to enter text.
Irrigation system (PWS supplied)	☐		

B. Distribution System Pressure Conditions in the Vicinity of the Backflow Incident

Backflow Type	Backsiphonage ☐	Backpressure ☐
Typical distribution system pressure in vicinity of incident (if range, enter lower end of range)	Click or tap here to enter text. psi	

Main/pressure status at time of incident (Check all that apply.)

Normal	☐	Source/plant outage	☐
Main break	☐	Scheduled water shutoff by PWS	☐
Firefighting	☐	Unscheduled/emergency shutoff	☐
Other high usage	☐	Unknown	☐
Power outage	☐	Other (specify)	Click or tap here to enter text.

Describe causes and circumstances leading to backflow incident.

Click or tap here to enter text.

C. Backflow Preventer Information/Installation/Approval Status at Site of Backflow

Complete the tables in C and D for the premises isolation preventer for either of the following situations:

- If a premises isolation backflow preventer is installed and the contaminant entered the PWS distribution system.
- If the premises isolation assembly is the only backflow preventer at the site.

In all other cases, complete tables in C and D for the in-premises backflow preventer installed at the fixture. If more than one backflow preventer was involved in the backflow incident, copy tables C and D and complete them for the additional preventer(s

If no backflow preventer was installed at the time the incident occurred, check this box ☐ and go directly to Part 4. Don't fill out the tables below (C and D).

Backflow Preventer Information	Type Installed	Click or tap here to enter text.
	Installed For	Click or tap here to enter text.
	Make	Click or tap here to enter text.
	Model	Click or tap here to enter text.
	Size	Click or tap here to enter text.
	Serial Number	Click or tap here to enter text.
	Date Installed	Click or tap to enter a date.

Installation Status. Check all that Apply.	Properly installed/plumbed	☐
	Improperly installed/plumbed	☐
	Improperly protected bypass present	☐
	If so, explain	Click or tap here to enter text.

Commensurate with assessed degree of hazard?	Yes ☐ No ☐	If not, explain. Click or tap here to enter text.
DOH/USC-approved at time of backflow incident?	Yes ☐ No ☐	If not, approved when installed? Yes ☐ No ☐

D. Backflow Preventer Inspection/Testing Information at Site of Backflow

Most recent inspection/test information prior to backflow incident. Attach test report(s), if available.	Not test report on record.	☐
	Date tested/inspected.	Click or tap to enter a date.
	Passed test/inspection *without* repairs.	☐
	Failed initial test/inspection, passed *after* repair.	☐
	Failed test/inspection, no repairs made.	☐
Inspection/test information after backflow incident [per WAC 246-290-490(7)(b)]. Attach test report.	Not tested/inspected.	☐
	Date tested/inspected.	Click or tap to enter a date.
	Passed test/inspection *without* repairs.	☐
	Failed initial test/inspection, passed *after* repair.	☐
	Failed test/inspection, no repairs made.	☐

Backflow Preventer failure information, if applicable. Check all that apply.	Fouled check	☐
	Debris	☐
	Weather-related damage	☐
	Damaged seat	☐
	Other	Click or tap here to enter text.

If preventer failed inspection/test, did failure allow backflow?	Yes ☐ No ☐	If yes, explain. Click or tap here to enter text.

Part 4: Corrective Action/Notification

Action *taken* by PWS to restore water quality. Check all that apply.	None	☐
	Flushed/cleaned mains	☐
	Flushed/cleaned plumbing	☐
	Disinfected mains	☐
	Disinfected plumbing	☐
	Other treatment (describe)	Click or tap here to enter text.
	Replaced mains	☐
	Replaced plumbing	☐
	Other	Click or tap here to enter text.

Action *ordered* by PWS to correct cross-connection. Check all that apply.	None	☐
	Eliminate cross-connection	☐
	Remove by-pass	☐
	Install new preventer For premises isolation For fixture protection	☐ ☐ ☐
	Change existing preventer Repair/replumb ..... Reinstall correctly ..... Replace with same type Upgrade type	☐ ☐ ☐ ☐ ☐
	Other	Click or tap here to enter text.

Action ordered accomplished?	Yes	☐	Date	Click or tap to enter a date.
	No	☐	Explain	Click or tap here to enter text.

Agency notifications per WAC 246-290-490(8)(f). Check all that apply.	DOH	☐
	Local Health Agency	☐
	Local Administrative Authority	☐
	Issued by end of next business day	Click or tap here to enter text.

Notifications of consumers in area of incident (check all that apply)	Population at risk	☐
	Public Notification (PN per DOH regs)	☐
	Boil Water Advisory	☐
	Other (describe)	Click or tap here to enter text.
Other enforcement/corrective actions (describe).	Click or tap here to enter text.	

Part 5: Cost of Backflow Incident *(Optional)*

Item	PWS Personnel Hours Expended	Cost to PWS ($)	Cost to Premises Owner ($)
Investigation	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Restoration of Water Quality	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Correction of Cross-Connection Situation	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Litigation and/or Settlement	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Other Not Included in Above	Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.

Part 6: Further Information/Documentation

Additional information about this incident such as pictures, sketches, newspaper/journal articles, water quality analyses, epidemiological reports, etc. is helpful. Provide information in electronic or hard copy form.

Click or tap here to enter text.

Click or tap here to enter text.

Click or tap here to enter text.

Part 7: Form Completion Information	
Note: Form should be completed by a person currently certified as a Cross-Connection Control Specialist.	
I certify that the information provided in this Backflow Incident Report is complete and accurate to the best of my knowledge.	
CCC Program Manager Name	Click or tap here to enter text.
Title	Click or tap here to enter text.
CCS Certification Number	Click or tap here to enter text.
Signature	
Date	Click or tap to enter a date.
Phone	Click or tap here to enter text.
Email	Click or tap here to enter text.
I have reviewed this report and certify that the information is complete and accurate to the best of my knowledge.	
PWS Manager/Representative Name	Click or tap here to enter text.
Title	Click or tap here to enter text.
Operator Certification Number	Click or tap here to enter text.
Signature	
Date	Click or tap to enter a date.

Please send completed backflow incident form to:

Mail
Washington State Department of Health
Office of Drinking Water—CCC Program Manager
P O Box 47822
Olympia, WA 98504-7822

Email cccprogram@doh.wa.gov

Please send any form questions, comments, or suggestions to the address above or email cccprogram@doh.wa.gov.

To request this document in another format, call 1-800-525-0127. Deaf or hard of hearing customers, please call 711 (Washington Relay) or email doh.information@doh.wa.gov. If in need of translation services, call 1-800-525-0127.

AUBURN WATER UTILITY

WATER SHORTAGE CONTINGENCY PLAN (WSCP)

SUPPLEMENT TO THE AUBURN
COMPREHENSIVE WATER PLAN

May 2024

TABLE OF CONTENTS

Introduction	3
Causes of Water Shortage	3
Objective	3
Phased Curtailment Plan	4
Stage I. Anticipated Water Shortage	5
Stage II. Serious Water Shortage	6
Stage III. Critical Water Shortage	9
Stage IV. Emergency Water Shortage	12
Stage V. Regional Disaster	14

Attachments

A. Contact List
B. Enforcement Procedural Check List

AUBURN WATER UTILITY
WATER SHORTAGE CONTINGENCY PLAN

Introduction

This Water Shortage Contingency Plan (WSCP) describes the actions and procedures for implementing Auburn City Code (ACC) 13.14 during impending or actual water shortages or emergencies caused by drought conditions, city water utility damage or destruction, or any other cause threatening to disrupt or diminish the city's water supply below its ability to meet normal water demands.

Causes of Water Shortage

Water supply in Auburn is sourced from a series of wells and springs, rendering the city less susceptible to short-term droughts compared to other regions however, unforeseen circumstances may still arise that could lead to water scarcity and challenge the city's ability to meet demand. These challenges include:

- Drought conditions resulting from below-average fall/winter precipitation, which may gradually impact local aquifers; and
- Extended periods of unusually warm and dry weather during the summer months could exacerbate water supply issues, particularly if the peak demand period is prolonged beyond the norm; and
- Unexpected events such as infrastructure failures, natural disasters, vandalism, or contamination incidents could create water supply issues.

Objective

The WSCP objective is to guide the City of Auburn Public Works Department in implementing water use restrictions and/or conservation measures necessary in response to a current or threatened water supply disruption or diminution.

This plan addresses both progressive situations, such as those that are weather-related, and more drastic and immediate situations such as facility emergencies (e.g., a pipeline break) to maintain levels of service essential for public health and safety, minimize adverse impacts on economic activity, and protect our customer's lifestyle.

Phased Curtailment Plan

This WSCP provides five stages of response to water shortages. The first three stages of the WSCP are intended for response to seasonal or long-term supply shortages. The fourth stage will be used in response to a sudden loss of distribution capability, such as a pipeline break or well failure. The fifth stage is to be implemented in response to regional emergencies. The five stages include a variety of communications, internal operations, and supply and demand management strategies as appropriate, and are characterized as follows:

- **Stage I. Anticipated Water Shortage. Voluntary Curtailment** – If a shortage appears imminent, the Public Works Department will enact Stage 1 of the Phased Curtailment Plan and conduct outreach and messaging regarding the benefits and necessity of water curtailment.

- **Stage II. Serious Water Shortage. Restricting Certain Activities** – If the voluntary curtailment messaging of Stage 1 does not result in the reduction needed, the Public Works Department will enact Stage II, following the Mayor issuing a proclamation of water shortage per Auburn City Code 13.14.020, and conduct outreach and messaging restricting certain activities for both residential and commercial customers.

- **Stage III. Critical Water Shortage. Mandatory Restrictions** – If the required curtailment of certain activities of Stage II does not result in the reduction needed, the Public Works Department will enact Stage III and conduct outreach and messaging prohibiting certain activities for both residential and commercial customers. This stage would be accompanied by an enforcement plan, which could include fines for repeated violation.

- **Stage IV. Emergency Water Shortage.** – In the event that immediate curtailment is required to maintain supply for human consumption, medical uses, sanitation, and fire protection, the Public Works Department will enact Stage IV, and conduct outreach and messaging prohibiting all non-essential uses. This stage would be accompanied by an enforcement plan, which includes fines for violations.

- **Stage V. Regional Disaster. Water rationing** – In the event of a regional disaster or water shortage, the Public Works Department will enact Stage V, would require rationing water by Auburn's customers.

Stage I. Anticipated Water Shortage. Voluntary Curtailment.

Objectives

- To prepare the City, relevant agencies, and water users for potential water shortage, thereby allowing all parties adequate planning and coordination time.
- To undertake supply management actions that forestall or minimize the need later for more stringent demand or supply management actions.

Triggers

Declining source levels and/or increased demand impacting source capacity, and no indication of trend reversal in the immediate future.

Stage I Actions

Coordinate monitoring and tracking of supply and demand conditions. Monitoring and tracking activities will be increased during this phase beyond normal intervals that would otherwise occur during typical work activities.

Public Messaging

The following is a typical public message response used during Stage I activities:

"The potential exists for lower-than-normal water supply if the water use trends the City is observing continue. At this time, the City is asking all customers to consider reducing your water use, where feasible. As water supply conditions are better understood, additional information and any potential request for action will be provided. Suggested activities for reducing water use are included below. If we all work together we can reduce the potential for the City needing to enact more significant enforcement steps to assure we have the available water supply for all our customers."

Suggested Water Use Reduction Activities

The following are some possible approaches to water reductions:

- Do not water outdoor plants and landscaping between 11:00 AM and 7:00 PM.
- Install Drip lines for watering plants and trees.
- During the Spring, water no more than 3 days per week, if needed.
- During the Summer, water no more than 6 days per week.
- Do not water on Sunday.
- Turn off irrigation on rainy days.
- Install water smart landscaping.
- Install Water Smart toilets, shower heads, and faucets.

Bill inserts, social media posts as well as website updates, indicating declining source levels and/or increased demand impacting sources, will be considered during Stage 1 messaging.

Stage II. Serious Water Shortage. Restricting Certain Activities.

Objectives

- To maintain or reduce demand to meet target consumption levels by customers through voluntary actions.
- To prevent or minimize the need for later prohibiting activities.
- To minimize the disruption to customers' lives and businesses while meeting target consumption goals.
- To maintain the highest water quality standards throughout the shortage.

Triggers

Public Works Director determines:

1. Decreasing static or pumping levels at city sources.
2. Source water levels are significantly below historical "normals" for the current time of year, and historic use patterns indicate that expected demands may not be met if this trend continues or worsens.

Stage II Actions

Staff will frequently monitor demand and supply and re-evaluate the situation based on current and projected water supply conditions, taking into considerations the time of year, and determine the appropriate actions and strategies. Staff will determine target consumption goals to be achieved, which may be revised as necessary.

Public Messaging

The Mayor issues a proclamation of water shortage per Auburn City Code 13.14.020.

The following is a typical public message response used during Stage II activities:

Due to … we are experiencing lower-than-normal water supply, creating a citywide water shortage. We are relying on the support and cooperation of all water users to stretch the available water supply to ensure that everyone has water to meet their required and basic needs. At this time, your demand needs to be reduced by ___%. To meet that reduction, the City is limiting certain activities, which is included in the list below. If everyone cooperates, we may avoid imposing more stringent restrictions.

Required Water Use Reduction Activities

The following are required actions to reduce water use:

- Do not water outdoor plants and landscaping between 11:00 AM and 7:00 PM.
- During the Spring, water no more than 2 days per week, if needed.
- During the Summer, water no more than 6 days per week.
- Do not water on Sunday.
- Turn off irrigation on rainy days.

Social media posts as well as website updates and notices with monthly billings will be used during Stage 2 messaging. More detailed information on messaging identified in Communications Actions section below.

Communication Actions

- Staff communicates the nature and scope of measures and strategy to the Mayor/Council and wholesale customers.
- Evaluate whether targeted consumption levels and supply conditions warrant a rate surcharge to reinforce voluntary actions and/or to recover revenue losses.
- Prepare appropriate legislation regarding emergency surcharges, if required.
- Initiate major public information, media and advertising campaign:
    - Promote consumption goals for typical households, and a percentage reduction goal for commercial customers.
    - Develop and implement a marketing plan, potentially including paid advertising, to 1) keep customers informed about supply and demand conditions, 2) reinforce desired customer actions; recommend customer actions to reduce demand, and 3) depending on conditions, remind customers that if goals are not achieved, restrictions may be necessary.
    - Identify what potential next steps will be used to reduce demand including timing, what type of restrictions and/or surcharges will be imposed.
    - Include water quality information in public information so that if flushing is necessary, the public understands that it is essential for water quality maintenance.
- Publicize water supply conditions on the City web page, update regularly. Ensure the information provided covers the needs of all key interests: the public, news media and purveyors.
- Contact largest customers (including wholesale customers) (refer to Attachment A) to request percentage reduction and conservation messaging be the same as the City. Contact other public agencies to inform them of conditions and request their cooperation.
- Provide direct messaging to City employees on requirements and restrictions for City water usage at City Facilities.
- Contact nurseries and landscape contractors to inform them of conditions and request their cooperation.
- Establish regular communication mechanism to keep City employees, especially utility account representatives, up to date on goals, conditions, and actions.
- Initiate remaining planning and preparation for Stage III.

Auburn Internal Operating Actions

- Continue appropriate actions from Stage I.
- Intensify data collection actions and monitoring of weather forecasts.
- Intensify supply side management techniques to optimize existing sources.
- Assess current water main flushing and reservoir cleaning activities to determine whether they should be accelerated for completion prior to the peak season or postponed to conserve supply.
- Assess water quality in reservoirs and distribution system to target for correction areas that may be predicted to experience severe degradation with reduced consumption.
- Increase water quality monitoring actions.
- Communicate flushing and reservoir cleaning policy to wholesale customers.
- Review current wholesale customer agreements regarding curtailment actions.
- Implement staffing reassignments as needed, and plan staging changes, which may be needed for the Stage III, including staff to enforce mandatory restrictions.

Supply and Demand Management Actions

- Restrict hydrant meter assembly permits to essential purposes.
- Activate any existing interties unless they are also under curtailment of use to increase supply availability.
- Request that Fire Department limit training exercises that use water.
- Request that City departments eliminate washing fleet vehicles unless recycling car washes are used.
- Request that City of Auburn spray parks reduce or eliminate hours of operation.
- Request that hosing sidewalks, driveways, parking lots, etc. be limited to situations that require it for public health and safety.
- Have Auburn field personnel “tag” observed obvious water waste such as hoses without shutoff nozzles, irrigation overspray, etc. with notice that informs customer about the supply conditions and need to reduce consumption.
- Evaluate ability to accelerate or enhance or expand long-term curtailment programs; implement as appropriate.
- Request that wholesale customers who have alternative sources use them.

Stage III. Critical Water Shortage. Mandatory Restrictions.

Objectives

- To achieve targeted consumption reduction goals by restricting defined water uses.
- To ensure that adequate water supply will be available during the duration of the situation to protect public health and safety.
- To minimize the disruption to customers' lives and businesses while meeting target consumption goals.
- To maintain the highest water quality standards throughout the shortage.
- To promote equity among customers by establishing clear restrictions that affect all customers.

Triggers

The Public Works Director determines that progression to this stage is required due to the goals established in Stage II have not been met and additional action is needed.

Stage III Actions

If not already implemented, activate interties and any other alternative sources of supply that are also not curtailed.

Public Message

The following is a typical public message response used during stage III activities:

"Due to … we are experiencing a serious water shortage. The previous water use reduction messaging did not provide the results to achieve the water savings necessary, it is now necessary to impose mandatory restrictions to reduce the demand on our water supply. We are continuing to rely on the support and cooperation of the public to comply with these restrictions but need the certainty and predictability of restricting certain water uses in order to ensure that throughout the duration of this shortage an adequate supply of water is maintained for public health and safety.

Mandatory Activities

The following actions are mandatory activities required actions to reduce water use:

- Do not water outdoor plants and landscaping between 11:00 AM and 7:00 PM.
- During the Spring, water no more than 2 days per week, if needed.
- During the Summer, water no more than 6 days per week.
- Do not water on Sunday.
- Irrigation must be turned off on rainy days.
- Do not leave hoses untended hoses without shut-off nozzles, including obvious leaks and water running to waste such as gutter flooding and sprinklers/irrigation whose spray pattern unnecessarily and significantly hits impervious areas.
- Do not water landscape strips with grass only.
- Car washing must be conducted at commercial car wash facilities that recycle water.
- Filling or refilling of pools is prohibited.

- Filling or refilling of ponds or ornamental lakes is prohibited, unless they provide for aquatic life.

Communication Actions

- The Public Works Director recommends moving to Stage III and other appropriate actions.
- Mayor and Council briefing.
- The Council adopts legislation on emergency surcharges, if needed.
- The public is informed about the nature and scope of the mandatory restrictions through a press conference, code red, social media, paid advertising and other means, including direct mail. The enforcement mechanisms, rate surcharges, target consumption goals, projections for how long restrictions will be in place and the reasons for imposing restrictions will also be identified, as will the possible consequences if goals are not met.
- Any exemptions from restrictions will be clearly identified.
- In communicating mandatory restrictions to the public, a clear distinction will be made between lawn/turf watering and watering gardens and ornamental plantings. The type and amount of watering allowed will be clearly defined.
- A "Customer Hotline" will be set up to report violations of restrictions.
- Customers with private wells that are conducting activities prohibited by the city during this stage, will be urged to install signs to let the public know that private well water is being used.
- Communication actions from Stages I and II will be continued and expanded upon as needed.

Auburn Internal Operating Actions

- Continue appropriate actions from Stages I and II.
- Evaluate options for using seasonal sources of supply.
- Finalize and implement procedures for exemptions from restrictions and/or emergency surcharges.
- Finalize and implement enforcement procedures for restrictions including highly visible "Water Watchers." (See Attachment B)
- Increase water quality monitoring actions at storage reservoirs.

Supply and Demand Management Actions

The Public Works Director will consider current supply and demand conditions before recommending mandatory restrictions. The specific restrictions imposed during Stage III would be determined based on the season of the year, targeted demand levels, and other considerations previously mentioned. Variations of the specific restrictions may be applied based on water supply conditions.

Other Restrictions

- Prohibit use of any ornamental fountain using drinking water for operation or make-up (turn off City Hall Fountain).
- Close City of Auburn spray park(s).
- Rescind hydrant permits.
- Prohibit washing of sidewalks, streets, decks or driveways except as necessary for public health and safety.
- Limit washing of buildings to situations that require it as part of scheduled building rehabilitation project (e.g., painting or staining).

Exemptions from Water Use Restrictions

Lawn watering ban exemption- The City may exempt newly installed lawns from a watering ban. Those wishing to request this exemption would need to contact the Public Works Director in writing and request a variance. The Public Works Director would consider the size of lawn and type of watering system to determine is an exemption is granted and if so to quantify the amount of water to be used under the exemption. Public Works staff will spot check for compliance.

The procedures relating to the exemption and the requirements of the exemption would be clearly outlined at the time of the ban. The following procedures are subject to change:

- Each person requesting a variance would be mailed a packet stating the requirements.
- Once the requirements are met, an authorization packet would be mailed to the customer including a sign to be posted indicating that utility requirements are being complied with.
- New lawns must be properly installed, meaning that two inches of organic soil amendment, such as composted yard waste, is cultivated into the top six inches of existing soil, at a minimum.
- New lawns must be watered according to guidelines to be provided in the packet mentioned above.
- For purposes of this exemption, “new lawn” refers to a lawn newly installed during the current year only. Over seeded or otherwise renovated lawns would not be exempt.
- If the shortage continues to worsen, this exemption would be revoked. It would also be revoked on a case-by-case basis if the rules stated above are not followed, or in the case of a water system emergency.

Monitoring and enforcement are at the discretion of the utility. The existence of an exemption to a watering ban would be announced early in the response process, for example, when the Stage II is invoked.

Other Exemptions –
For purposes of dust control, water may be applied to construction areas or other areas needing to comply with air quality requirements. Ball fields and playfields may be watered at the minimum rate necessary for dust control and safety purposes. The city will exempt customers with special medical needs such as home dialysis from any emergency surcharge provided individual customers notify the utility of such a need.

Stage IV. Emergency Water Shortage.

Objectives

- To maximize consumption reduction by restricting defined water uses.
- To ensure that adequate water supply will be available during the duration of the emergency to protect public health and safety.
- To minimize the disruption to customer's lives and businesses while meeting target consumption goals.
- To maintain the highest water quality standards throughout the shortage.
- To promote equity among customers by establishing clear restrictions that affect all customers.

Triggers

The Public Works Director enacts implementation of this stage in the event of a sudden disruption within the City's water system, or to a source of supply, which prevents the City from providing the usual level of service to our customers.

Stage IV Actions

If not already implemented, activate interties and any other alternative sources of supply that are available.

Public Message

The following is a typical public message response used during stage IV activities:

"Due to failure (break) in the water supply system (or source), it is necessary to impose mandatory restrictions to reduce water use. We are requesting the support and cooperation of our customers (within this defined geographic area) to immediately reduce their use of water to ensure that, throughout the duration of this emergency, an adequate supply of water is maintained for public health and safety."

Communication Actions

- The Public Works Director enacts Stage IV and other appropriate actions.
- Mayor and Council Briefing, when practical.
- The public is informed about the nature and scope of the emergency and mandatory restrictions through a press conference, door hangers, code red, social media, paid advertising and other means, including direct mail.
- Any exemptions from restrictions will be clearly identified.

Auburn Internal Operating Actions

- Assess options for supplying emergency water to affected customers. And if appropriate develop implementation plan and execute.
- Monitor water quality as required.

Supply and Demand Management Actions

The City will consider current supply and demand conditions before recommending restrictions. The specific restrictions imposed during Stage IV would be determined based on water supply conditions and the expected duration of the emergency.

Other Restrictions

- Prohibit hydrant permit withdrawals from within the affected water service area.
- Consider appropriate water use restrictions from Stage III depending on the type of shortage the City is experiencing.

Exemptions from Water Use Restrictions

The Public Works Director will exempt customers with special medical needs, such as home dialysis from any emergency surcharge, provided individual customers notify the utility of such a need.

Stage V. Regional Disaster

Introduction

Although many of the demand reduction measures employed would be like those used during a progressive, weather-related shortage, short term emergencies are unique because of a lack of preparation time and the urgency of immediate, large-scale demand reductions. Each emergency scenario is different, but most of them require major curtailment actions by customers.

Unlike drought, some emergencies would be localized, requiring demand reduction for only a limited geographic area.

There are several criteria by which to decide which demand management measures are appropriate to initially reduce demand during an emergency:

- Timing: can the measure(s) or action(s) deliver the necessary water savings in the necessary timeframe, i.e., are immediate savings needed or can the system support a gradual reduction in demand.
- Magnitude of savings: will the measure produce enough savings to make a meaningful difference i.e., reduce demand to the level the impaired water system can handle.
- Season: does the action make any impact at the time of year that the emergency occurs, i.e., banning lawn watering will have little impact in November.
- Costs: How severe are the cost implications of the measure to the customer, including local business and industry.

Supply and Demand Management During Emergencies

No single strategy can be created which will meet the needs of the department for all emergency scenarios. The criteria listed above create a framework for decision making. Emergencies initially require quick and immediate response. Once an assessment is made as to how long it will take to restore the system, the immediate response strategy may change if it appears that the repair process will be lengthy. The strategy for most emergencies can be narrowed to measures having the most immediate impact on water supply and consumption. All needed and available back up supplies would be activated during an emergency: interties, well-fields, off-loading wholesale customers who have other sources, etc.

Attachment A

Auburn Water Shortage Contingency Plan

CONTACT LIST

A working list of contacts for easy reference in case of a drought or emergency should be developed and regularly updated by the Water Utility Engineer in consultation with others in the Department. In addition to the communication elements contained in the WSCP, the following will be contacted directly in the event of a drought or emergency to inform them and ask for their support and cooperation in reducing demand.

Customers
List of large irrigators, including those using alternate sources.
List of large commercial and industrial customers.

City of Auburn Contacts
Department Directors

Other public agencies with high visibility water use

Business Groups

Attachment B

Auburn Water Shortage Contingency Plan

Enforcement Procedural Check List

MANDATORY RESTRICTIONS

- ✓ Determine number of warnings before surcharges applied
- ✓ Self-duplicating "Notice of Violation" forms printed; one to record violation with billing
- ✓ Staff with customer service and communication experience or training assigned to "Water Watch"
- ✓ Establish procedure for "Water Watchers" to record warnings and penalties on customer accounts
- ✓ Establish "hotline" for customers to report violations
- ✓ Vehicles for "Water Watch" made available; vehicles that are signed as "Water Watchers" will increase visibility and effectiveness of enforcement
- ✓ High priority routes established, e.g. areas with large lawns
- ✓ All field and customer service staff provided "fact sheets", Question and Answer sheets; briefed on restrictions, enforcement procedures; field staff trained on tagging obvious violations

CONCEPTUAL MITIGATION PLAN

Water Right Application No. G1-28404

Prepared for: The City of Auburn

Project No. 210355-A-02 • October 14, 2021

Aspect CONSULTING

earth + water

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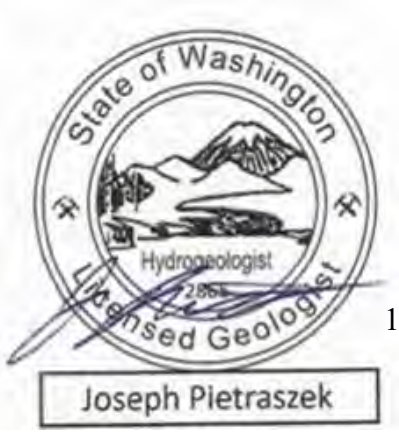

10/14/2021

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Contents

Executive Summary **ES-1**

1 Introduction **1**

2 Project Background **2**

2.1 Summary of City's Water System 2
2.2 Proposed Points of Withdrawal and Place of Use 3
2.3 Current Water Use 4
2.4 Future Demand 5
2.5 Projected Water Use Under G1-28404 5

3 Site Description **6**

3.1 Project Setting 6
3.2 Regional Geology 7
3.3 Hydrogeologic Setting 8
3.3.1 Groundwater Recharge and Discharge 9
3.3.2 Groundwater Elevations and Flow Directions 9
3.3.3 Hydraulic Connection between the Lower Alluvial Aquifer and Surface Water 10
3.4 Project Well Details 11

4 Regulatory Setting **13**

4.1 Instream Flow Regulations 13
4.1.1 Overview of WAC Chapter 173-509 13
4.1.2 Summary of Instream Flow Statistics 13
4.2 Existing Water Rights in Project Vicinity 15
4.3 Competing Applications in Project Vicinity 16
4.4 Preliminary Mitigation Sources 16
4.4.1 Potential Sources for Green River Mitigation 16
4.4.2 Potential Sources for White River Mitigation 17
4.4.3 Potential Sources for Mill Creek Mitigation 18
4.4.4 Additional Mitigation Options 18
4.5 Preliminary Mitigation Estimates 19

5 Project Next Steps **20**

References **21**

Limitations **22**

List of Tables

1 Summary of Auburn's Existing Water Rights 3

2 Project Well Completion Details 11

3 Average Percent of Days Below Minimum Instream Flows (1981-2020) 14

4 Consecutive Days without Interruptions during Winter Months (January through April) 15

List of Figures

1 Site Map (Wells and Service Area)

2 Geologic Map and Generalized Cross-Section A-A'

3 Surficial Geology

4 Geologic Cross-sections (from PGG, 1999)

5 Surficial Hydrogeologic Units

6 Hydrogeologic Cross-sections (from USGS, 2015)

7 Groundwater Contour Map

8 Comparison of Streamflows at the Green River near Auburn to WAC 173-509 ISFs

9 Water Rights Within 1 Mile of Project Wells

List of Appendices

A Well Logs

Executive Summary

The key points of the City of Auburn's Conceptual Mitigation Plan (CMP) for Water Right Application G1-28404 are provided below. Please refer to the main report for additional details.

- The Washington State Department of Ecology (Ecology) issued a Preliminary Permit in May 2021 to the City of Auburn (City) for Application G1-28404 (filed in January 2006), that requires the City to evaluate and identify options for mitigation due to the potential for impairment of surface waters that are subject to instream flow regulations.
- Application G1-28404 requests 13,443 acre-feet per year (afy) and 12,500 gallons per minute (Qi) from two existing supply wells (Well 6 and 7) and one potential new well (Well 8). Wells 6 and 7 are authorized as additional points of withdrawal under four of the City's existing water rights. The location of future Well 8 has not been determined but it is assumed Well 8 will be located near Wells 6 and 7, potentially in the Fulmer Wellfield area, with similar completion details.
- Wells 6 and 7 are completed in the lower alluvial aquifer in the Auburn Valley (also known as the Qvrd or Production Aquifer), which is known to be a highly productive aquifer capable of well yields in excess of 5,000 gallons per minute (gpm). A low permeability confining layer may provide some degree of hydraulic separation from shallow groundwater and surface water but, in general, the withdrawals from Wells 6 and 7 appear to be hydraulically connected to the Green River, and potentially the White River and Mill Creek.
- Washington Administrative Code (WAC) Chapter 173-509 established minimum instream flows in the Green River and closed tributaries to the Green River to further appropriations. The White River is closed to new appropriations under WAC Chapter 173-510. Water use under G1-28404 will likely require mitigation to offset potential impacts to the Green River when instream flows are not met. Potential impacts to the White River may also require mitigation.
- The City has various potential strategies for mitigation and water use under G1-28404 that include timing the withdrawals to occur during periods when instream flows are met. Mitigation would be used to offset lag time effects on the Green River after pumping stops (and to fully mitigate potential impacts to the White River and tributaries). Mitigation sources include:
    - Using existing City wells (and associated water rights) located in the White River drainage to augment flows in the Green River (and potentially tributaries including Mill Creek), or mitigation water from the 2010 Lake Tapps Area Water Resources Agreement with Cascade Water Alliance (CWA).

  - Offsetting streamflow impacts by changing the operation of certain wells to reduce impacts.
  - Purchasing water from Tacoma Public Utilities from Howard Hansen Reservoir to maintain streamflows in the Green River.
  - Purchasing water from CWA to maintain streamflows in the White River (for potential White River mitigation).
  - Using the City's existing water rights from West Hill Springs (for potential Mill Creek mitigation).1
  - Using infiltration basins, fed by either City water sources or reclaimed water, to provide delayed discharge to surface water.
- The potential impacts to streamflows and potential mitigation requirements under the projected use of G1-28404 will be evaluated in the Phase 2 (Testing and Analysis) portion of the Preliminary Permit.

[1] We note that under RCW 90.03.550(1), a water right for municipal water supply purposes may be utilized to benefit fish and wildlife, water quality, or other instream resources or related habitat values – i.e., for mitigation purposes – without changing the purpose of use. The City would request technical assistance from Ecology's Northwest Regional Office regarding an appropriate mechanism for documenting such mitigation.

1 Introduction

The City of Auburn (City) filed water right permit application G1-28404 in January 2006. The application requested 13,443 acre-feet per year (Qa; afy) and 12,500 gallons per minute (Qi; gpm) from two existing supply wells (Wells 6 and 7) and one future well to be developed (Well 8) in the Auburn/Duwamish Valley. In May 2021, the Washington State Department of Ecology (Ecology) issued a Preliminary Permit for Application G1-28404 that required the development of a mitigation and compliance plan before the water right could be authorized. This memorandum is intended to fulfill the reporting requirements for the Conceptual Mitigation Plan (CMP), Phase 1 of the work required under the Preliminary Permit.

Aspect Consulting, LLC (Aspect) developed this CMP to describe the features and processes relevant to the project, determine if the proposed use will impact Instream Flows (ISFs) or senior water users in the basin, and identify conceptual mitigation sources to offset potential impacts. Wells 6 and 7 are located in the Green-Duwamish Basin, which is part of Water Resources Inventory Area (WRIA) 9. Surface water in the Green-Duwamish Basin is subject to ISF regulations (WAC 173-509-030). Mitigation is required for new groundwater appropriations if the proposed use could impair streamflows in the Green River. Mitigation may also be required to offset impacts to the White River and one or more tributaries to the Green River. This evaluation assesses the potential impact to the surface water sources and the need for mitigation, identifies potential mitigation sources, and provides estimates of potential mitigation quantities.

This report is organized as follows:

- The Project background and an overview of the City's water system and water demand is described in Section 2.
- The Project setting and geologic and hydrogeologic conditions at the proposed points of withdrawal are presented in Section 3.
- The regulatory setting, including applicable ISF regulations and senior water rights, are presented in Section 4.
- The Conceptual Mitigation Plan that includes estimates of mitigation quantities and potential mitigation sources is presented in Section 5.
- Project next steps are summarized in Section 6.

2 Project Background

This section summarizes the City's existing water supply infrastructure and water rights portfolio, the Retail Water Service Area (RWSA), and the current and projected water use in the RWSA.

2.1 Summary of City's Water System

The City uses a combination of production wells and springs for its municipal water supply. The City's existing water right portfolio includes claims, permits and certificates that total an annual maximum quantity (Qa) of approximately 21,000 acre-feet per year (afy) and a maximum instantaneous quantity (Qi) of approximately 19,000 gallons per minute (gpm; Table 1). The City also has the opportunity to purchase water from Tacoma's wholesale water supply. The City's current and recent water usage from the various sources is presented in Section 2.3.

In 1995 Ecology issued a Change Authorization, which authorized two additional points of withdrawal to four of the City's primary water rights, in order to provide redundancy to the City's water system in the event of well or equipment failure (see Table 1). This authorization allowed for the construction of Wells 6 and 7. In 2009 Ecology issued a Superseding Certificate for G1-00277C to include Wells 6 and 7, and authorize an additional non-additive quantity of 2,480 afy to this water right.

Ecology noted that Wells 6 and 7 are completed in the same body of groundwater as Wells 1 through 4, even though the various wells are located in different drainages. Wells 1, 3, and 4 are located in the White River Drainage. Wells 2, 6 and 7 are located in the Green River drainage. The Green River is part of WRIA 9 and the White River is part of WRIA 10 (White River/Puyallup River). As detailed in Section 3.3, a portion of the alluvial groundwater in the White River drainage discharges into the Green River.

Table 1. Summary of Auburn's Existing Water Rights

Water Right Number	Sources	Annual Quantity, Additive (Acre-Feet)	Instantaneous Maximum Quantity (gpm)	Non-Additive Quantity (Acre-Feet)	WRIA/Drainage Basin Location
857	Coal Creek Springs	9,410	6,730		10 (White River)
S1-049354CL	West Hill Springs	1,010	625		9 (Green River)
3560-A	Well 1, 6, & 7	1,120	2,200		Well 1: 10 (White River) Wells 6/7: 9 (Green River)
G1-00277C[1]	Well 2, 6, & 7	1,360	2,400	2,480	9 (Green River)
G1-23629C	Well 3A & 3B, 6, & 7	3,600	2,800		Well 3: 10 (White River) Wells 6/7: 9 (Green River)
G1-20391C	Well 4, 6, & 7	3,600	2,800		Well 4: 10 (White River) Wells 6/7: 9 (Green River)
G1-23633C	Well 5, 5A, 5B, and 5C	720	1,000		10 (White River)
G1-25518C	Well 5A	0	167	187	10 (White River)
G1-22769C	Algona Well 1	175	500		10 (White River)
G1-25173C	Braunwood Well	6.5	20		10 (White River)
Total		**21,002**	**19,242**		

Notes:
1. An additional 2,480 afy is available under this authorization for non-additive withdrawals, which allows the City to pump water from other rights.

2.2 Proposed Points of Withdrawal and Place of Use

Application G1-28404 lists three proposed points of withdrawal that includes two existing City production wells (Wells 6 and 7) and a future well (Well 8). Wells 6 and 7 are located northeast of downtown Auburn, in the Green River valley in WRIA 9 (Figure 1). Well 6 is situated adjacent (within approximately 30 feet) of City Well 2 in Frank Fulmer Park. Well 7 is approximately 0.3 miles west-southwest of the Fulmer Park in the City's Veterans Memorial Park. Collectively, Wells 2, 6, and 7 are referred to as the

Fulmer Wellfield, and all are completed in unconsolidated glacial and alluvial sediments that are part of the Green River Valley. Additional details on Wells 6 and 7 are provided in Section 3.3.2.

The proposed location for future Well 8 was not specified in the application. For the purposes of this CMP and to facilitate its long-term water supply planning, the City assumes that Well 8 will be located in the same general vicinity of Wells 6 and 7 (i.e., Green River Valley and WRIA 9) and will be completed in the same groundwater source. The City has identified a potential location in the Fulmer wellfield (i.e., near Wells 6 and 2) for Well 8 but the precise location has not been determined or finalized.

The assumed location of Well 8 enables the development of a common mitigation strategy for all three proposed points of withdrawal. The CMP and eventual final mitigation plan may require modifications and/or additional evaluations if the final location and well completion for Well 8 differs significantly from Wells 6 and 7.

The proposed place of use for G1-28404 includes all of the City's Retail Water Service Area, as shown on Figure 1. Aspect completed a site visit on August 19, 2021, to visit the proposed points of withdrawal and place of use. All applicable site features were observed. A meeting with City personnel, including Lisa Tobin (Utilities Engineering Manager), Susan Fenhaus (Water Utility Engineer), and Josh Flanders (Water Distribution Supervisor) was conducted to discuss and detail all processes associated with the planned water use.

2.3 Current Water Use

As of 2018, the City's municipal water supply served approximately 24,000 connections for a population of approximately61,000. The City's total annual water use over the five most recent complete years on record (2016 through 2020) has ranged from approximately 7,000 to 7,800 afy (Figure 2). The average annual use from 2016 through 2020 translates to an average daily use of 6.6 million gallons per day (MGD). Over this same time period (2016-2020), the maximum daily use ranged from 11.3 to 14.5 MGD or 7,900 to 10,100 gpm (daily average)

Figure 2 shows the annual totals and maximum daily use from each of the City's existing water sources. The total production from Well 6 between 2018 and 2020 (Well 6 was not used in 2016 and 2017 while it was being rehabilitated and new pump controls installed) ranged from 1,100 and 1,400 afy and the annual maximum daily use ranged from 5.1 to 5.8 MGD (3,600 to 7,200 gpm). Well 7 was not used between 2016 and 2020 due to high levels of manganese (treatment facilities will be required before use).

The average annual quantities withdrawn from the City's other water sources between 2016 and 2020 include:

- Coal Creek Springs: 4,200 afy
- West Hill Springs: 460 afy
- Well 1: 540 afy
- Well 2: 820 afy (from 2018 through 2020; Well 2 was not used in 2016 and 2017)

- Well 3: Not used between 2016 and 2020 due to high levels of manganese (treatment facilities will be required before use)
- Well 4: 710 afy
- Braunwood Well: 5 afy

As noted in Section 2.1, withdrawals from Wells 6 and 7 are authorized under the City's existing water rights for Wells 1 through 4. The annual combined use from Wells 1 through 4 and Well 6 ranged from 1,900 to 3,000 afy between 2016 and 2020, or approximately 20 to 31 percent of the combined annual quantity (9,680 afy) that is currently authorized.

2.4 Future Demand

The City's 2015 Water System Plan (WSP) projected an average daily demand of up to approximately 12 MGD (13,000 afy) and a maximum daily demand of 19 MGD (13,000 gpm) by 2030 (Carollo, 2015). Recent updates to the WSP indicate that the City's annual water demand between 2014 and 2020 has been less than the projected demand in the City's 2015 WSP. This is attributed to the City's conservation program, low distribution system leakage, and Lake Meridian Water District having secured an alternate wholesale source instead of utilizing wholesale water from Auburn (City of Auburn, 2021).

The City expects to remain below the demand projected in the 2015 WSP through 2025. The City's future demand beyond 2025 is somewhat uncertain for various reasons, including an agreement to provide water to the Muckleshoot Indian Tribe, which could potentially involve substantial quantities. The City is currently re-evaluating its growth projections as part of its 2024 Comprehensive Plan update to meet the state's Growth Management Act requirements. This evaluation is expected to be completed by mid-2022. Updated demand projections will be incorporated into Phase 2 (Testing and Analysis Plan) of the Preliminary Permit.

2.5 Projected Water Use Under G1-28404

The City is pursuing the application for G1-28404 to provide additional supply for future demand and operational flexibility for its existing water rights. If authorized, the City could maximize the capacities at Wells 1, 2, and 4 and pump the surplus of the currently authorized quantities from Wells 6 and 7. Based on the pumping capacities of the existing wells, the following hypothetical scenario is:

- Well 1
  - Use entire quantity of 3560-A (1,120 afy Qa; 2,200 gpm Qi)
- Well 2
  - Current capacity is 1600 gpm
  - G1-00277C authorizes 2400 gpm (Qi)
  - Remaining 800 gpm (Qi) pumped from Well 6
- Well 3
  - No current pumping capacity from Well 3A/3B

    - G1-23629C authorizes 2800 gpm (Qi) – see below for strategy to use this water right
- Well 4
    - Use entire quantity of G1-20391C (3,600 afy Qa; 2,800 gpm Qi)

Based on these projections, pumping from Wells 6, 7, and future Well 8 could be used as follows:

- Well 6
    - Current capacity is 2400 gpm
    - Hypothetical future operations: 2,400 gpm
        - 800 gpm from G1-00277C (Well 2) and 1600 gpm from G1-23629C (Well 3)
- Well 7
    - Past observed capacity: 4,000 gpm
    - Hypothetical future operations: 4000 gpm
        - 1200 gpm from G1-23629C (Well 3)
        - 2800 gpm from new water right (G1-28404)
- Future Well 8
    - Authorized withdrawals under G1-28404

The future use from Wells 1 through 4 could be increased, particularly once the manganese treatment facilities are constructed for Wells 3A/3B. This could increase the City's use of G1-28404. As noted in Section 2.4, the City is currently re-evaluating their projected future demand. The proposed withdrawals from Wells 6, 7, and 8 will be refined in Phase 2 of the Preliminary Permit.

3 Site Description

3.1 Project Setting

The City is centrally located between Seattle and Tacoma in both King County and Pierce County, Washington and encompasses approximately 30 square miles. The City's RWSA generally follows or is located within the City's administrative City Limits (Figure 1). Several other public and private water systems provide water service within the City Limits.

The topographic setting was largely formed by glacial processes (Section 3.2) and generally consists of an alluvial valley surrounded by uplifted plateaus. There are two major river systems that flow through the lower valley. The Green River flows north

through the eastern part of the City and flows north to Puget Sound[2]. Mill Creek is a tributary of the Green River that flows northerly through the western portion of the City and flows into the Green River north of the City Limits.

The White River flows westerly through the southern part of the City before turning south to join the Puyallup River. The White River historically flowed into the Green River until a flood event in 1906 formed a large debris jam that diverted the course of the White River south into the Puyallup River. The historic course of the White River likely remains an influence on the regional hydrogeologic system, as alluvial groundwater in portions of the White River valley flows north into the Green River system (Section 3.3).

Ground elevations in the valley areas range between 50 to 100 feet. The terrain rises sharply to elevations of 400 to 500 feet on either side of the valley as well as in the southern portion of the City, south of the White River and between the White and Green Rivers. The topographic features influence the City's water distribution system and resulted in the division of the RWSA into four major service areas (Carollo, 2015).

3.2 Regional Geology

The City completed an extensive study of the geology and hydrogeology within the City's RWSA. The study results are documented in several volumes: 1996 Preliminary Hydrogeologic Characterization, Summary of 1997 Hydrogeologic Investigations, the 1997-1998 Test Well Drilling and Installation Program, and the 1999 Hydrogeologic Characterization Report. This Section and Section 3.2 use the key findings of these investigations (PGG, 1999) and a regional USGS study of the Puyallup and Green River drainages (USGS, 2015) to summarize the geologic and hydrogeologic conditions in the Project vicinity. The surficial geology of the project area is shown on Figure 3 and geologic cross-sections of the area developed by PGG (1999) are provided on Figures 4a and 4b.

The geologic setting is dominated by thick sequences of unconsolidated glacial and more recent alluvial sediments. The geologic sequences are differentiated between the upland areas and the Green and White River valleys, as detailed below.

The stratigraphy of the upland areas includes sequences of recessional and advance outwash sand and gravel, glacial till (compacted and poorly sorted mix of clay, silt, sand, and gravel), and fine-grained ice-contact material. More localized sequences of lacustrine, bog, and marsh deposits containing clay, silt, peat, and lenses of sand and gravel that were deposited during inter-glacial periods are also present in the upland areas. Bedrock in the upland areas is present at depths of several hundred feet or more.

The Green and White River valleys were largely excavated by subglacial meltwater. The valleys began to fill with sediment as glaciation ended and have continued to fill during the more recent Holocene period. Sediment thicknesses in the valleys exceed 1,000 feet in places. The deposition occurred through marine, lacustrine, fluvial, and deltaic processes resulting in a mix of fine and coarse-grained sediments. Volcanic mudflow deposits from Mount Rainier are also present, most notably the Osceola Mudflow

[2] The lower-most 12 miles of the Green River, within Seattle's city limits, is called the Duwamish River, also known as the Duwamish waterway.

deposit, which are present at depths of approximately 30 feet bgs in the vicinity of Wells 6 and 7 and may act as groundwater flow barriers (i.e., aquitards) in some areas (Section 3.3).

The primary geologic units in the vicinity of Wells 6 and 7 are recent and Quaternary age alluvial deposits (Qa); the Osceola Mudflow deposit (Qom), and Vashon-age recessional deltaic deposits (Qvrd).

3.3 Hydrogeologic Setting

Groundwater is present in both the upland and valley areas. There are multiple hydrogeologic units (aquifers) in the upland areas, including recessional and advance outwash deposits and older glacial deposits that underlie the outwash deposits. Multiple confining layers are present in portions of the upland areas. Groundwater in the outwash deposits in the upland areas generally discharge to the valley aquifers. Groundwater elevations and flow paths in the deeper aquifers vary but generally flows toward or in the same direction as the valley aquifer (USGS, 2015).

The hydrogeologic conditions of the valley aquifers are relevant to this CMP as Wells 6 and 7 are completed in the valley aquifers. We assume that potential future Well 8 will also be completed in the valley aquifer (Section 2.2). There are two primary alluvial aquifers in the Green River Valley: upper and lower with a confining layer separating the two in most portions of the valley. Wells 6 and 7 are completed in the lower alluvial aquifer (termed the Qvrd or production aquifer by PGG and the AL2 aquifer by the USGS). The PGG and USGS studies provide similar descriptions although the terminology differs.

The surficial hydrogeologic units developed by the USGS (2015) are provided on Figure 5 and two of the hydrogeologic cross-sections developed by the USGS (2015) that are applicable to the Well 6 and 7 vicinity are provided on Figure 6. The hydrogeologic units in the vicinity of Wells 6 and 7 are detailed below.

- **Upper Alluvial Aquifer**: A shallow unconfined aquifer is present in recent alluvial deposits termed the Qal aquifer by PGG and the AL1 aquifer by the USGS. This unit is generally less than 100 feet thick and groundwater is present as shallow as 10 to 15 feet bgs.
- **Confining Unit**: The Qal is underlain by a confining layer that is present throughout most of the Green River valley in the vicinity of Auburn. The confining layer is not present in the White River Valley. The USGS attributes the confining layer (termed the MFL confining layer) to the Osceola mudflow deposits while PGG states that the confining layer (termed Qal/Qud/Qom aquitard system) is a combination of mudflow and finer-grained glacial and alluvial deposits.

  The confining layer is approximately 10 feet thick in the vicinity of Wells 6 and 7 (PGG). In portions of the valley where the confining layer is not present, the upper and lower aquifers essentially form a single aquifer although the permeability varies laterally and vertically.

- **Lower Alluvial Aquifer/Production Aquifer**: Wells 6 and 7, along with the other City production wells, are completed in the lower alluvial aquifer, which is the Qvrd unit, also termed the production aquifer in PGG's studies, and termed the AL2 aquifer in the USGS report. The lithologic character of this unit is quite heterogeneous and varies greatly with depth. The thickness of the unit exceeds 250 ft within the Auburn Valley (Figures 4 and 6).

  Groundwater in this aquifer generally is confined; however, unconfined conditions may occur in areas where the overlying MFL confining unit is locally thin or absent. The lower alluvial aquifer is highly productive with transmissivities ranging from approximately 50,000 to more than 2,000,000 gallons per day per foot (gpd/ft). The USGS estimated the average hydraulic conductivity of this unit to be approximately 300 feet per day (USGS, 2015).

3.3.1 Groundwater Recharge and Discharge

Groundwater discharge from the upland aquifers is the primary source of recharge to the lower alluvial aquifer. The upland aquifers are primarily recharged by precipitation and leakage from Lake Tapps. Alluvial groundwater from the White River also discharges into the Green River alluvial aquifer (Section 3.3.2), and effectively serves as an additional source of recharge.

Groundwater in the vicinity of Wells 6 and 7 discharges into Puget Sound via the Green River and Duwamish River valley. Groundwater may also discharge into the Green River in gaining portions of the Green River.

3.3.2 Groundwater Elevations and Flow Directions

Groundwater elevations in the lower alluvial aquifer occur at elevations between approximately 60 and 70 feet above sea level (asl) in the vicinity of Wells 6 and 7. Groundwater in both the upper and lower valley aquifers flows northerly and generally parallel to the path of the Green River. Groundwater from the upland aquifers generally flows toward the valley aquifers and groundwater generally moves upward in the valley alluvial aquifers. PGG estimated horizontal groundwater flow velocities of approximately 1 to 4 feet per day in the lower alluvial aquifer. A generalized groundwater contour map taken from PGG (1999) is shown on Figure 7.

Water level data and previous studies indicate there is a groundwater divide in the alluvial aquifer where the White River enters the Valley. Alluvial groundwater flow in the White River where it enters the valley (southeast and upgradient of Wells 6 and 7) does not match the current path of the White River but instead flows north into the Green River. Groundwater in this vicinity appears to follow the historic course of the White River, which flowed into the Green River until the early 1900s (Section 3.1). The approximate location of the groundwater divide for the Qa aquifer is shown on Figure 7. Groundwater north of the divide flows into the Green River system while groundwater south of the divide flows south into the White River system. A similar groundwater divide exists in the lower alluvial aquifer (Qvrd aquifer) and may be slightly south of the Qa aquifer groundwater divide (PGG, 1999).

Based on this information, it appears that the City's water sources may capture water that would otherwise discharge into both the Green River and White River drainages as shown on Figure 7 and detailed below:

- City water sources in Green River System:
  - Well 2 is located in the Green River and it is widely understood that groundwater in this vicinity (including the vicinity of Wells 6 and 7) flows north and eventually discharges into Puget Sound or the Duwamish waterway.
  - West Hill Springs discharges into Mill Creek, which flows into the Green River.
  - Wells 1 and 4 are located in the White River watershed but groundwater in the vicinity of these wells discharges into the Green River.
- City water sources in the White River system:
  - Wells 5A/5B/5C are located south of the groundwater divide; groundwater in this vicinity discharges into the White River system.
  - The Algona Well is located south of the groundwater divide.
  - Coal Creek Springs drains into the White River; as noted below, a portion of the flow in the White River below Coal Creek Springs may infiltrate into the alluvial groundwater system and flow into the Green River.
- City water sources with uncertain discharge locations:
  - Wells 3A/3B are located in the White River drainage and very close to the Qa aquifer groundwater divide (Figure 7). Because the precise location of the groundwater divide in the lower alluvial aquifer (Qvrd aquifer) is uncertain, groundwater in the vicinity of Wells 3A/3B may flow into either the Green River or White River systems.[3]
  - A portion of the discharge from Coal Creek Springs (i.e., spring water that does not discharge into the White River or that infiltrates from the White River to groundwater) may also flow into the Green River.

The location of the groundwater divide has two significant implications for the CMP. First, a portion of the groundwater in the vicinity of Wells 6 and 7 may originate in the White River drainage. Second, the groundwater captured by Wells 6 and 7 may discharge entirely to the Green River even if the radius of influence from pumping extends into the White River surface water (topographic) drainage. The radius of influence of the two wells has not been fully established.

3.3.3 Hydraulic Connection between the Lower Alluvial Aquifer and Surface Water

Wells 6 and 7 are completed in the lower alluvial aquifer and a low-permeability confining layer separates the upper and lower alluvial aquifers (Section 3.2). The

[3] It is possible that the groundwater divide may shift slightly in response to seasonal water level fluctuations, meaning groundwater in the vicinity of Wells 3A/3B may discharge into both the Green River and White River systems depending on the time of year.

confining layer creates some degree of hydraulic separation between the lower alluvial aquifer and the Green River. The upper alluvial aquifer is believed to be directly connected to the Green River. The confining layer is not present throughout the Green River valley. In areas where the confining layer is not present, the lower alluvial aquifer is hydraulically connected to the shallow aquifer and the Green River, although lower permeability zones that are present in the alluvial deposits can limit the degree of connectivity.

Pump testing of Well 6 in 2016 produced a drawdown response in a monitoring well completed in the shallow aquifer (TW-6S) that is approximately 1,800 feet northeast of Well 6, indicating some degree of hydraulic connection through the confining layer. The response at TW-6S, however, was delayed and muted when compared to the adjacent monitoring well completed in the lower alluvial aquifer (TW-6D).

3.4 Project Well Details

Wells 6 and 7 are completed in unconsolidated glacial and alluvial sediments that are part of the Green River lower alluvial aquifer. Well completion details are provided in Table 2.

Well 6 was drilled in 1998, completed to a depth of 390 feet below ground surface (bgs) and screened from 320 feet to 380 feet bgs with a 20-inch diameter, 80-slot (0.08-inch openings) stainless steel well screen.

Well 7 was drilled in 1997, completed to a depth of 303 feet bgs and screened from 235 feet to 295 feet bgs with a 10-inch diameter, 100-slot (0.1-inch openings) stainless steel well screen.

Well logs for both wells are included in Appendix A. Both wells are highly productive.

Table 2. Project Well Completion Details

Attribute	Well 6	Well 7
Ground Elevation (elevation, ft)	74	80*
Depth, ft bgs (elevation, ft)	390 (-226)	300 (-220)
Screen Interval ft bgs (elevation, ft)	320 to 380 (-246 to -206)	235 to 295 (-155 to -215)
Approximate Static Water Level ft bgs (elevation, ft)	14 (60)	12 (68)
Approximate Capacity (gpm)	2,400 (current capacity)	4,000 (past observed capacity)

Note:
*Well 7 surface elevation is approximate.

Golder Associates produced a technical memo on Well 6 and 7 in 2013 describing the rehabilitation progress for the two production wells (Golder, 2016). Since it was drilled in 1999, the capacity of Well 6 had decreased by about 75 to 79 percent. It was restored to

production capacity of 2,400 gpm following rehabilitation in 2017. Well 7 had showed a specific capacity decrease of about 6 to 7 percent compared to when it was drilled in 1997.

Well 7 is currently not in use due to high levels of manganese. The City plans to install a manganese treatment system for Well 7, which would allow for the ongoing use of Well 7. A phased implementation of the treatment system is proposed. The initial phase is planned for the medium-term planning horizon and will treat half of the well's capacity, and phase 2 in the long-term planning horizon will treat the entire well capacity (Carollo, 2015).

4 Regulatory Setting

4.1 Instream Flow Regulations

4.1.1 Overview of WAC Chapter 173-509

New appropriations in the Green-Duwamish Basin are subject to instream flow regulations (WAC Chapter 173-509) that were adopted in 1980 and are senior to the City's water right application (G1-28404). The Green River instream flow regulations (WAC 173-509-030) are based on the measured streamflows at two U.S. Geological Survey (USGS) gauging stations on the Green River: the Green River near Palmer (12.1067.00) and the Green River near Auburn (12.1130.00). The Palmer gauge is approximately 20 miles upstream of Auburn and the Auburn gauge is located approximately ½ mile east of Wells 6 and 7 just upstream of the 8th Street NE bridge.

Per WAC 173-509-030(1), the Auburn gauge will be used to condition future water right appropriations downstream from the Palmer gauge. Therefore, the withdrawals from Wells 6 and 7 associated with G1-28404 will be subject to the instream flow regulations as measured at the Auburn gauge. In addition to establishing instream flows, WAC Chapter 173-509 incorporated the 1953 administrative closure of all tributaries to the Green River.

WAC Chapter 173-509 effectively requires mitigation (offsets) for any potential impacts to the Green River when instream flows are not met. Further, under the *Postema* decision, potential impacts to closed tributary streams may affect the availability of water for a new groundwater appropriation. WAC 173-509-050 provides: "Future groundwater withdrawal permits will not be affected by this chapter unless such withdrawal would clearly have an adverse impact upon the surface water system contrary to the intent and objectives of [WAC Chapter 173-509]."

With respect to Green River mitigation, relevant considerations include predicting precisely when streamflows will drop below the ISFs, and the lag time associated with impacts to instream flows from groundwater withdrawals.

4.1.2 Summary of Instream Flow Statistics

A review of historical streamflow data indicates that on average streamflows are below the ISFs at the Auburn gauge approximately 20 percent of the time (Table 3). Streamflows are generally more often below the minimum ISFs during the summer months, falling below the minimum ISFs 35 percent to 61 percent of the time between June and September. The flows are frequently above the minimum ISFs during the spring and winter months but can drop to below ISFs at any time of the year. For example, in April, streamflow falls below the minimum ISFs approximately 3 percent of the time.

ISFs are not met more frequently during dry years and less frequently during wet years. For example, in Water Year 1992 (dry year) instream flows were not met on 54 percent of the days (196 days), while in Water Year 2014 (wet year) instream flows were not met on only 2 percent of the days (7 days). Figure 8 shows that streamflows at the Green River gauge near Auburn have been below ISFs in only 8 years (20%) of the 40-year

period of record (Water year 1981 through Water Year 2020) between the months of February to April.

Table 3. Average Percent of Days Below Minimum Instream Flows (1981-2020)

Month	Green River Near Auburn, WA (USGS 1214900)	Green River at Purification Plan Near Palmer, WA (USGS 12106700)
January	5%	2%
February	5%	3%
March	5%	6%
April	3%	3%
May	8%	5%
June	35%	26%
July	44%	45%
August	61%	56%
September	43%	31%
October	23%	25%
November	16%	11%
December	10%	4%
Average	20%	18%

Notes:

1. Minimum instream flows from WAC 173-509-030; withdrawals from G1-28404 will be subject to instream flows at the Auburn gauge.

2. The period of record is for Water Year 1981 (October 1990) through Water Year 2020 (September 2020), which represents the full (complete year) period of record since the Green-Duwamish Basin instream flow regulations became effective.

The historical data show that there have been long consecutive periods when streamflows have remained above instream levels. For example, streamflows at the Auburn gauge remained above instream flows from October 14, 2009, to August 11, 2011, a period of 680 consecutive days. The difficulty, however, is predicting when interruptions will occur, particularly during the summer and early fall when streamflows are low and relatively close to instream flow levels.

Interruptions are more predictable during the winter months. The data show that interruptions will not occur for relatively long periods of time after high flow events in the winter months because streamflows recede relatively slowly in the Green River in the winter. For example, when streamflows exceed 4,000 cfs between January and April, the historic data show that streamflows will remain above instream flow levels for at least 25

days. Table 3 shows the minimum, average, and maximum number of days before an interruption occurred in the Green River at various high flow levels. The predictability of interruptions not occurring during these periods may provide some operational flexibility in the pumping of Wells 6 and 7, depending on the rate of streamflow depletion after pumping stops.

Table 4. Consecutive Days without Interruptions during Winter Months (January through April)

Range of Green River Streamflow (Auburn Gauge), January to April	Minimum Number of Days before interruption	Average Number of Days before interruption	Maximum Number of Days before interruption
0 - 999	0	66	601
1,000 – 1,999	2	116	600
2.000 – 2,999	5	133	595
3.000 – 3,999	13	167	597
4,000 – 4,999	25	162	596
5,000 – 5,999	25	170	525
6,000 – 6,999	26	141	528
7,000 – 7,999	27	158	527
8,000 – 8,999	28	168	503
9,000 – 9,999	97	154	502
10,000 +	98	156	219

Note:
The period of record is for Water Year 1981 (October 1990) through Water Year 2020 (September 2020), which represents the full (complete year) period of record since the Green-Duwamish Basin instream flow regulations became effective.

4.2 Existing Water Rights in Project Vicinity

Existing senior water rights in the vicinity of Wells 6 and 7 are shown on Figure 9. The following senior water rights within an approximately 1-mile radius of the Project were identified in Ecology's database:

- Surface water rights include 22 certificated rights and 1 water right claim, as well as 1 permit that is not a certificated right.
- Groundwater rights records include 14 certificated rights and 6 water right claims, as well as 6 permits that are not certificated rights.

The instream flow regulations and required mitigation elements associated with G1-28404 effectively eliminates the potential for impairment to senior surface water rights. The closest existing groundwater right is located approximately one-half mile northeast

from Well 6 and 3/4 mile northeast from Well 7. Impairment to existing senior groundwater rights associated with G1-28404 is unlikely considering the productivity of the aquifer and minimal radial drawdown response measured during previous aquifer testing in the lower alluvial aquifer (Golder, 2016).

A specific requirement in Phase 2 of the Preliminary Permit (Testing and Analysis) is to conduct a pumping test on the Supply Well and a more thorough assessment of potential impairment to senior rights will be included in that analysis.

4.3 Competing Applications in Project Vicinity

Geomatrix (2006) reviewed water right applications with priority dates senior to G1-28404 in the project vicinity in 2006. That review identified 14 senior applications in WRIA 9 (Green-Duwamish) that were determined to involve withdrawal from the same water source as G1-28404. The applications were filed from five different applicants: King County Water District 111, Lakehaven Utility District, City of Kent, City of Seatac, and Mariani Water Systems. Ecology has rejected all fourteen applications since 2006 and none are currently active. Several new applications have been filed in WRIA 9 since 2006 that remain active but those applications are junior to G1-28404 and cannot impair any potential use associated with G1-28404.

Geomatrix (2006) also identified four senior applications in the White River basin that could potentially involve withdrawal from the same water source as G1-28404. Since 2006, Ecology has processed three of the four applications as part of the Lake Tapps project and only one application remains active:

- **Henry Flatt (G2-30254)**. Application for domestic and irrigation use with a May 13, 2005 priority date. The application requests 150 gpm of groundwater to irrigate 2.5 acres. The place of use is southwest (upgradient) of Lake Tapps (T20N, R5E, S36) and approximately 8 miles from Wells 6 and 7. Ecology's WRATS database lists the application as active. No other documentation beyond the application form is available. The potential withdrawal under G1-28404 is unlikely to impair use associated with this application.

4.4 Preliminary Mitigation Sources

The proposed withdrawals from Wells 6 and 7, and/or a new well location will require mitigation of impacts to the Green River, and potentially the White River and/or other tributaries including Mill Creek. Conceptual mitigation sources to address potential impacts to streamflows in the Green River, White River and Mill Creek are provided in the following sub-sections. Additionally, general mitigation measures are provided that could be used to provide additional mitigation if warranted after Phase 2 testing and analysis.

4.4.1 Potential Sources for Green River Mitigation

Managed Use of Existing Authorizations: This option would involve the managed use of the City's existing water rights portfolio to minimize authorized withdrawals under G1-28404 during periods when Green River streamflows are below or near the ISFs. This option requires additional analysis of the timing and location of streamflow impacts associated with the pumping of Wells 6 and 7. If the timing, and specifically the stream

depletion lag times after pumping stops can be sufficiently characterized, the City could cease withdrawing under G1-28404 at predefined streamflow levels and then provide mitigation (using the potential options listed below) to offset small impacts associated with stream depletion lag times that may persist for longer durations after pumping stops.

The City could utilize its other existing points of withdrawal when ISFs are not met, including the preferential use of withdrawals from its sources in the White River drainage (Algona Well, Coal Creek Springs, and potentially Well 3A/3B).

The specific operational elements are to be determined and would utilize estimates of groundwater travel times, stream depletion lag times, and the City's water demand projections. This analysis would be developed and performed as part of Phase 2 (Testing and Analysis) of the Preliminary Permit.

Non-Use of Existing Municipal Water Right Authorizations: This option would entail cessation of authorized withdrawals under the City's various senior water rights to offset impacts to instream flows. Conceptually, this measure would be combined with the City withdrawing water under G1-28404 only during periods when instream flows are met; any impacts to the Green River would be offset by a commensurate level of non-use of other senior water rights.

Diversions from White River Sources: This option is the most conventional form of mitigation: diversion of water from a separate watershed to augment streamflows in a different watershed. Potential scenarios include diversion of both surface and/or groundwater. Surface water from the Cascade Water Alliance as discussed in Section 4.3.2 could be pumped into the Green River and/or into infiltration basins to facilitate delayed recharge to the Green River. The use of infiltration basins is described in Section 5.1.4.

Use of Water from Howard Hansen Dam: This option entails purchasing water from Tacoma Public Utilities (Tacoma) that is stored in Howard Hansen Dam. The City would purchase water from Tacoma under its existing agreement with Tacoma for purchasing water from Pipeline 5. Instead of the City withdrawing the chlorinated and fluoridated water from Pipeline 5 and discharging it after de-chlorination into the Green River, Tacoma would release the purchased water from Howard Hansen Dam into the Green River to mitigate potential impacts.

4.4.2 Potential Sources for White River Mitigation

2010 Water Resources Agreement with Cascade Water Alliance (CWA). The Cities of Auburn, Bonney Lake, Buckley, and Sumner entered into the 2010 Lake Tapps Area Water Resources Agreement with CWA (February 5, 2010), in consideration of CWA's purchase of Lake Tapps for water supply from Puget Sound Energy. This Agreement is intended to offset the impact of CWA's future water supply withdrawals from Lake Tapps on the water resources of the four cities. The Agreement provides for CWA to set aside Regional Reserved Water for use by the four cities to mitigate loss of water supply, in the amounts of 7 cfs for average daily demand and 10 cfs for peak demand. Auburn's share of the Regional Reserved Water is 1.3 million gallons per day (mgd) average daily demand and 2.5 mgd peak demand (3.88 cfs). Auburn would use this mitigation water by

keeping the water in the White River rather than diverting it, by having CWA release water into the White River from the Lake Tapps tailrace.

Use of the Algona Well. The municipal water right associated with the City's Algona Well (G1-22769C) could be allocated to preserve groundwater resources or support instream flows on an annual and continuous basis. The water right for the Algona Well authorizes instantaneous withdrawals up to 500 gpm (1.1 cfs) and an annual quantity of 75 afy.

4.4.3 Potential Sources for Mill Creek Mitigation

Use of West Hill Springs. The municipal water right associated with the West Hill Springs (S1-049354CL) could be allocated to support instream flows on an annual and continuous basis. The water right for West Hill Springs authorizes instantaneous withdrawals up to 625 gpm (1.4 cfs) and an annual quantity of 1,010 afy. West Hill Springs discharges into Mill Creek to the northwest of Wells 6 and 7 at River Mile 4.25 on Mill Creek.

Direct discharge of City Water. This option would entail discharge of City water directly into Mill Creek. The water that is discharged could be sourced from any of the City's authorized sources that do not adversely impact Mill Creek (i.e., anywhere except Wells 2, 6, and 7). The City has identified a potential point of discharge downstream of West Hill Springs at approximately River Mile 6.2.

4.4.4 Additional Mitigation Options

Additional mitigation options could be utilized to offset potential impacts at various locations and drainages. The conceptual element is to utilize infiltration basins that are hydraulically connected to surface water such that water will infiltrate to the shallow groundwater system and eventually discharge to surface water. The lag time response to the surface water is a function of the location of the infiltration basins relative to the target surface water location and the shallow groundwater travel times. The infiltration basins could be operated on a continuous or near-continuous basis to provide a relatively constant surface water benefit during periods of use from G1-28404. The source water introduced into the infiltrations could be obtained from multiple sources but would be operated in a similar conceptual manner, as detailed below.

Infiltration of Reclaimed Water: The use of infiltration basins to benefit streamflows is a potential reuse opportunity for wastewater or reclaimed water. Wastewater from the City is currently sent to the King County Wastewater Treatment Division's regional sewer system.

Managed Aquifer Recharge: Water could be diverted from other drainages into infiltration basins. Alternatively, water could be captured from the same drainage as the target surface water body during seasonally wet periods when ISFs are met, and then allowed to infiltrate slowly to provide streamflow benefits during periods when ISFs are potentially not met. This type of system is conventionally known as managed aquifer recharge.

4.5 Preliminary Mitigation Estimates

The City's water right application (G1-28404) requests 13,443 acre-feet per year (Qa; afy) and 12,500 gallons per minute (Qi; gpm). However, based on their current water rights and future demand projections (Section 2.2 and 2.3), the full quantity will likely not be needed to meet the projected future water demand. As noted in Section 2.4, the City is currently re-evaluating its demand projections. The mitigation requirements will be a function of the updated demand projections and the projected use from G1-28404 to meet the projected demand.

Quantification of the projected use under G1-28404 and the potential impacts to streamflows from that use will be evaluated in Phase 2 (Testing and Analysis). The City plans to utilize a detailed regional groundwater flow model being developed by the USGS to predict the potential impacts to surface water and associated lag times. The USGS has been developing the model for a number of years and it is currently in its final phase of testing and validation. Per recent communication with USGS staff, we anticipate the model will be ready for use by early- to mid-2022.

Mitigation offsets would be quantified based on the amounts necessary to address impacts of pumping under G1-28404 to surface water bodies that are subject to ISFs and closures in WAC Chapter 173-509. Because groundwater withdrawn from Wells 6 and 7 is hydraulically connected to surface water, a 1:1 offset would be needed unless the authorized pumping under G1-28404 can be managed such that the pumping will occur during periods when ISFs are met. Under this managed pumping scenario, mitigation offsets would be identified to address the delayed impacts to surface water after pumping stops.

The City anticipates utilizing the various mitigation strategies presented in Section 5.1 to develop a mitigation program meeting the requirements of RCW 90.03.290 and WAC Chapter 173-509.

5 Project Next Steps

We understand that Ecology has a 60-day period upon submittal of this CMP to review and provide comments. The City will address comments, as needed, based on the nature and extent of the comments. The City may request a meeting with Ecology to discuss the CMP and the potential scope of work for Phase 2 following Ecology's review and comment period for this report.

Per the Preliminary Permit, the Testing and Analysis Plan (Phase 2) is due to Ecology on October 15, 2022, and the Final Mitigation and Compliance Plan (Phase 3) is due October 15, 2023. The City plans to utilize a USGS groundwater flow model as part of Phase 2 (Section 5.2). The model is expected to be ready for use by early- to mid-2022. The City may request a reasonable extension to the remaining Preliminary Permit schedule to facilitate the use of the USGS model.

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Limitations

Work for this project was performed for the City of Auburn (Client), and this report was prepared in accordance with generally accepted professional practices for the nature and conditions of work completed in the same or similar localities, at the time the work was performed. This report does not represent a legal opinion. No other warranty, expressed or implied, is made.

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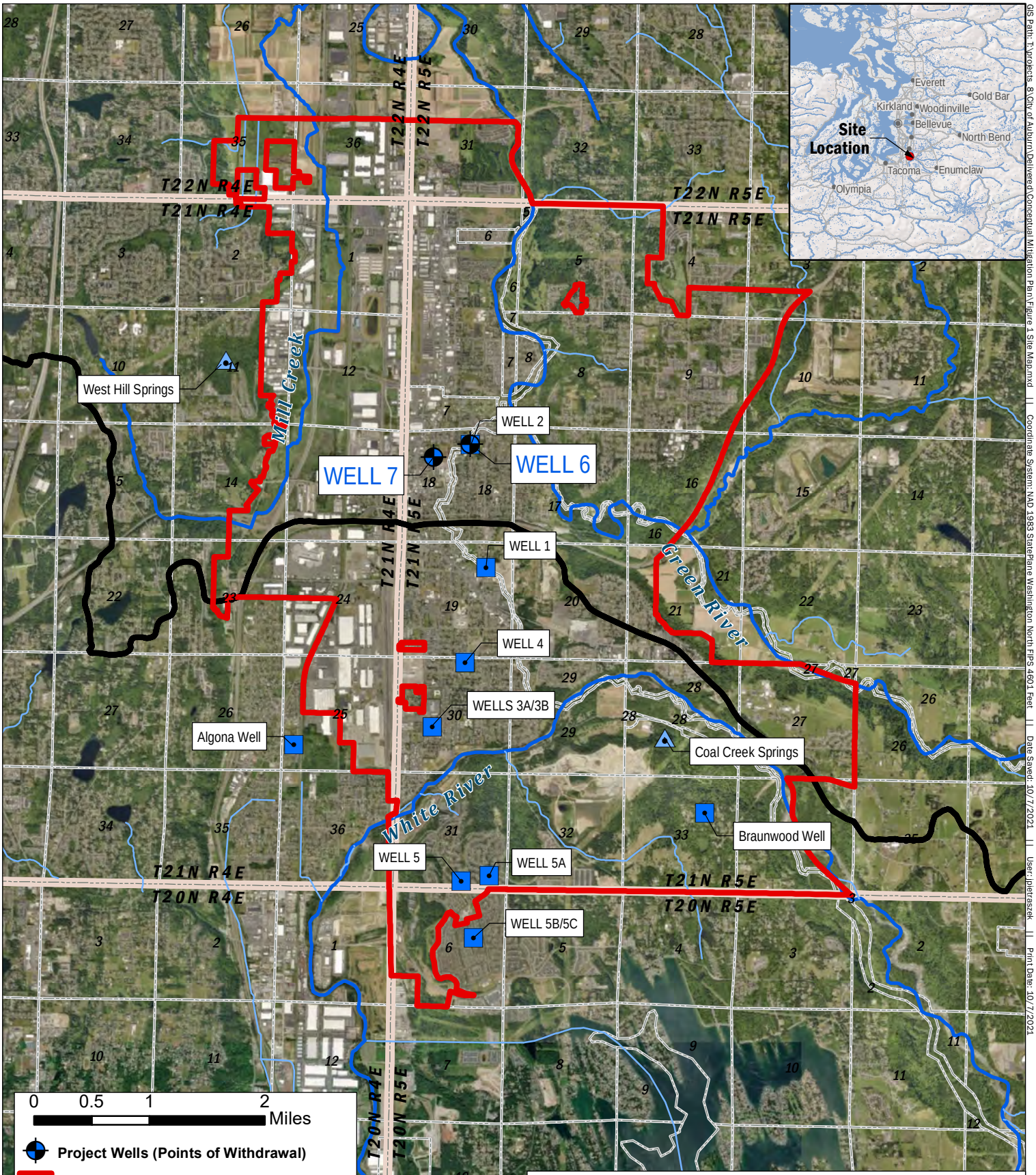
FIGURES



Site Map

Conceptual Mitigation Plan
City of Auburn
Auburn, Washington

Aspect CONSULTING	OCT-2021	BY: JHP	FIGURE NO. 1
	PROJECT NO. 210355	REVISED BY: ---	

GIS Path: T:\projects_93\City of Auburn\Delivered\Conceptual Mitigation Plan\Figure 1 Site Map.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 10/7/2021 || User: jhetrazek || Print Date: 10/7/2021

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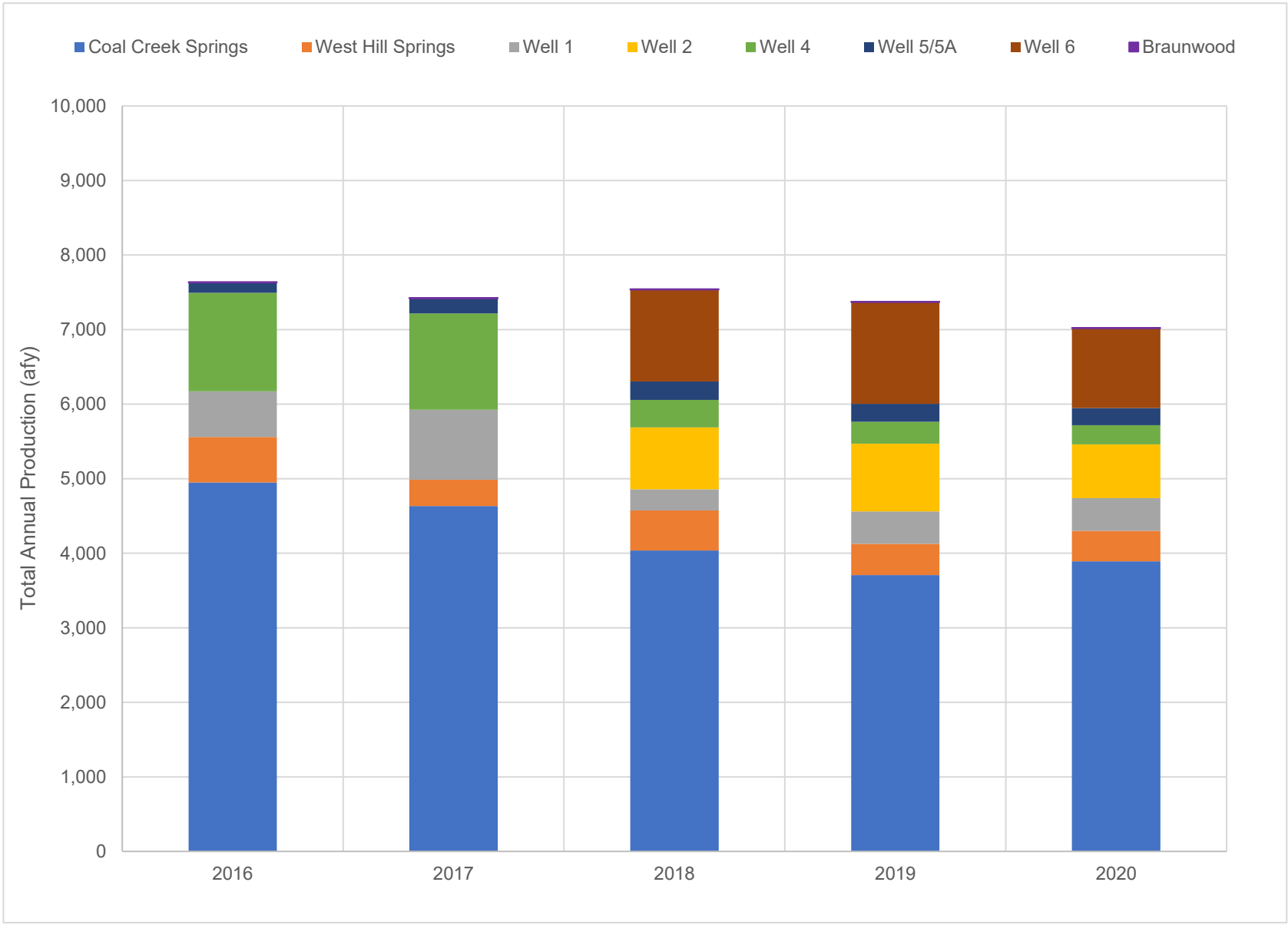

Figure 2
Annual Water Use (2016-2020)
Conceptual Mitigation Plan
City of Auburn, Auburn, WA

Aspect Consulting
10/7/2021
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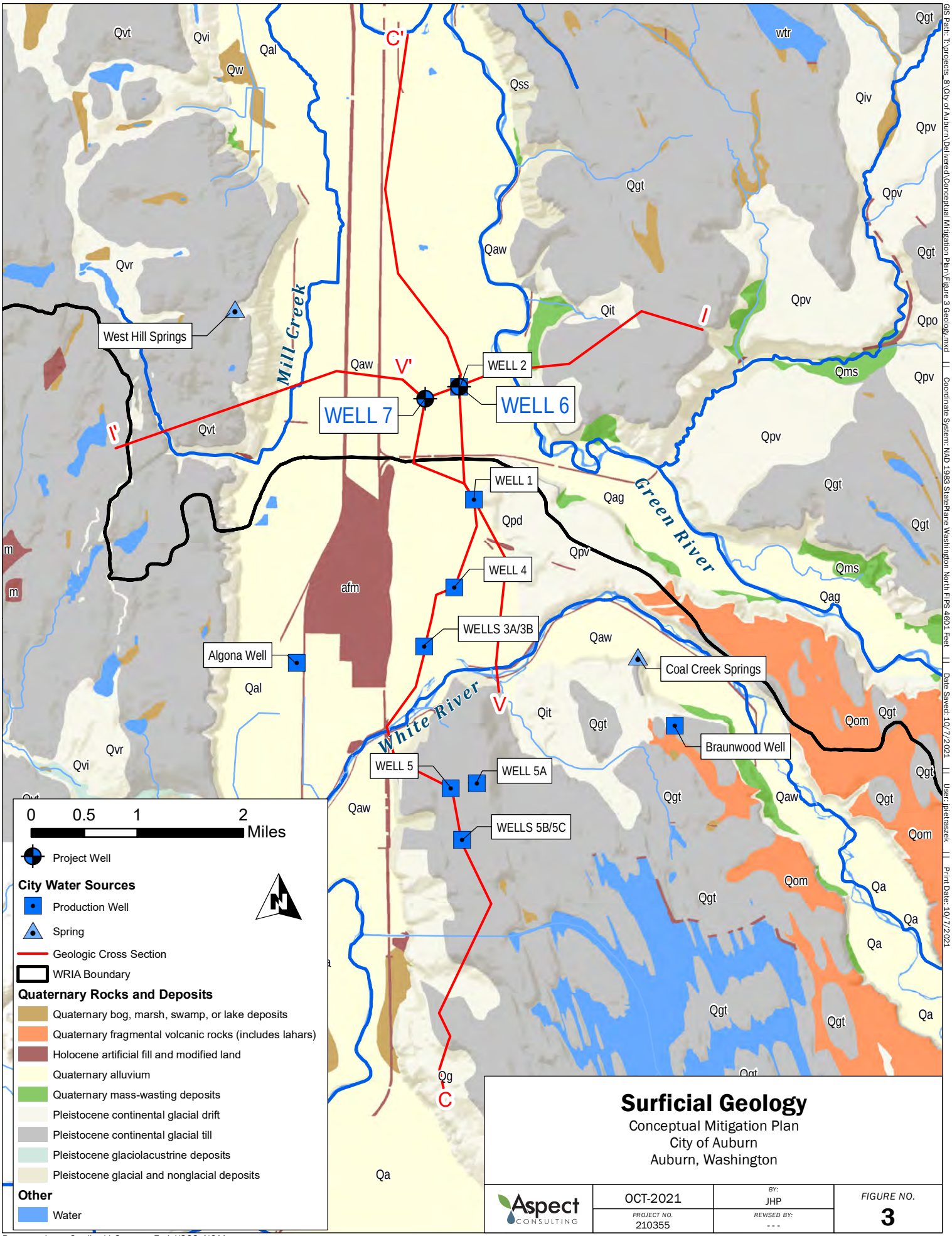

Surficial Geology

Conceptual Mitigation Plan
City of Auburn
Auburn, Washington

Aspect Consulting	OCT-2021	BY: JHP	FIGURE NO. 3
	PROJECT NO. 210355	REVISED BY: ---	

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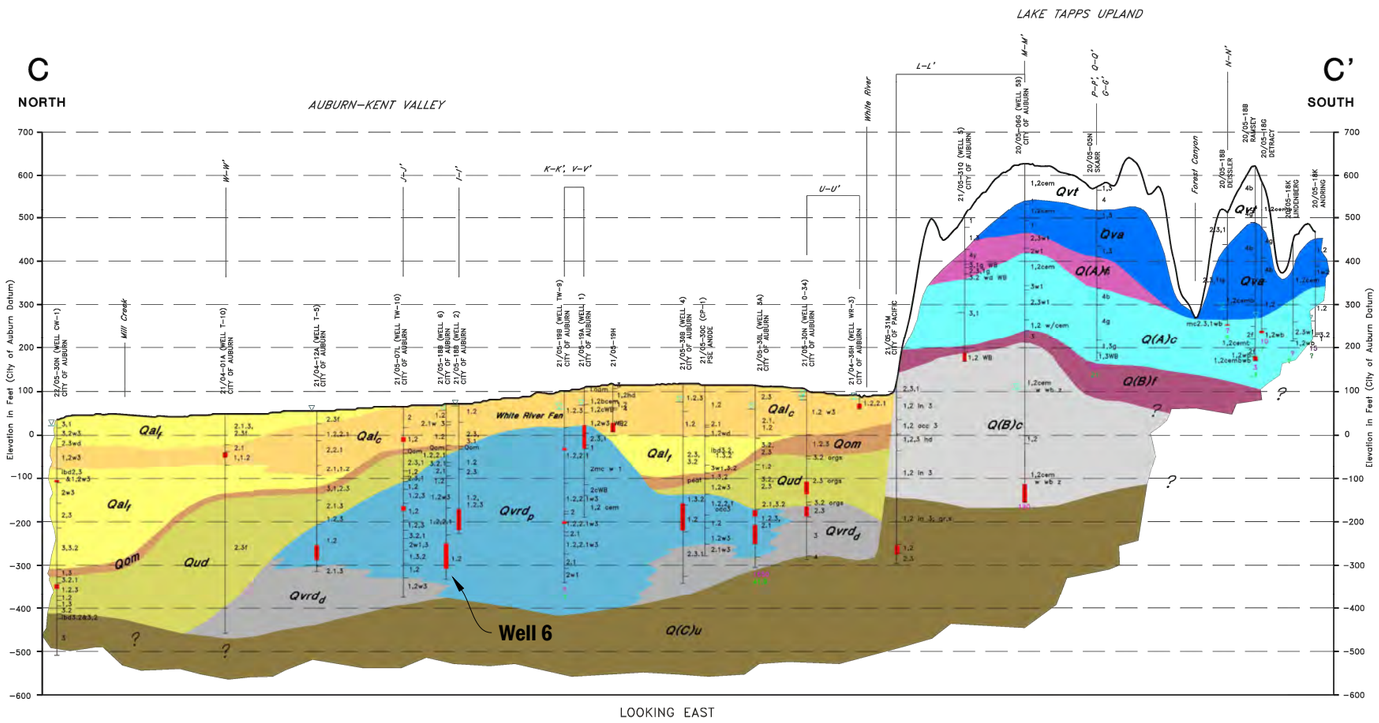
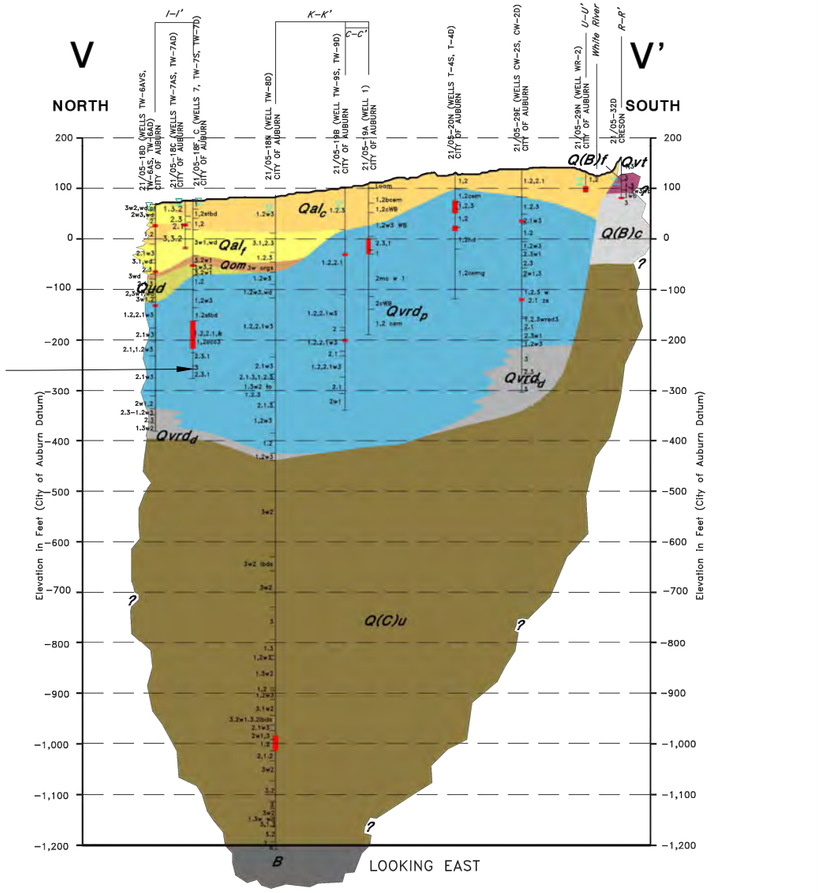
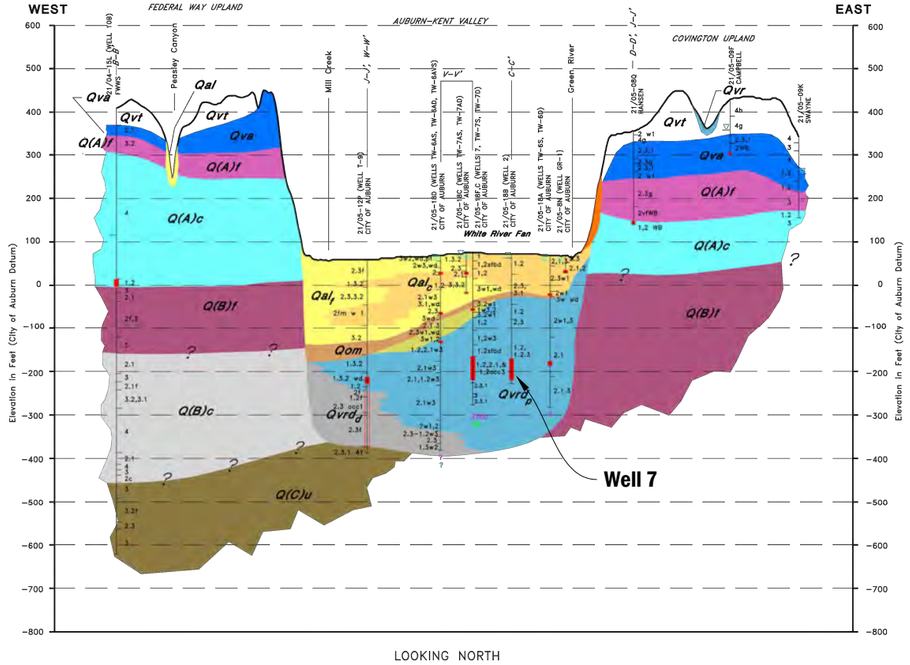






Source: All images from PGG, 1999.

KEY TO LITHOLOGIC UNITS ON HYDROGEOLOGIC CROSS SECTIONS

- Qal_f — Modern alluvium, fine-grained facies: Fine sand, silt, and clay deposited by the Green and White Rivers and their tributaries
- Qal_c — Modern alluvium, coarse-grained facies: Sand and gravel deposited by the Green and White Rivers and their tributaries; includes the Green and White River Fans
- Qom — Osceola Mudflow: Poorly-sorted sand, gravel, silt and/or clay with boulders and organic debris
- Qud — Ancient undifferentiated deltas: Mostly fine sand, silt, and clays of the Ancient Auburn and Ancient Green River Deltas; contains shells
- Qm — Mass wasting deposits: Landslide debris and colluvium
- Qvrd_d — Vashon recessional outwash distal delta deposits: Fine sand, silt, and clay deposited in the distal reaches of the Vashon recessional delta
- Qvrd_p — Vashon recessional outwash proximal delta deposits: Coarse sand and gravel deposited in the proximal reaches of the Vashon recessional delta
- Qvr — Vashon recessional outwash: Sand and gravel deposited by the ancient Wilderness River
- Qvt — Vashon till: Poorly-sorted, unstratified, hard, silt, sand, gravel, and boulders deposited under the bottom of the Vashon glacier
- Qva — Vashon advance outwash: Sand and gravel deposited by glacial outwash streams
- Q(A)f — Upper fine-grained unit: Mostly clay, silt, and fine sand of interglacial origin, but may include some till and unsorted glacial drift
- Q(A)c — Upper coarse-grained unit: Sand and gravel with interbedded till sheets and clay lenses; probable glacial drift sequence
- Q(B)f — Lower fine-grained unit: Mostly clay with silt and fine sand; interglacial in origin
- Q(B)c — Lower coarse-grained unit: Probable glacial drift sequence
- Q(C)u — Undifferentiated and unconsolidated deposits: Unconsolidated sediments of interglacial and glacial origin
- # — Bedrock: Cemented sandstone, shale, and some volcanic and intrusive igneous rocks

KEY TO LITHOLOGIC DESCRIPTIONS ON HYDROGEOLOGIC CROSS SECTIONS

1 = GRAVEL
2 = SAND
3 = SILT/CLAY
4 = TILL
"," = and
"." = modifier

b = brown
g = gray
y = yellow
or = orange
w = with

v = very
f = fine
m = medium
c = coarse

loos = loose
hd = hard
cem = cemented
heav = heaving

wd = wood
pt = peat
sh = shale, shells
orgs = organics

wb, WB = water bearing
z = zones
ibd = interbedded
ss = sandstone
occ = occasional

EXAMPLES:

1,2cemb = Brown cemented SAND and GRAVEL
2mcb w 1 = Brown, medium to coarse SAND with GRAVEL
2.3f occ wd = Silty fine SAND with occasional wood
ibd 1,2 WB = Interbedded water-bearing SAND and GRAVEL

KEY TO WELL LOGS

- 7E01 — Well identifier
- Water level at time of drilling
- Geologic contacts
- Screened interval
- # — Pumping rate (gpm)
- # — Specific capacity (gpm/ft)

Horizontal Scale: 1" = 7000'
Vertical Scale: 1" = 350'
Vertical Exaggeration 20x

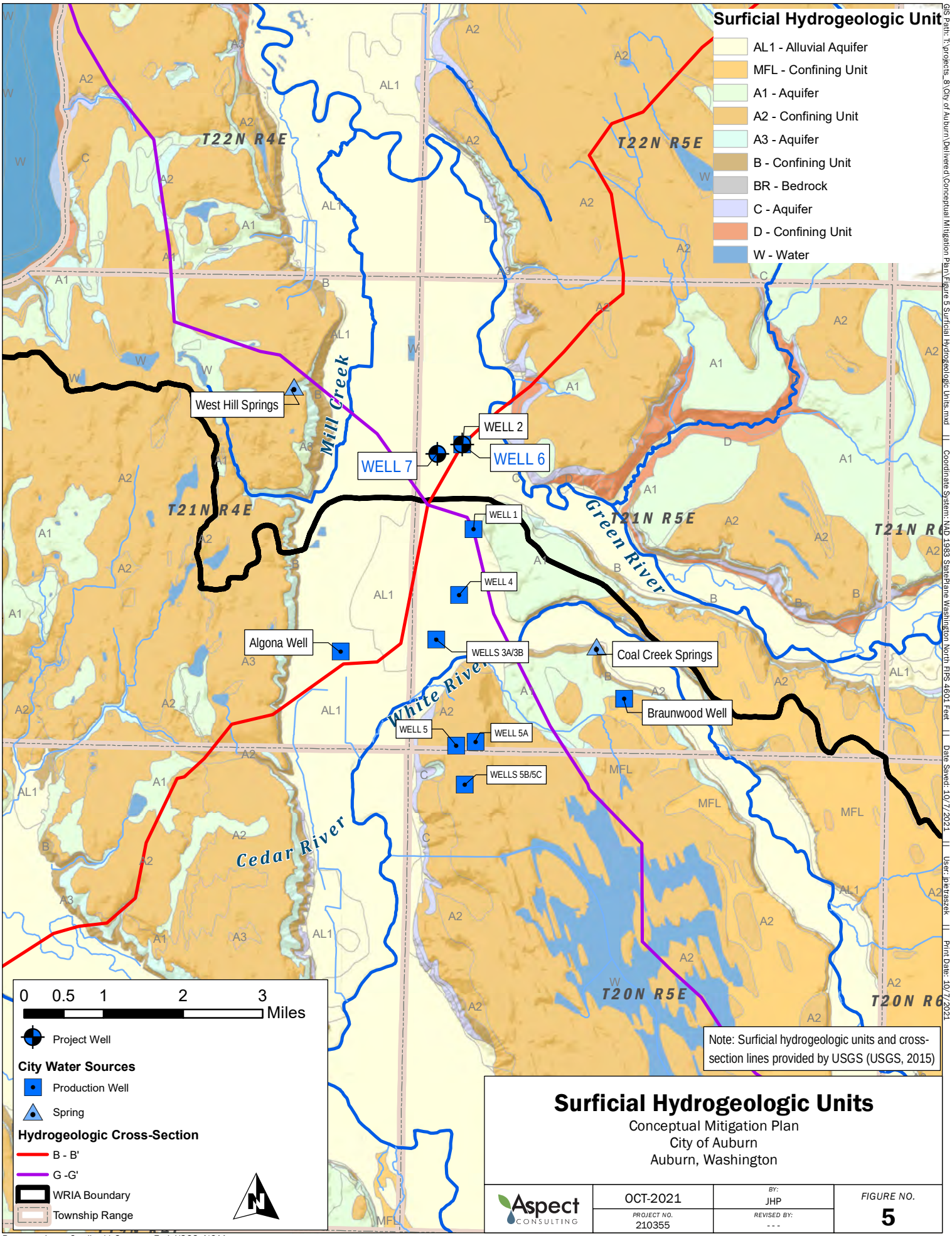
0 — 7000 — 14000 Feet

Geologic Cross-Sections (from PGG, 1999)

Conceptual Mitigation Plan
City of Auburn
Auburn, Washington

Aspect Consulting	Oct-2021	BY: JP/SCC	FIGURE NO. 4
	PROJECT NO. 210355	REVISED BY: -	

CAD Path: Q:\City of Auburn\210355 WR Assistance\2021-09 Conceptual Mitigation Plan - Draft\210355-02.dwg 04 Geologic Cross-Sections (from PGG 1997) || Date Saved: Oct 04, 2021 1:13pm || User:scudd



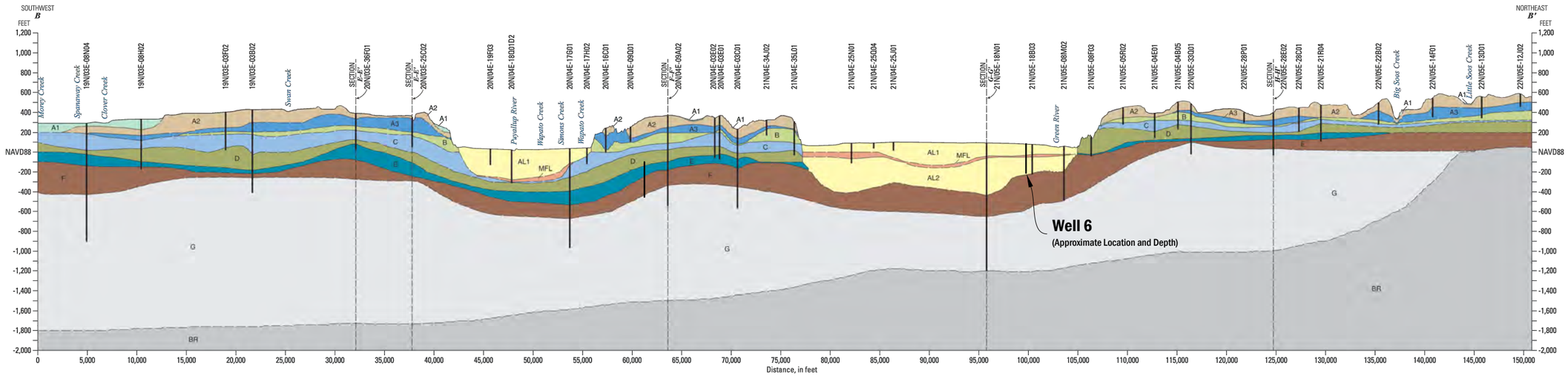
Surficial Hydrogeologic Units

Conceptual Mitigation Plan
City of Auburn
Auburn, Washington

Aspect Consulting	OCT-2021	BY: JHP	FIGURE NO. 5
	PROJECT NO. 210355	REVISED BY: ---	

Basemap Layer Credits || Sources: Esri, USGS, NOAA

GIS Path: T:\projects_8\City of Auburn\Delivered\Conceptual Mitigation Plan\Figure 5 Surficial Hydrogeologic Units.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 10/7/2021 || User: jpetraszek || Print Date: 10/7/2021



EXPLANATION

Hydrogeologic Unit

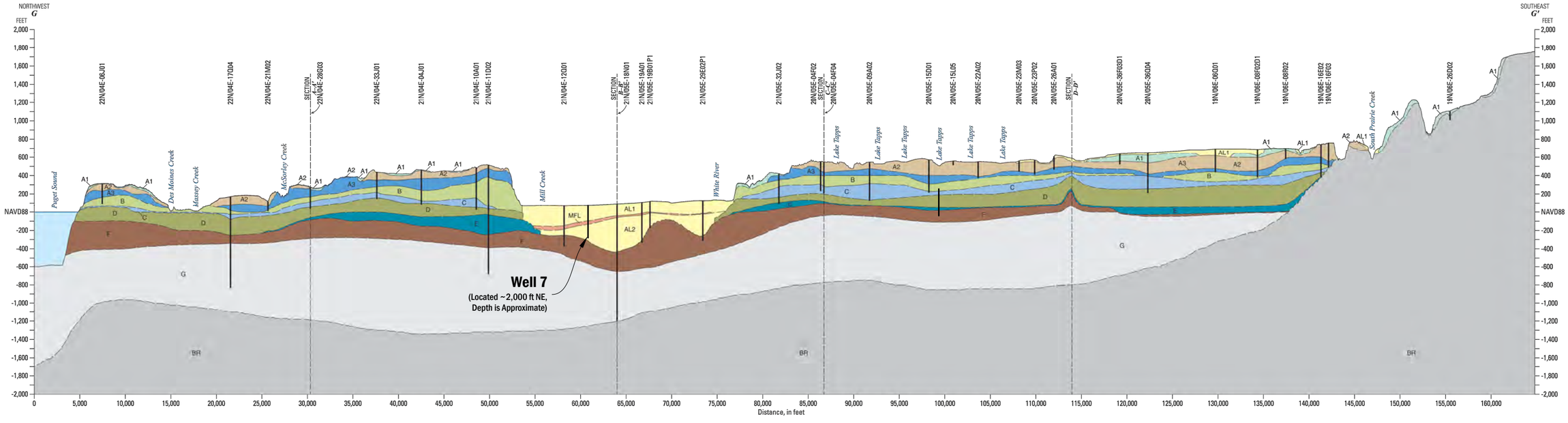
- AL1 - upper alluvial aquifer
- MFL - confining unit
- AL2 - lower alluvial aquifer
- A1 - aquifer
- A2 - confining unit
- A3 - aquifer
- B - confining unit
- C - aquifer
- D - confining unit
- E - aquifer
- F - confining unit
- G - undifferentiated deposits
- BR - bedrock
- Water

Contact, approximately located dashed where uncertain

Well located on section

22N/05E-22B02

VERTICAL EXAGGERATION X 10
DATUM IS NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)



Source: All images from USGS, 2015.

Horizontal Scale: 1" = 8000'
Vertical Scale: 1" = 800'
Vertical Exaggeration 10x

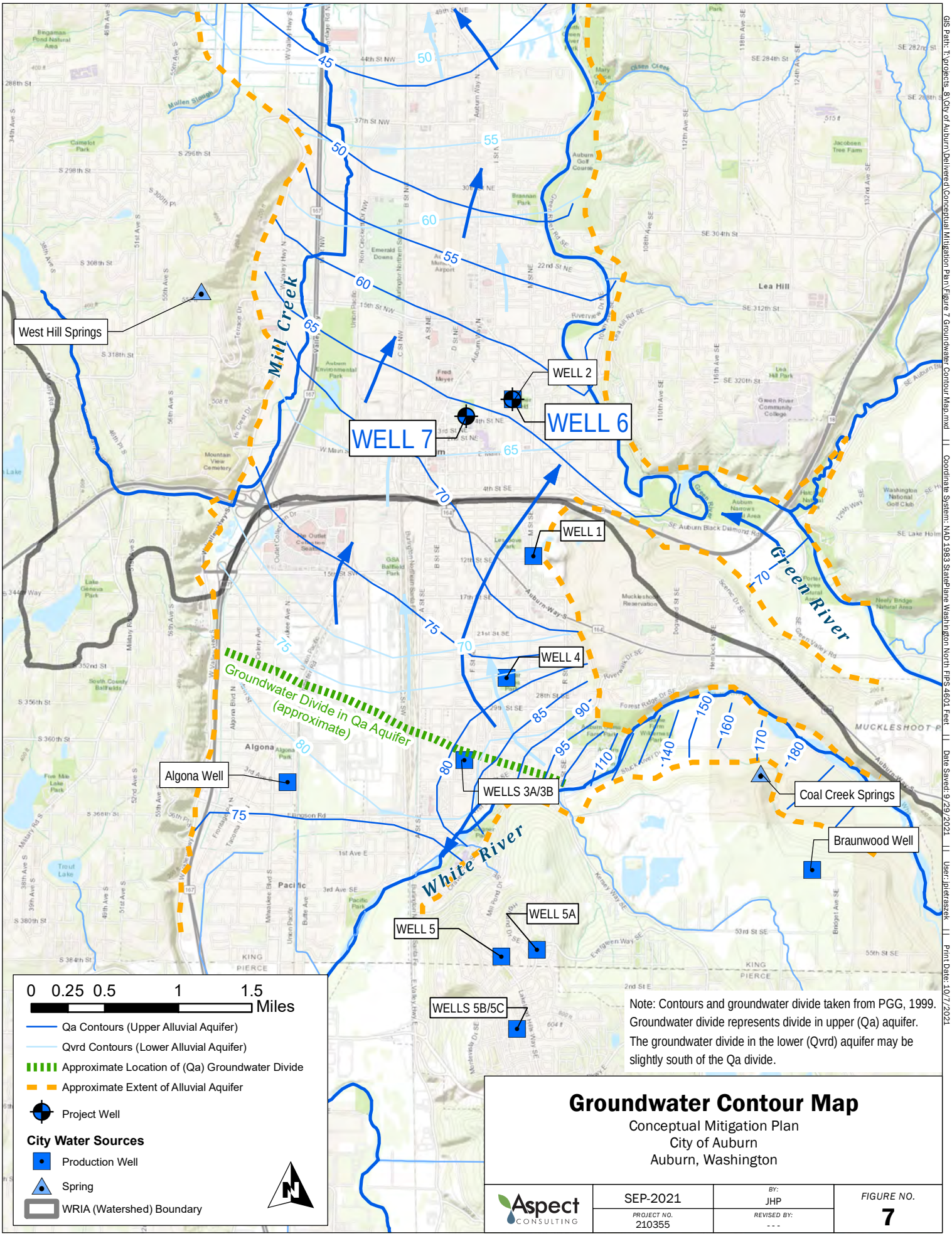
0 8000 16000 Feet

Hydrogeologic Cross-Sections (from USGS, 2015)

Conceptual Mitigation Plan
City of Auburn
Auburn, Washington

Aspect Consulting	Oct-2021	BY: JP/SCC	FIGURE NO. 6
	PROJECT NO. 210355	REVISED BY: -	

CAD Path: Q:\City of Auburn\210355 WR Assistance\2021-09 Conceptual Mitigation Plan - Draft\210355-02.dwg 06 Hydrogeologic Cross-Sections (from USGS 2015) || Date Saved: Oct 04, 2021 1:23pm || User: scudd



Note: Contours and groundwater divide taken from PGG, 1999. Groundwater divide represents divide in upper (Qa) aquifer. The groundwater divide in the lower (Qvrd) aquifer may be slightly south of the Qa divide.

Groundwater Contour Map

Conceptual Mitigation Plan
City of Auburn
Auburn, Washington

Aspect Consulting	SEP-2021	BY: JHP	FIGURE NO. 7
	PROJECT NO. 210355	REVISED BY: ---	

Basemap Layer Credits || Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

GIS Path: T:\projects_8\City of Auburn\Delivered\Conceptual Mitigation Plan\Figure 7 Groundwater Contour Map.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 9/29/2021 || User: jpietraszek || Print Date: 10/7/2021

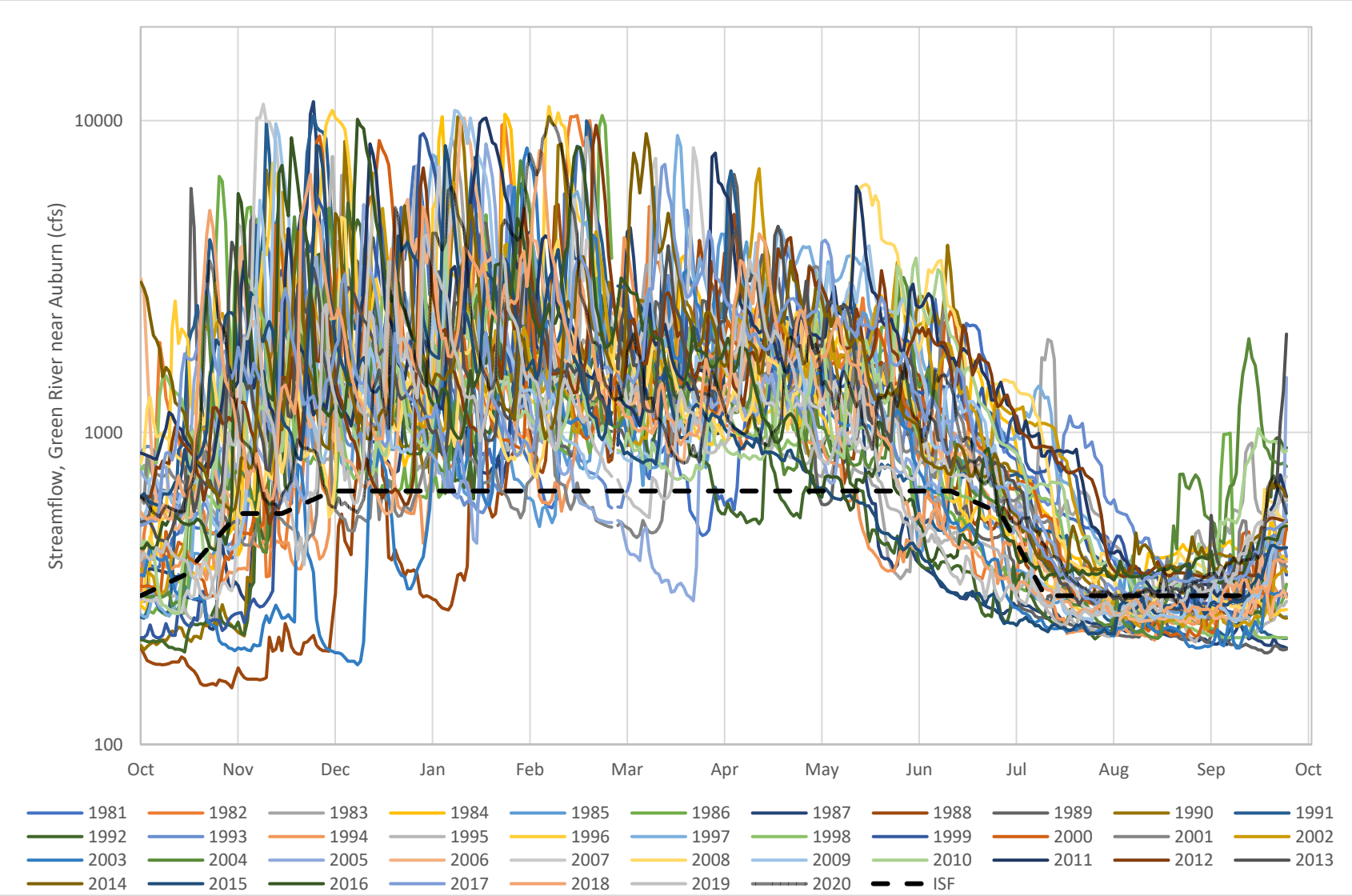
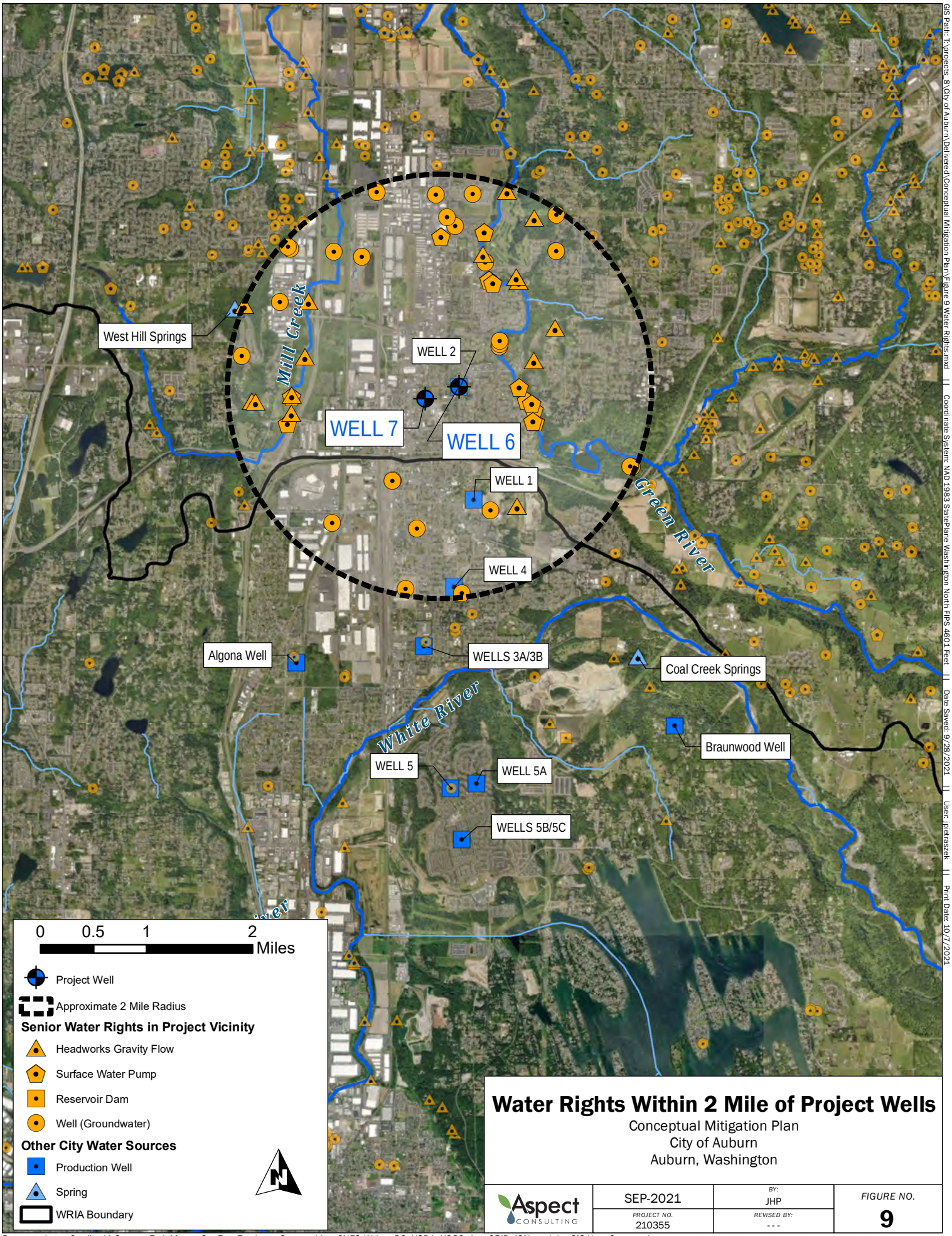


Figure 8
Comparison of Streamflows at the Green River near Auburn to WAC 173-509 ISFs

Conceptual Mitigation Plan
City of Auburn, Auburn WA

Aspect Consulting
9/28/2021
S:\City of Auburn\Data\Auburn ISF Analysis



Water Rights Within 2 Mile of Project Wells

Conceptual Mitigation Plan
City of Auburn
Auburn, Washington

Aspect Consulting	SEP-2021	BY: JHP	FIGURE NO. 9
	PROJECT NO. 210355	REVISED BY: ---	

Basemap Layer Credits || Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
EagleView Technologies, Inc.

GIS Path: T:\projects_8\City of Auburn\Delivered\Conceptual Mitigation Plan\Figure 9 Water Rights.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 9/28/2021 || User: jpietraszek || Print Date: 10/7/2021

APPENDIX A

Well Logs

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Start Card No. W074235
UNIQUE WELL I.D. # ABB 106
Water Right Permit No. 21-5E-18B

(1) OWNER: Name City of Auburn Address

(2) LOCATION OF WELL: County King NW 1/4 NE 1/4 Sec 18 T 21 N, R 5 E WM.

(2a) STREET ADDRESS OF WELL (or nearest address) 8th st NE + K st NE

(3) PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☒ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) Well #6
Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☒ Driven ☐ Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 24" inches. Drilled 400 feet. Depth of completed well 390 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 24" Diam. from +2 ft. to 322 ft.
Welded ☒ " Diam. from ft. to ft.
Liner installed ☐ " Diam. from ft. to ft.
Threaded ☐

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☒ No ☐
Manufacturer's Name Johnson
Type 304 Stainless Model No.
Diam. 20 Slot size 80 from 320 ft. to 380 ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☒ No ☐ Size of gravel 4X6
Gravel placed from 390 ft. to 300 ft.

Surface seal: Yes ☒ No ☐ To what depth? 111' ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level Approx 14' ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☒ No ☐ If yes, by whom? Driller
Yield: 2500 gal./min. with 201 ft. drawdown after 72 hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Airtest gal./min. with stem set at ft. for hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☒ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Sand + gravel - Cobbles	0	96
Silthound sand + gravel	96	100
Silty clay	100	104
Brown + gray sand + gravel some silty layers	104	400

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Work Started 1-23-98, 19. Completed 9-98, 19

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Holt Drilling Inc (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 10621 Todd Rd E
(Signed) (WELL DRILLER) License No. 1099
Contractor's Registration No. HOLTDI 1360G Date 1-14-99, 19

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

49802 MAY 14 1997 ENTERED

WATER WELL REPORT

STATE OF WASHINGTON

DEPT. OF ECOLOGY

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

PAGE ONE

Start Card No. W068301
UNIQUE WELL I.D. # ABE845
Water Right Permit No. 21-5-18C

(1) OWNER: Name City of Auburn Address 25 W. Main - Auburn, WA 98001

(2) LOCATION OF WELL: County King NE 1/4 NW 1/4 Sec 18 T 21N N, R 5E W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) Corner 4th St NE and "E" St NE - in City Park - Auburn

(3) PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☒ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) Well #7
Abandoned ☐ New well ☒ Method Dug ☐ Bored ☐ Deepened ☐ Cable ☒ Driven ☐ Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 24 inches
Drilled 305 feet Depth of completed well 303 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 24" Diam. from 0 ft. to 305 ft
Welded ☒ Liner installed ☐ Threaded ☐
" Diam from ft. to ft.
" Diam from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☒ No ☐
Manufacturer's Name JOHNSON
Type STAINLESS Model No. 304
Diam 18" Slot size 100 from 235 ft. to 295 ft.
Diam Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☐ Size of gravel
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 167 ft.
Material used in seal Bentonite Grout
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level 11.5 ft below top of well Date 3-18-97
Artesian pressure lbs per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☒ No ☐ If yes, by whom? PACIFIC GROUND WATER, INC. AND DRILLER
Yield: 3760 gal /min. with 157.5 ft. drawdown after 72 hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
0	157.5	360	0.8	3165	0.3
60	1.4	1265	0.5	4434	0.2
120	1.2	1800	0.4		

Date of test 3/12/97 - 3/18/97
Bailer test gal /min with ft drawdown after hrs.
Airtest gal./min. with stem set at ft. for hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☒ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
BROWN SAND + GRAVEL W/ SOME WATER	0	10
TIGHT BROWN SAND + GRAVEL	10	19
SILTY BROWN SAND + GRAVEL W/ LITTLE WATER	19	26
BROWN SILTY SAND + GRAVEL	26	40
SAND & LARGE GRAVEL	40	48 1/2
TIGHT SAND, LARGE GRAVEL	48 1/2	56
GRAY SILTY SAND W/ SOME GRAVEL & LITTLE WATER	56	80
GRAY SILTY SAND W/ GRAVEL & WOOD - LITTLE WATER	80	100
GRAY SILTY SAND W/ WOOD & SOME GRAVEL	100	113
GRAY SILTY SAND W/ LARGE GRAVEL & LITTLE WATER	113	120 1/2
LARGE GRAVEL & SAND	120 1/2	126
GRAY, TIGHT LARGE GRAVEL & SAND	126	139
SILT + GRAVEL	139	141
GRAY SILTY SAND W/ GRAVEL	141	146
TIGHT SILTY SAND + GRAVEL	146	164
GRAY SAND W/ GRAVEL + SILT	164	167
GRAY SILTY SAND W/ LARGE GRAVEL	167	172
BROWN SAND & GRAVEL [redacted]	172	181
BROWN SAND, LARGE GRAVEL	181	185
CLAY + GRAVEL	185	186 1/2
W.B. CLAY BOUND SAND + GRAVEL	186 1/2	198
BROWN CLAY, SILTY SAND + GRAVEL - W.B.	198	216
SILTY GRAVEL	216	217
continued		

Work Started 9-30-96 Completed 4-2 19 97

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME CHARON DRILLING, INC. (PERSON, FIRM OR CORPORATION) (TYPE OR PRINT)
Address 12719 E. 224 ST - GRAHAM, WA 98338
(Signed) Dave Charon (WELL DRILLER) License No. 1190
Contractor's Registration No CHARODI133NF Date 5-6 19 97

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006

MAY 14 1997

ENTERED

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

DEPT OF ECOLOGY

PAGE TWO

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W068301

UNIQUE WELL I.D. # ABE 845

Water Right Permit No. 21-5-18C

(1) OWNER: Name City of Auburn Address 25 W. Main - Auburn, WA 98001

(2) LOCATION OF WELL: County King NE 1/4 NW 1/4 Sec 18 T 21N N, R 5E WM.

(2a) STREET ADDRESS OF WELL (or nearest address) Corner of 4th St NE & "E" St NE - in City Park - Auburn

(3) PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____

Abandoned ☐ New well ☐ Method Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well _____ inches. Drilled _____ feet. Depth of completed well _____ ft.

(6) CONSTRUCTION DETAILS:

Casing installed: _____" Diam. from _____ ft. to _____ ft.
Welded ☐ _____" Diam. from _____ ft. to _____ ft.
Liner installed ☐
Threaded ☐ _____" Diam. from _____ ft. to _____ ft.

Perforations: Yes ☐ No ☐
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☐
Manufacturer's Name _____
Type _____ Model No. _____
Diam. ____ Slot size _____ from _____ ft. to _____ ft.
Diam. ____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☐ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☐ No ☐ To what depth? _____ ft.
Material used in seal _____
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level _____ ft. below top of well Date _____
Artesian pressure _____ lbs per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? _____
Yield. _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
SILTY SAND W/LARGE GRAVEL	217	225
LARGE COBBLES & SAND (BROWN)	225	229
BROWN SILTY SAND & GRAVEL	229	231
BROWN SILTY SAND & GRAVEL W.B.	231	240
BROWN SAND & GRAVEL	240	245
BROWN SAND & GRAVEL -WB	245	264
BROWN SILTY SAND & GRAVEL	264	274
BROWN SAND & GRAVEL WB	274	294
BROWN/GRAY SILTY SAND W/LARGE GRAVEL -WB	294	303

Work Started 9-30-96 19. Completed 4-2-97 19

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Charon Drilling, LLC (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 12719 E. 234th St - Graham, WA 98338

(Signed) Dave Charon (WELL DRILLER) License No. 1190

Contractor's Registration No. CHARDDI133NE Date 5-6 19 97

(USE ADDITIONAL SHEETS IF NECESSARY)

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ECY 050-1-20 (9/93) * * f

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

ROBINSON
NOBLE

CITY OF AUBURN
WELLHEAD PROTECTION PLAN
HAZARD INVENTORY UPDATE

NOVEMBER 2014

by

Kari A. Thomas
Project Geologist

Burt G. Clothier, LHG, RG, CPG
Principal Hydrogeologist

INTRODUCTION 1
WELLHEAD PROTECTION AREA DEFINITION 1
EXISTING AND POTENTIAL CONTAMINATION HAZARD IDENTIFICATION 3
PROTECTION STRATEGIES AND IMPLEMENTATION TASKS 3
CONTAMINANT SOURCE INVENTORY METHODOLOGY 3
FIELD SURVEY 6
METHODOLOGY FOR ESTABLISHING RISK PRIORITY 6
Decision Level I – Proximity to WHPA 7
Decision Level II – Type of Contamination 7
Decision Level III – Distance from Wells 8
LAND USE 8
Residential Land Uses 9
Commercial Land Uses 9
Industrial Land Uses 10
Mining & Transportation 10
Mixed Uses 10
Pipeline Corridors 10
IDENTIFIED CONTAMINANT SOURCES 11
POTENTIAL GROUNDWATER CONCERNS 11
DISCHARGE ONTO THE GROUND SURFACE 12
DIRECT DISCHARGE TO THE SUBSURFACE 12
ABANDONED WELLS 12
STORMWATER RUNOFF 12
MANAGEMENT STRATEGIES 12
LAND MANAGEMENT ACTIVITIES 12
WHP LAND-USE STRATEGIES 13
Possible Special Protection Area Designations 13
WHP REGULATORY STRATEGIES 13
Well Drilling Inspections inside the WHPA 13
Washington State Environmental Policy Act/Hydrogeologic Evaluations 13
Septic Tanks 13
PLANNING STRATEGIES 13
Sewers 14
Stormwater Management 14
Petroleum Pipelines 14
Hazardous Material Transport 14
Spill Response 14
DATA MANAGEMENT STRATEGIES 14
GROUNDWATER MONITORING PLAN 15

Abandoned Well Inventory *15*
Herbicide and Pesticide Survey *15*
Underground Storage Tanks Inventory *15*
Drywell Monitoring *15*
EDUCATION STRATEGIES 15
WELLHEAD PROTECTION IMPLEMENTATION TASKS 15
REFERENCES 18

TABLES

TABLE 1 POTENTIAL CONTAMINANT SOURCE LISTED BY TYPE
TABLE 2 FEDERAL AND STATE DATABASES
TABLE 3 OVERALL RISK PRIORITIZATION
TABLE 4 PROXIMITY TO SOURCE
TABLE 5 TYPE OF CONTAMINATION
TABLE 6 RESIDENTIAL-USE DESIGNATIONS
TABLE 7 OTHER LAND-USE ZONING DESIGNATIONS
TABLE 8 EDR IDENTIFIED CONTAMINANT AND POTENTIAL SOURCES
TABLE 9 2008 IMPLEMENTATION TASKS CURRENTLY IN PROGRESS
TABLE 10 RANKED TABLE OF HAZARDS (APPENDIX B)

FIGURES

FIGURE 1 WELLHEAD PROTECTION LOCATION MAP
FIGURES 2 THROUGH FIGURE 7 HAZARD SITE LOCATION MAP
FIGURE 8 ZONING MAP

APPENDICES (ON ATTACHED CD)

APPENDIX A EDR REPORT
APPENDIX B RANKED TABLE OF HAZARDS
APPENDIX C NOTIFICATION LETTERS
APPENDIX D SPILL RESPONSE PLAN

City of Auburn
Wellhead Protection Plan Update
November 2014

Introduction

Under the Washington Administrative Code (WAC), public water systems have primary responsibility for developing and implementing local wellhead protection programs. Due to the limited jurisdictional and regulatory authority afforded most purveyors, it is essential they work with other local, state, and federal agencies possessing the appropriate authority. The Washington State Department of Health (Health) oversees the wellhead protection program.

The City of Auburn (City) developed a Wellhead Protection Plan to identify and protect the groundwater resources which supply the Well 1, 2, 3A, 3B, 4, 5, 5A, 5B, 6, and 7 wellfields; West Hill Springs; and Coal Creek Springs. The initial plan was created in 2000 by Pacific Groundwater Group (PGG). Robinson Noble provided a plan update in 2008 (Robinson, Noble & Saltbush, 2008). This report largely replaces that work. The study area, physiographic setting, and wellhead protection zones were defined in several works by PGG (1996, 1999 and 2000). Those reports remain valid for use in this project.

The plan meets the requirements of the Federal Safe Drinking Water Act and conforms to the wellhead protection measures directed by Washington State Department of Health. The study is divided into three primary areas of interest: 1) Wellhead Protection Area Delineation, 2) Existing and Potential Contamination Hazard Identification, and 3) Protection Strategies and Implementation Tasks.

The City is located in the Green River Valley between the City of Kent and the southern boundary of King County. Figure 1 shows the location of the City's wells and the approximate study area. The majority of the City is located in the valley, separated from the City of Kent to the north by the Green River. To the west is the Federal Way upland; to the east are the outlets of the upper Green and White River valleys. The City of Pacific resides to the south of the City along with the neighboring Lake Tapps upland. Ten production wells and two spring collection facilities are currently used to supply the City's needs. At the present time and into the near future, the use of groundwater constitutes the City's primary and most economical source of water.

Wellhead Protection Area Definition

A wellhead protection area (WHPA) defines the area surrounding a public water supply well where the well may be at risk from contaminants. It is based upon capture zones, which describe the area of the well's source aquifer (and all overlying material) that can contribute water to the well in a given period of time. Capture zones are typically defined for time-of-travel periods of one-half, one, five, and ten years. These four zones are defined by regulation as a management tool; actual contaminants reaching the source aquifer may move faster or slower than the calculated times-of-travel.

Typically, a "zone of contribution" is determined for the study area. The zone of contribution is the aquifer area which contributes groundwater to the wellfields independent of travel time. However, a zone of contribution was not determined in previous models. Therefore, for this

WHPA, we have defined a fifth zone which we label as the area of investigation. The area of investigation includes areas where potential surface water and stormwater runoff and surface water bodies may contribute to the groundwater in the WHPAs. However, the area of investigation we have delineated is likely much smaller than the actual zone of contribution would be. Based upon the existing WHPA zones and the generalized water flow directions of the shallow aquifer system, we delineated an area of investigation, which covers approximately 42 square miles, inside the zone of contribution. Stormwater runoff is considered in our area of investigation because it runs over the surface of the ground, picking up and dissolving potential contaminants, and may eventually discharge these contaminants to groundwater via infiltration through ditches or ponds designed to percolate water or from surface-water bodies which receive the runoff.

Travel-time boundaries can be determined by either technical or non-technical methods, although technical methods are preferred so that the Wellhead Protection Plan (WHPP) better protects the actual capture zones of protected wells. In general, there are four delineation methods available. They are, from generally least to generally most accurate: the calculated fixed-radius method, analytical modeling, hydrogeologic mapping, and numerical modeling. The particular method employed (and the accuracy of that method) depends largely on the availability of hydrogeologic data. Numerical modeling, for example, can be highly accurate but also typically requires a relatively large amount of data. For areas with typical data availability, time-travel boundaries are often delineated using a combination of analytical modeling and hydrogeologic mapping, which provides a reasonably technical level of delineation.

Pacific Groundwater Group initially delineated the City's wellhead protection areas in 1997 by using a two-dimensional analytical model. Later, in 2000, PGG re-delineated capture zones for the City utilizing MODPATH Version 2, a three-dimensional particle-tracking program that utilizes steady-state head distribution created by a numerical model to calculate time-related capture zones. Numerical models are typically highly detailed, three-dimensional representations of water flow through identified hydrogeologic layers and are considered the most accurate approach for delineating wellhead protection areas by the Washington State Department of Health.

In 2008, Robinson, Noble, & Saltbush, Inc. used the modeled capture zones from 2000 to perform a hazard assessment within the wellhead protection area. The wellhead protection area includes ten wellfields and two springs that are related by overlapping geographical areas and represent three aquifer systems. We then provided the City with implementation tasks and strategies to help effectively implement the WHP plan. This current report is intended to provide a single effort that will suffice to update WHPAs for all ten wellfields and both springs, and the WHPAs have been mapped together for this updated wellhead protection plan.

The US Geological Survey is currently completing groundwater flow modeling of the Puyallup River Watershed, and the model area will cover the WHPP study area. The resulting numerical computer model will likely refine aquifer characteristics, groundwater flow patterns, and the location of aquitard-deposits. During the next update of the WHP plan, we recommend using the USGS model to re-define the WHPAs as the new model will represent an expansion of and improvement over the older PGG work.

Of particular interest to the WHPAs is the Osceola Mudflow (Qom), which originated on Mt. Rainier approximately 5,700 years ago, and consists of poorly sorted clay, silt, sand, gravel, boulders, and wood debris. It functions as an important aquitard in the valley. However, a 1999 hydrogeologic characterization report by PGG states that the mudflow does not occur beneath the confluence of the White River and Auburn-Kent valleys or near Auburn's Production Well 1, Wells T-4S/D, CW-2S/D, WR-2, and TW-9S/D. The USGS reports the thickness of the mudflow

ranges from approximately 0 to 60 feet in the study area (Dragovich and others, 1994). In the area defined by PGG where the mudflow is missing, it was likely not deposited or removed by erosional processes. The area where Osceola Mudflow aquitard is not present in the study area is shown on Figure 1.

Existing and Potential Contamination Hazard Identification

The inventory of potential contamination sources within the WHPA was performed according to the Washington State Department of Health 1993 publication "Inventory of Potential Contaminant Sources in Washington's Wellhead Protection Areas." As part of this inventory, a search of contamination-related databases was made by EDR Inc., an environmental database research company. They reviewed 27 federal and state databases for any known or potential contaminant sites within a 5-mile radius of the center of the City's service area. The sites in this radial search were narrowed further by Robinson Noble based on the sites' locations in relation to WHPAs.

We also performed an evaluation of various land-use categories in the study area and ranked them according to the likely activities occurring within those zones. Each land use zone was included as a specific entry (representing all of the area covered by that zone) in the contamination source inventory. The land-use zones, in order of relative risk, include: 1) rural areas, 2) commercial sites, 3) industrial, 4) mixed-use areas, 5) medium-density urban residential, 6) high-density urban residential, 7) mining and transportation corridors, 8) pipeline corridors, 9) and low-density urban residential. The ranking and types of potential risks for each zone are discussed below.

The results of the contamination source inventory include a list of potential and known environmental hazards in proximity to the City's water system. From this process, 513 sites or categories of land-use activities were identified as known or potential hazards to the City's groundwater sources. These sites and land-use activities were prioritized and ranked such that the wellhead protection implementation process can address each site or land use in a systematic manner. Each site was ranked according to three factors: proximity of potential hazard to the WHPA, type of contamination, and distance from the groundwater source to the potential hazard.

Protection Strategies and Implementation Tasks

The completion of wellhead protection planning provides no safeguards unless effective management strategies are implemented to prevent potential contamination of groundwater sources. With the hazards identified, the Wellhead Protection Plan provides for six strategies and 12 specific tasks for the City to undertake to complete the process. Also included is a detailed review of the State spill-response plan and a contingency plan to address the possible loss of one or more water sources. The plan is based a great deal upon monitoring of the existing system, active data collection and management by the City, and cooperation with those state and local agencies which regulate potential contaminants.

Contaminant Source Inventory Methodology

A summary of potential contaminant sources presented in the Health 1993 guidance is reproduced in Table 1. These sources were considered when performing the contaminant inventory for the City.

Table 1: Potential Contaminant Source Listed by Type

Category I

Sources Designed to Discharge Substances

Subsurface Percolation (e.g. septic systems and cesspools)
Injection Wells
- Hazardous waste
- Non-hazardous waste (e.g. brine disposal and drainage)
- Non-waste (e.g. enhanced recovery, artificial recharge solution mining, and *in-situ* mining)

Land Application
- Wastewater (e.g. spray irrigation)
- Wastewater by-products (e.g. sludge)
- Hazardous waste
- Non-hazardous waste

Category II

Sources Designed to Store, Treat, and/or Dispose of Substances; Discharge through Unplanned Release

Landfills
- Industrial hazardous waste
- Industrial non-hazardous waste
- Municipal sanitary

Open Dumps, Including Illegal Dumping (Waste)
Residential (or Local) Disposal (Waste)
Surface Impoundments
- Hazardous waste
- Non-hazardous waste

Waste Tailings
Waste Piles
- Hazardous waste
- Non-hazardous waste

Materials Stockpiles (Non-waste)
Graveyards or Animal Burial
Above-ground Storage Tanks
- Hazardous waste
- Non-hazardous waste
- Non-waste

Underground Storage Tanks
- Hazardous waste
- Non-hazardous waste
- Non-waste

Containers
- Hazardous waste
- Non-hazardous waste
- Non-waste

Open Burning Sites
Detonation Sites

Category III

Sources Designed to Retain Substances during Transport or Transmission

Pipelines
- Hazardous waste
- Non-hazardous waste
- Non-waste

Materials Transport and Transfer Operations
- Hazardous waste
- Non-hazardous waste
- Non-waste

Category IV

Sources Discharging Substances as a Consequence of Other Planned Activities

Irrigation Practices (e.g. return flow)
Pesticide Applications
Fertilizer Applications
Animal Feeding Operations
De-icing Salt Applications
Urban Runoff
Percolation of Atmospheric Pollutants
Mining and Mine Drainage
- Surface mine-related
- Underground mine-related

Category V

Sources Providing Conduit or Inducing Discharge through Altered Flow Patterns

Production Wells
- Oil (and gas) wells
- Geothermal and heat recovery wells
- Water supply wells

Other Wells (non-waste)
- Monitoring wells
- Exploration wells

Construction Excavation

Category VI

Naturally Occurring Sources whose Discharge is Created and/or Exacerbated by Human Activity

Ground Water - Surface Water Interactions
Natural Leaching
Saltwater Intrusion/Brackish Water
- Upconing (or intrusion of other poor-quality natural water)

Radioactive Disposal Sites

The initial part of the contaminant inventory was a search of contaminant-related databases completed by EDR, Inc. EDR is a third-party environmental database research company that

reviews federal and state environmental databases for known or potential contaminated sites within a designated area. Table 2 lists the primary federal and state databases (in alphabetical order according to the database abbreviations used by EDR) reviewed by EDR in order to locate sites of known or potential soil and groundwater contamination.

Table 2: Federal and State Databases

- Washington Emissions Data System (AIRS)
- Ecology Facility/Site Identification System (ALLSITES)
- Clandestine Drug Lab (CDL, Hist CDL, and US CDL)
- Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)
- CERCLIS No Further Remedial Action Planned (CERL NFRAP)
- Confirmed and Suspected Contaminate Sites (CSCSL)
- Confirmed and Suspected Contaminants Sites List No Further Action (CSCSL NFA)
- Department of Transportation, Office of Pipeline Safety (DOT OPS)
- Department of Defense sites (DOD)
- Drycleaners and Inactive Drycleaners (DRYCLEANERS and INACTIVE DRYCLEANERS)
- Emergency Response Notification Systems (ERNS)
- Financial Assurance Information listing (FINANCIAL ASSURANCE)
- Facility Index System (FINDS)
- FIFRA/TSCA Tracking System (FTTS and Hist FTTS)
- Formerly-used DOD sites (FUDS)
- Hazardous Waste Information System – CA Dept. of Toxic Substances (HAZNET)
- Hazardous Materials Information Reporting System (HMIRS)
- Hazardous Site List (HSL)
- Integrated Compliance Information System (ICIS)
- Independent Clean-up Report (ICR)
- Indian Leaking Underground Storage Tank (Indian LUST)
- Indian Underground Storage Tank (Indian UST)
- Institutional and Engineering Controls (INST CONTROL, US ENG CONTROLS, and US INST CONTROL)
- Leaking Underground Storage Tank (LUST)
- Hazardous waste manifest data (MANIFEST)
- Mines master index file (MINES)
- National Pollutant Discharge Elimination System permits (NDPES)
- National Priority List (NPL)
- PCB Activity Database System (PADS)
- RCRA Conditionally Exempt Small Quantity Generator (RCRA CESQG)
- RCRA Large Quantity Generator (RCRA LQG)
- RCRA non-Generator (RCRA NonGen)
- RCRA Small Quantity Generator (RCRA SQG)
- Records of Decision (ROD)
- Reported spills (SPILLS)
- Solid Waste Facilities Database (SWF/LF)
- Recycling Facility List (SWRCY)
- Solid Waste Tire Facilities (SWTIRE)
- Toxic Chemical Release Inventory (TRIS)
- US Aerometric Information Retrieval System (AIRS)
- Underground Injection Controls (UIC)
- Brownfields Grant Sites (US Brownfields)
- Underground Storage Tank (UST)
- US Mines Master Index File (MINES)
- Voluntary Cleanup Program (VCP)

EDR also searches additional non-federal and state databases, including some that are proprietary. The full list of databases researched is included in the EDR report, an electronic copy of which is included as Appendix A on the attached CD.

When EDR identifies a site during the database search, it lists the site with a unique site identification data key. However, since many sites are included on multiple databases and may have

different identifying information on the separate databases, some individual sites end up with more than one listing and identification key. In cases where there are several apparent sites in close proximity or at the same location, EDR attempts to group such listings in "clusters" having related data keys that allow for easy identification of all the listings for that general location.

We have condensed the initial listings from EDR into a final list of sites, attempting to combine all related listings for each site into a single entry on the potential hazard list. For those sites with multiple EDR listings, one of the unique data keys for each listing is retained as the combined site ID on the final hazard list (Table 10 in Appendix B). This should allow for identification of associated listings in the EDR report. Figures 3 through 7 show the locations of each site with their final ranking as an identifier.

Field Survey

A field verification or "windshield survey" was performed by City staff based on guidance provided by Robinson Noble. The purpose of the windshield survey was to verify that listed sites are appropriately located and to identify and describe any additional sites of concern that were not included from the database search. The sites provided by the EDR report were organized and plotted onto maps by their respective database listings. A windshield survey checklist was also designed based on the Health publication, "Wellhead Protection Program Guidance Document – Sample Inventory Form." Once the survey checklist, EDR database list, and map of database sites were produced, they were given to the City to allow field staff to confirm the presence/condition of the sites. City employees performed this task because they are familiar with the businesses and land uses within the service area and because field staff are routinely deployed in the field on other tasks. The findings of the field survey were incorporated into the potential hazards listing and ranking discussed below.

New sites beyond the EDR listings were not identified through the field survey, though the field verification process identified the current uses of each property visited. This allowed us to cross-check the database listings and then add current uses or business names that EDR did not identify.

Methodology for Establishing Risk Priority

The methodology for prioritizing risks in the WHPA was partially based on the EPA guidance document entitled "Managing Ground Water Contamination Sources in Wellhead Protection Areas: a Priority Setting Approach" (EPA, 1991). The ranking effort was also based on the level of confidence in data and information that is currently available for known and potential contamination sites.

Each site was ranked according to three decision levels. The decision levels are listed below in Table 3 (Level I represents the highest hazard risk criteria; Level III is the lowest).

Table 3: Overall Risk Prioritization

Decision Level	Available Data and Information
I	Proximity of potential hazard to the WHPA
II	Type of contamination
III	Straight-line distance from the wells to the potential hazard

Each known or potential hazard was first scored and then ranked using decision level one. Sites with equal level one rankings were then further scored and ranked using decision level two. If sites were still equal in priority, they were further sub-prioritized under decision level three. Once sites were all differentiated in priority (i.e., no ties in scoring), no further ranking was nec-

essary. For this project, ranking beyond decision level III was unnecessary. The criteria for scoring sites within each level are discussed below.

Decision Level I – Proximity to WHPA

For the first decision level, the sub-prioritization of contaminated sites was based on their location in the WHPA zones; the shorter the travel time, the higher the priority. Scores for each site and hazard category are summarized in Table 4.

Table 4: Proximity to Source

Sub-Priority Score	Proximity to Source
1	½-year time-of-travel to the source (Zone 1)
2	1-year time-of-travel to the source (Zone 2)
3	5-year time-of-travel to the source (Zone 3)
4	10-year time-of-travel to the source (Zone 4)
5	Area of investigation outside Zone 4 (Zone 5)

Decision Level II – Type of Contamination

For the second decision level, the sites were ranked as either known or potential sites of contamination. Known contamination sites were defined as those with known releases of contaminants according to the environmental database survey results. Sites of potential contamination are areas or locations that are used in ways that could pose a risk to the groundwater. This category's scoring is summarized in Table 5.

Table 5: Type of Contamination

Sub-Priority Score	Known or Suspected Contamination	Type of Site	Assumptions
1	Known	CSCSL, HSL, ICR, RGA HWS, RGA LUST, Indian LUST, SPILLS, SPILLS 90, US BROWNFIELDS	As a worst case scenario, contamination is assumed to be comprised of the most toxic chemical identified for the site based on information contained in the Ecology and EPA databases.
2	Known or Suspected	Inactive Drycleaners, Drycleaners, RGA LF, SWF/LF, US Hist Cleaners [1],	Contamination is known or suspected to exist at the site, but may be partially controlled.
3	Known	VCP sites; CDL, historic CDL	Voluntary cleanup sites (VCP) are sites where contamination has occurred, but the contamination has been at least partially controlled or cleaned up. Clandestine drug labs (CDL) can cause toxic fumes, spills, explosions, fires, and can create large amounts of toxic waste.
4	Potential	Financial Assurance; Indian UST, UST; , rural zoned areas; pipeline corridors	It is assumed that petroleum products are stored in USTs, but contamination is not imminent. Rural areas use septic systems. Nitrates and bacterial contamination from septic systems are assumed to be health risks, along with potential chemical hazards, but it is not known what the likelihood is for systems to contaminate the wells.
5	Potential	ERNS, Haznet, Hist Auto, Manifest, RCRA-CESQG, RCRA-NonGen, RCRA-NLR, TRIS; commercial or industrial zoned areas	Hazardous chemicals may be stored on RCRA sites, but contamination has not necessarily occurred. Commercial/industrial uses at this level assume that they are served by sewer systems.
6	Potential	FINDS, US MINES, mining land uses and transportation corridors	This category also includes highways and railroad tracks where accidental spills can occur (with the risk based on the possibility of hazardous material spill; for example, gasoline).

Sub-Priority Score	Known or Suspected Contamination	Type of Site	Assumptions
7	Potential	ALLSITES, urban residential zoned areas	Urban residential uses within areas served by sewer systems are generally lower risk than those served by septic systems.
8	Potential	FTTS, HIST FTTS, open space/recreational/forest zoned areas	Non-residential insecticide, fungicide, and rodenticide uses. Herbicide and pesticide use along transportation corridors, power lines, and in open spaces/recreational uses,
9	Potential	CERC NFRAP, NPDES	This category includes the potential release of lead, petroleum products, and/or solvents via a stormwater system.
10	Potential	CSCSL NFA	Sites achieving a NFA ranking are presumed to have been cleaned up sufficiently to no longer pose a threat. Therefore, this ranking will take precedence over other categories listed for the same site.

[1] Existing and historic drycleaners, landfills (LF), and solid waste facilities (SWF) all have, or had, contaminants present, but the contaminants were not necessarily released to the environment. However, particularly for older sites, the chances of release due to use practices and facility designs is particularly high for these sites. Therefore, contamination is suspected. Additionally, the types of contamination typically found at these sites are particularly mobile in groundwater. These factors combine to rank these sites high although contamination is not known for certain.

Decision Level III – Distance from Wells

For potentially hazardous sites with similar characteristics for prioritization decision levels I and II, the direct distance from the site to the well was used to further rank the sites. In some cases, the nearest wellfield to a hazard site is not a reasonable path (i.e., groundwater moving up gradient). Therefore, we determined the most direct distance based on pathways that are reasonably achievable. Those sites closest to the wells or springs were given a higher priority.

As noted above, a portion of the valley was defined by PGG as lacking deposits of the Osceola mudflow. If correct, the absence of this aquitard will allow for water and/or contaminants to travel vertically through the substrate and into the aquifer faster than it would otherwise.[1] This translates into a shorter travel time to the wellfield. Travel-time calculations were performed based on porosity of the material, averaged thickness of the mudflow deposits, hydraulic conductivity, and difference groundwater elevation above and below the unit. Using average values, we determined that water and/or contaminants could travel vertically through the mudflow unit in an estimated 135 days. Therefore, where the mudflow unit is not present, flow toward the well can be assumed to be 135 days faster. Over a similar period, water and/or contaminants already in the source aquifer would travel approximately 520 feet horizontally toward the wellfield. To account for this quicker time of travel, we subtracted 520 feet from the calculated straight-line distance measured between the nearest source well and the site in question for areas where the mudflow deposit is not present. Where a site had a distance that is less than 520 feet from a source well, we assumed a minimum travel time of one month or 245 feet and used this value for the distance.

Land Use

Land use zones are added to the hazard ranking process in order to include the more general, non-point-source activities that each zone represents. Since the land use activities vary with the zoning, it is reasonable to use the zone classifications as a proxy for trying to identify individual activities within a zone. So rather than call out each commercial business as a possible handler of hazardous materials (a paint store for example), the commercial zone can be given a suitable

[1] The USGS Puyallup River Watershed model will likely refine the areas where mudflow deposits are present. The assumptions used here should be revisited during the next WHPP update using the USGS model as a guide to better define the vertical relationships, flow directions, and times of travel.

ranking level and the nearest instance of that zone to a source well is ranked in the hazard inventory process.

Land use and zoning within the study area include (in general order of prevalence) medium density urban residential industrial, mixed use, commercial, rural area (large lots, 2.5 acres or larger), low density urban residential, mining, and high density urban residential. These land-use categories are discussed below in relation to the potential hazards they represent. Figure 8 shows the locations of zoning categories within the Auburn City limits.

Residential Land Uses

Residential zoning generally falls into four categories across the study area: rural; low density, medium density, and high density urban residential. Table 6 lists the residential land categories.

Table 6: Residential-use Designations

Land Use/Zoning	Description	Hazard Ranking
Rural (2.5, 5, and 10 acre)	Large lot residential (includes non-residential rural uses such as churches and some schools) 1 dwelling unit per 4 acres	7
Urban residential, low	Small lot single- and multi-family residential mixed. Low – 1- 3 dwelling units per acre	274
Urban residential, medium	medium – 4 - 10 dwelling units per acre	18
Urban residential, high	High – 11 or more dwelling units per acre	19

Three rural-zoning categories are present representing allowed minimum lot sizes of 2.5, 5, and 10 acres. As each of these variations on rural zoning present essentially the same basic risk to the City's sources; they are combined into a single category for this ranking process. Contaminant sources related to rural land use include chemical fertilizer, herbicide, and pesticide application; petroleum hydrocarbons; household chemicals; and household sewage. Petroleum hydrocarbons from home heating-oil tanks and farm equipment fuel tanks, as both aboveground and underground storage tanks (USTs), are a potential threat with this land use.

The risk is higher from rural zones for two reasons. First, rural zones in general, because of the potential for agricultural uses, have a larger potential for high, more concentrated use of fertilizers, pesticides, and herbicides. Second, because rural zones are not sewered, risk is elevated due to the use of septic systems, which have the potential to deposit contaminants directly into the subsurface. So, while urban area densities are greater than rural zones, the potential pathways for contamination are often better controlled (sewers, stormwater handling systems, more impervious cover, etc.). However, it is worth remembering that typically risk from septic systems is dominated by the gradual loading of contaminants (i.e., nitrates) from many systems together over a large area rather than inputs of a hazardous material to a specific septic system. In general, single-source contamination is not only uncommon but also rarely travels significant distances beyond the septic drain field because most household chemicals are not highly mobile nor are used in significant enough volumes to cause extended contamination.

Commercial Land Uses

Commercial land use makes up approximately 2,353 acres of the study area and is ranked as the seventh highest risk to the WHPA because of its proximity and subsurface pathways for contamination.

The most likely potential contaminants related to commercial land uses are, but are not limited to, petroleum hydrocarbons and metals. These potential contaminants are generally due to the presence of fuel in USTs, parking lots, and listings of businesses potentially as RCRA small-quantity generators of hazardous materials.

Industrial Land Uses

Like commercial zones, industrial areas can host a range of activities with potential to cause contamination. The most likely contaminants related to industrial uses are petroleum hydrocarbons and metals. Contaminants are generally due to the potential for large spills, presence of aboveground and underground storage tanks, parking lots, and potentially small or large quantity generators of hazardous materials.

Mining & Transportation

Major transportation routes are included as potential hazards due to the transport of potential contaminants by road or rail and the potential use of herbicides and pesticides along the routes. Two Burlington Northern Santa Fe (BNSF) and one Union Pacific railroad corridors extend through WHPA and study area. Heavily trafficked roads determined to be significant transportation corridors through the WHPA and study area include Highway 18, A Street East, and Auburn Way.

The main consideration for transportation corridors is for large spills, typically involving petroleum hydrocarbons or hazardous materials. Smaller streets and roads are not listed separately in the potential hazards list because there is less chance for large spills and small spills (i.e., leaks, over application of de-icing salt, etc.) that might occur only on non-highways are less of a concern. Hazards related to smaller streets and roads are included within the other land-use categories (specifically the rural and urban planning development categories).

Multiple sand and gravel mining operations are located in the study area. Openwork mining allows a direct route for potential contaminants to enter the groundwater system. While it is assumed that the mines operate under best-management practices and conform to all appropriate state regulations, the lack of vegetated cover and continued disturbance of mining pits when in operation makes mines potential sites for contamination. Contaminants of particular concern associated with mining are petroleum based fuels and hydraulic fluid.

Mixed Uses

The final category of land-use categories is mixed use. This category includes a mixture of residential, commercial, and public land uses. Public land use includes hospitals, public swimming pools and athletic facilities, libraries, parks, etc. Potential contaminants include the use of herbicides and pesticides, as well as other chemicals for public swimming pools and hospitals, etc.

Pipeline Corridors

The Olympic Pipeline, owned by BP, is located in the study area and is within the West Hill Springs WHPA 5- and 10-year zones. The pipeline transports gasoline, diesel, and jet fuel from refineries at Cherry Point and Anacortes, Washington to as far south as Portland, Oregon. Hazards associated with the pipeline corridor include potential for leaking and spills of petroleum products from the pipeline, as well as the potential use of herbicides and pesticides along the routes.

Table 7, below, shows the relative ranking for the non-residential land use categories.

Table 7: Other Land-use Zoning Designations

Land Use/Zoning	Description	Hazard Ranking
Mixed Use	Mix of residential, public properties including swimming pools and athletic facilities, libraries, and parks, hospitals, and some commercial uses.	10
Mining &Transportation Corridors	Highway 18, Auburn Way, and A Street. Active and abandoned sand and gravel mines.	54
Industrial	Safeway Distribution Center, Oldcastle Precast Concrete Manufacturing, Northwest Aviation Service Group, and many others	16
Commercial	neighborhood business, shopping malls, and strip malls, etc.	11
Pipeline Corridors	BP's Olympic petroleum pipeline	125

Identified Contaminant Sources

In the federal and state databases reviewed by EDR, 992 sites are identified within the WHPP study area. These sites are scattered among all four of the WHPA zones and the area of investigation, as well as outside the WHPAs. However, based on the locations, types of listings, the field verification effort, and review of additional on-line database information where available, we reduced the final list of sites to be ranked to 504. Adding in the nine land-use categories discussed above brings the total number of ranked hazards to 513. The five highest ranked sites are shown below in Table 8. The City should do additional due diligence on the highest ranked sites to evaluate to risk to the WHPAs. The hazard sites are mapped on Figures 2 through Figure 7 and shown in Table 10, attached as Appendix B.

Table 8: EDR Identified Contaminant and Potential Sources

Hazard Ranking	EDR ID Numbers	EDR Site Name	Address	Database
1	CU 950, CU 949, CU 953, CU 952, CU 951	The Church of Jesus Christ of Latter Day Saints	331 4th St. NE	ICS, RGA HWS, FINDS, ALLSITES, CSCL
2	DP1003	No Name Provided	634 M Street NE	SPILLS
3	DP 975	No Name Provided	1207 6th St NE	SPILLS
4	CW 849	No Name Provided (residence-duplex)	1208 4th St NE	EDR US Historic Cleaners
5	DN 962, DN 969, DN 968	B and G One Hour Cleaners	420 N Auburn Way	ALLSITES, Inactive Cleaners, RCRA NLR, FINDS, Historic Cleaners

Potential Groundwater Concerns

For wellhead protection planning, it is important to understand the potential sources and types of contamination that threaten the City's WHPAs. It is also important to understand the potential pathways for contaminant migration since these contaminant pathways can increase the vulnerability of an aquifer by decreasing travel time from a source to a wellhead or spring. The following section briefly summarizes the main mechanisms for transport of contaminants to the subsurface.

Discharge onto the Ground Surface

Direct discharge to the ground surface occurs when products or waste materials are spilled onto the ground. With the help of rainfall infiltration, the materials percolate into the subsurface, and if a sufficient volume of material is released, they eventually reach the water table and migrate down gradient within the shallow aquifer. In large enough quantities, spills can impact deeper aquifers where water supply wells are completed.

Direct Discharge to the Subsurface

Discharge to the subsurface occurs from septic systems and dry wells (UICs). Discharge into the subsurface is a more direct mechanism for transport because contaminants are discharged closer to the water table and because subsurface discharge bypasses the upper layers of soil, which have the ability to absorb and disperse many types of contaminants.

Abandoned Wells

Old, improperly constructed or improperly abandoned wells[2] can act as direct conduits for contaminant transport to an aquifer. In such wells, transport can occur between the ground surface and aquifer zones because of a lack of a well seal or an inadequately constructed seal.

Stormwater Runoff

Rainfall onto the ground either induces infiltration into the subsurface or becomes runoff. The quality of the water which infiltrates or runs off is dependent on the type of land use and the potential presence of contaminants which may be located on the ground surface. Stormwater infiltration issues are similar to those of discharge to the ground surface. Stormwater runoff is considered differently because it runs over the surface of the ground, picking up and dissolving potential contaminants, and may eventually discharge these contaminants to groundwater via infiltration through ditches or ponds designed to percolate water or from surface-water bodies which receive the runoff.

The potential concerns due to water infiltration or runoff are diverse and reflect the land-use activities in the area of interest. Paved roadways, parking areas, and residential developments can contribute heavy metals and petroleum hydrocarbons which originate primarily from vehicle-related emissions. Industrial and commercial operations commonly process and release a variety of organic pollutants (e.g., solvents, paints, and dry cleaning solutions) as well as petroleum products.

Management Strategies

This WHP program is designed to be an on-going management activity to meet the City's future planning needs and to adapt to changes in the City's use of the aquifer system. As such, the management strategies and practices outlined within this study provide a general direction but will periodically need to be refined to fit specific conditions. Additional adaptations may be needed to address future activities and regulations or changes in current regulations that may affect the WHPAs. The following sections detail proposed strategies to protect the integrity of the City's water sources.

Land Management Activities

The City should encourage owners or agencies responsible for large land parcels and developments to use and monitor best management practices (BMP) for control, reduction, and restriction of potential contaminants into the WHPAs.

[2] Washington State has standards for construction and abandonment of wells, WAC 173-160.

WHP Land-use Strategies

The City of Auburn has no authority to directly control land use for those areas of the WHPAs that are outside the city limits. Therefore, the City must develop a cooperative relationship with those state and local agencies that administer land use programs. At the present time, the best strategy for the City is to seek special designations for the WHPAs from pertinent agencies. The City should evaluate and seek the different designations that may be most beneficial.

Possible Special Protection Area Designations

- A Special Protection Area designation under the state groundwater quality standards (WAC-173-200)
- A Special Use Area by the Department of Agriculture
- An Environmentally Sensitive Area under various County-level programs

WHP Regulatory Strategies

This WHPP is designed to use the existing statutory rules and regulations to protect groundwater quality. The City, in coordination with state and local agencies having statutory authority in the area, could monitor regulated activities within the WHPA. The following regulatory strategies are recommended.

Well Drilling Inspections inside the WHPA

The City should support continuation of the delegation by the Department of Ecology (Ecology) of well construction inspection authority to the King and Pierce County Health Departments. Regardless of the responsible agency, the City should encourage more frequent well construction inspection than currently occurs.

Washington State Environmental Policy Act/Hydrogeologic Evaluations

The City should request that the King County Department of Development and Environmental Services (DDES) and the Pierce County Planning and Land Services (PALS) to require hydrogeologic evaluations that specifically address impacts to groundwater quality and quantity parameters for any development within the WHPAs which requires SEPA action or seeks a Determination of Non-Significance (DNS) designation. Additionally, the City should enter into a Memorandum of Understanding (MOU) with DDES and PALS seeking City comment on the effects such developments will have on the groundwater system. Designation of the area as a Special Protection Area will be the first step toward gaining such an agreement.

Septic Tanks

The City should request King County and Pierce County to require as-builts drafted by septic design professionals be recorded with property deeds for new septic systems. Additionally, the City should support the implementation of laws and regulations requiring proper inspection and maintenance of septic systems. The City currently has an active sewer system throughout the majority of the City; however, septic systems still exist in many areas. In areas that are sewered, septic tanks are not allowed for new construction as everything must be connected to the sewer.

Planning Strategies

A substantial degree of future protection for the WHPAs will be achieved through present-day planning and coordination. In order to accomplish the required level of future protection, the following strategies are recommended.

Sewers

The City, in coordination with the managers of neighboring local sewer systems, should develop emergency plans to be implemented in the advent of sewage leaks or spills. The City could encourage the County to require all industrial and commercial facilities within the WHPAs to connect to sanitary sewers if such services are reasonably available.

Stormwater Management

The City should conduct or promote research on the impact of stormwater discharge on water quantity and quality. Additionally, the City, in coordination with the responsible agencies, should evaluate the adequacy of stormwater facilities including proper routing, retention, and detention. In the upland areas, a balance should be found that allows optimum recharge of stormwater to groundwater systems while adequately protecting the water quality of the aquifers. Generally in the valley areas, aquifer recharge of stormwater is less of a concern and stormwater management should focus more solely on water quality protection.

Petroleum Pipelines

The City should document the location and use of petroleum pipelines and establish emergency response plans for pipeline failure. These efforts should be coordinated with the pipeline companies and the federal, state, and county agencies responsible for emergency, petroleum-product spill response.

Hazardous Material Transport

The City should investigate the feasibility of re-routing the transport of hazardous materials away from the half-year and one-year WHPA zones and the area where the Osceola mudflow aquitard is not present. However, it may be necessary for this option to exclude Highway 18 and SR 164 (Auburn Way South) since they represent major regional transportation routes. While Highway 18 does not travel directly through the 6-month or 1-year zones, it does pass through Zone 1A, an area with no confining layer above the main aquifer utilized by the City. A stronger emphasis on emergency response for this area could be an alternative to the rerouting of hazardous material transportation.

Spill Response

The City has established formal communication protocols with first-response emergency units of the Valley Regional Fire Authority. Notification of the location of the WHPAs should also be given to emergency response organizations outside of the City boundaries as appropriate. The City also has an Emergency Response procedure (600-02) to help it respond to minor spill events within City limits. However, creation of a formal Spill Response Plan that brings together City and first-responder agencies under the incident command system is recommended. Such a plan describes the proper response procedures to a major spill event that might threaten City water supplies and can prove valuable in cases where a first responder's perspective differs from the City's desire for protection of water resources by pre-establishing command and control roles and identifying proper contacts to ensure good decision making in the field.

Data Management Strategies

One of the principal goals of the WHPP is the development of a data collection network and analysis plan capable of providing the City with advance warning of contamination to the City's water supply. The following data management strategies seek to establish and maintain scientific data upon which future WHPP actions can be based.

Groundwater Monitoring Plan

The City should actively participate in the collection and analysis of regional and local groundwater information. The development of a proper groundwater-monitoring plan will be crucial to the City's capability to protect their water sources. This can be accomplished in cooperation with Health, the Regional Water Associations of South King County, Seattle-King County Health Department, the Department of Natural Resources (DNR), Ecology, and other entities seeking to monitor the groundwater resources of the region.

Abandoned Well Inventory

The City should locate and inventory decommissioned, abandoned, and unused wells. Owners of these wells could be notified of the potential liability such wells cause and be educated on the benefits of well decommissioning.

Herbicide and Pesticide Survey

The City should inventory and monitor major herbicide and pesticide use within the WHPAs. This inventory may be used to guide future groundwater monitoring and WHP-related education programs. In addition, the City could encourage county, state, and private land managers to use vegetation-management practices that protect groundwater quality.

Underground Storage Tanks Inventory

The City should inventory and locate underground storage tanks. Besides those presently identified by the current hazard inventory, this inventory should include new tanks placed after the hazard inventory was finished, residential home heating-oil USTs, and other tanks that have not been previously identified.

Drywell Monitoring

The City should encourage stormwater management agencies to develop an evaluation and monitoring plan for drywells within the WHPAs.

Education Strategies

Education of the public and industrial/commercial occupants of the WHPAs concerning groundwater protection is a critical portion of the WHPP. Through proper education, the degree and potential for future contamination can be greatly reduced; therefore, the following recommendations are made.

- If not already begun, the City should begin groundwater educational programs to educate WHPA residents, particularly on groundwater quality issues. The WHPAs could be targeted for distribution of literature regarding septic tank maintenance; fuel-oil storage tank maintenance and abandonment; residential use of herbicides and pesticides; and hazardous material use, disposal, and storage
- In addition to City-run programs, the City should participate in and support small-quantity waste disposal programs and actively work with state and local government in developing and creating public education programs concerning groundwater.

Wellhead Protection Implementation Tasks

In order to accomplish the protection of the WHPA, we recommend that the City adopt the WHP Implementation Tasks listed below. Twenty-six tasks were initially proposed during the 2008 WHPP update (Robinson, Noble, & Saltbush 2008). Two tasks have been completed, four have been removed as redundant, and eight tasks are currently being completed by the City as shown in the Table 9 below.

Table 9: 2008 Implementation Tasks Currently in Progress

2008 Task Number	Task goal
3	Notify county health and planning departments
11	Participate in a regional groundwater data development and management program
13	Ensure SEPA evaluations include WHP considerations
14	Document the type and amount of herbicide and pesticide application
17	Promote and coordinate public education programs on WHP concerns
20	Encourage development and use of best management practices in developments covering groundwater protection
22	Encourage thorough analysis of groundwater impacts for siting, operation, and reclamation of gravel quarries and mines
26	Work with responsible parties to assess adequacy of stormwater systems

The remaining tasks are listed in their recommended priority of implementation. Task numbers from the 2008 update have been retained. The City may institute all or a portion of these tasks, depending upon available funding, time, or other concerns.

Task 2

The City should establish formal communication with first responders and educate them about the needs for wellhead protection. As an example, Tacoma-Pierce County Health Department collected the WHPAs defined by each Group A water purveyor in Pierce County and created a GIS-based map. This map layer was then shared with all Pierce County fire departments to help inform their responses to fires or hazardous material spills in proximity to vulnerable water supplies.

Task 4

Consideration should be given to seeking designation of the WHPAs as a special protection area. As mentioned previously, there are numerous special designations the City may wish to seek in order to protect the WHPAs. The City should evaluate the protection offered by these designations and seek those most appropriate for the WHPAs.

Task 5

The City should create awareness of the wellhead protection area by posting metal "WATER SUPPLY PROTECTION AREA" signs along major arterial roads at the borders of the WHPAs.

Task 7

Increasing public awareness of homeowners who are connected to the City's water system through notification letters to customers within the WHPAs should be accomplished by the City. This notification letter should be given to homeowners either at the time of service hook up or as part of property escrow.

The City should deliver a copy of the WHPP to the King County and Pierce County library systems. This will allow interested residents to learn more about the wellhead protection program of the water system.

In addition, the City should inform local residents of the WHPA through a press release sent to Auburn Reporter, Tacoma News Tribune, and the Seattle Times for publication in the local or "Your Town" sections of each paper.

Task 8

The City should coordinate with King and Pierce Counties to require engineering as-builts of new septic systems be recorded with property deeds. These as-builts should be drawn and

submitted by septic-tank designers who are registered professional designers licensed by Washington State. The City should support the implementation of state laws and regulations regarding septic system inspection and maintenance programs and promote and coordinate public education programs concerning proper septic tank maintenance and proper hazardous waste disposal.

Task 9 and Task 24 (combined)

City public works staff should review routine leak detection procedures for sewer lines, request the use of "leak-proof" piping for new sewer construction, and replace older lines. There are currently multiple sewer force mains located throughout the City. The City currently has contingency plans in place for pump and line failure; however, the City should develop an emergency response procedure for sewer force main breaks within the half-year and 1-year WHPA zones. The City could seek to have appropriate agencies require sewer hook-up for all industrial-commercial facilities within the WHPAs if sewer service is reasonably available.

Task 12

The City could encourage King and Pierce Counties to maintain their delegated authority of well-drilling inspection and should coordinate with this program to gain advance notice of drilling in or near the City's WHPAs. The contacts for the appropriate programs are Tacoma-Pierce County Health Department's Drinking Water and Wells program at 253-798-6470 and Public Health – Seattle & King County Department's Drinking Water program at 206-296-4932. For information on the delegated authority, contact the Department of Ecology's Well Construction and Licensing program at 360-407-6650 (see also: http://www.ecy.wa.gov/programs/wr/wells/wellhome.html).

Task 15 and 16 (combined)

The City should annually review the CSCSL, LUST, and other significant environmental database listings within the WHPAs. Also, the City could monitor Ecology's progress in the cleanup of contaminated sites within the WHPAs and encourage Ecology and county inspection of RCRA hazardous waste generator facilities.

Additionally, review of annual Superfund Amendments and Re-authorization Act (SARA) Title III reports, in order to document and inventory the chemicals used in the WHPAs, is recommended. This review could be used to guide groundwater monitoring and WHP-related education programs.

Task 18

The City should develop data on the number and size of exempt underground tanks within the half-year and one-year WHPA zones. Also, the City should promote and coordinate public education programs concerning underground tank hazards, leak detection methods, and proper removal and closure procedures. These programs should target owners of exempt underground tanks. Such owners should be encouraged to contact the Pollution Liability insurance Agency (PLIA) to receive no-cost coverage of up to $60,000 at http://www.plia.wa.gov/.

Task 19

The City could seek to have Ecology prioritize the investigation of contaminated and potentially-contaminated sites within the WHPAs. This could assure that those areas with existing contamination and any subsequent contamination events within the WHPAs are given highest priority in relation to the amount and type of contamination in clean-up activities and budgets.

Task 23

An inventory of abandoned or unused wells in the six-month, one-, and five- year zones should be made. The owners of these wells should be informed about proper well decommissioning procedures.

Task 25

The City should investigate the need and feasibility for re-routing transport of hazardous materials through the WHPAs. Also, the City should create a formal Spill Response Plan to describe the City's responsibilities and responses to a major spill event under the State's Incident Command System.

References

Dragovich, J.D., Pringle, P.T., and Walsh, T.J., 1994, Extent and geometry of the mid-Holocene Osceola Mudflow in the Puget Lowland – implications for Holocene sedimentation and paleogeography, Washington Geology, v. 22, no 3., p. 3 – 26

Pacific Groundwater Group, 1996, Preliminary hydrogeologic characterization: City of Auburn, prepared for the City of Auburn Department of Public Works Engineering Section, 25 p.

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Robinson Noble & Saltbush, Inc., 2008, Draft wellhead protection update: City of Auburn, 16 p., 3 appendices

Washington State Department of Health, 1995, Wellhead protection program guidance document, publication 331-018, 78 p.

Washington State Department of Health, 1993, Inventory for potential contaminant sources within Washington's Wellhead Protection Areas, 33 p.

U.S. Environmental Protection Agency, Office of Water, 1991, managing ground water contamination sources in wellhead areas a priority setting approach, Washington D.C. EPA 570/9-91-023, 252 p.

The statements, conclusions, and recommendations provided in this report are to be exclusively used within the context of this document. They are based upon generally accepted hydrogeologic practices and are the result of analysis by Robinson Noble staff. This report, and any attachments to it, is for the exclusive use of the City of Auburn. Unless specifically stated in the document, no warranty, expressed or implied, is made.

FIGURES

WEST HILL SPRINGS

WELL 6

WELL 7

WELL 2

WELL 1

WELL 4

WELL 3A

WELL 3B

COAL CREEK SPRINGS

WELL 5A

WELL 5

WELL 5B

0’ 4200’

Legend

- Springs
- Well
- Area of Investigation
- 6 Month WHPA
- 1 Year WHPA
- 5 Year WHPA
- 10 Year WHPA
- Area where Osceola mudflow (Qom) aquitard is not present
- Water Service Boundary
- Auburn City Limits
- Active Railroad

ROBINSON NOBLE

Note: Image from ESRI ArcGIS

PM: BGC
November 2014
1051-005B

King County
T 21 N/R 04 E
Scale 1” = 4200’

Figure 1

Wellhead Protection Location Map

City of Auburn: Water Comprehensive Plan Update

Figure 3

Figure 4

Figure 5

Figure 6

Figure 7

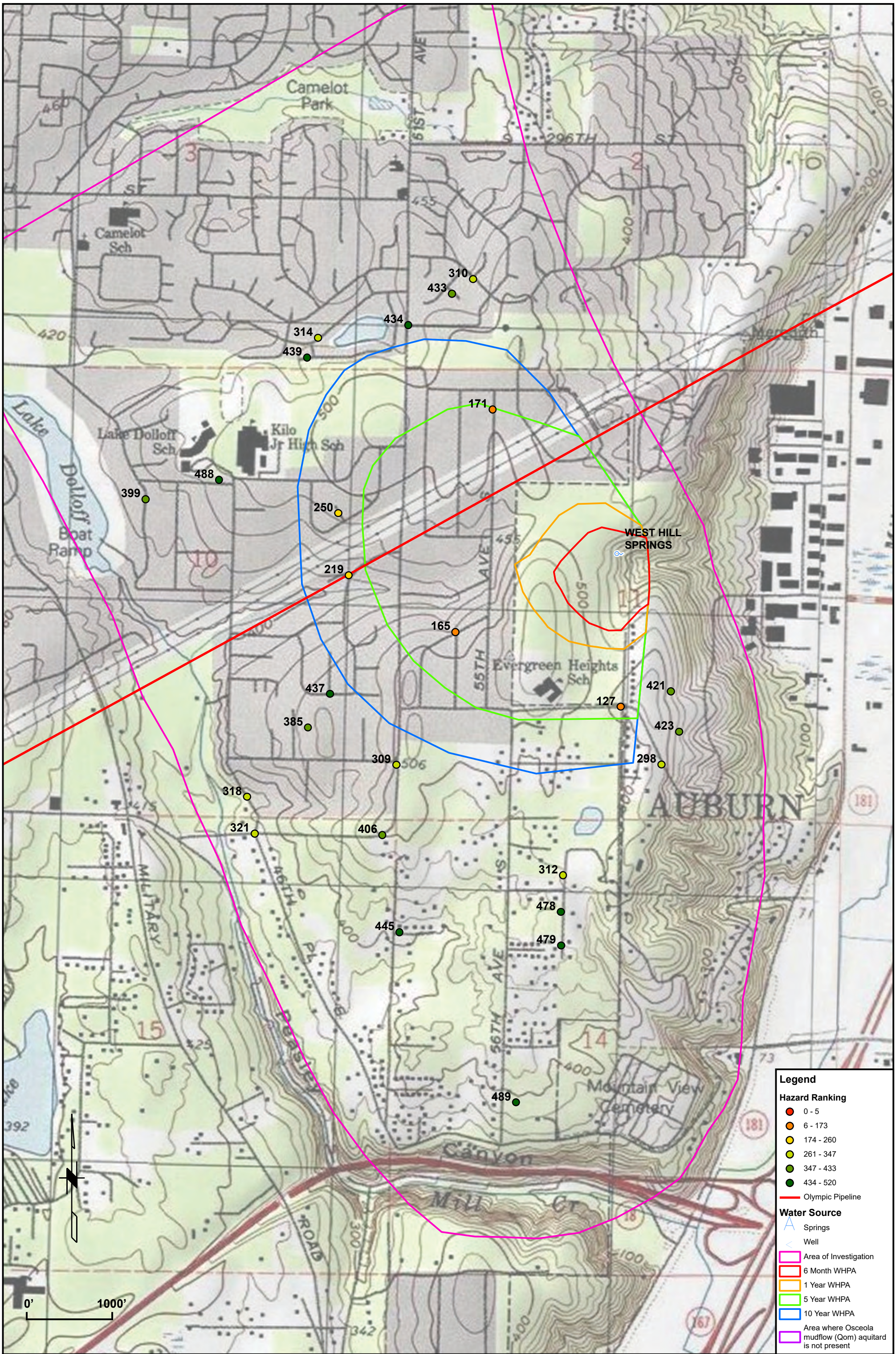
0’ 4167’

ROBINSON NOBLE	Note: Image from ESRI ArcGIS	PM: BGC November 2014 1051-005B	King County T 21 N/R 04 E Scale 1” = 4167’

Figure 2

Hazard Site Location Map

City of Auburn: Water Comprehensive Plan Update



ROBINSON NOBLE	Note: Image from ESRI ArcGIS	PM: BGC November 2014 1051-005B	King County T 21 N/R 04 E Scale 1" = 1000'	Figure 3 Hazard Site Location Map City of Auburn: Water Comprehensive Plan Update

Legend

Hazard Ranking

- 0 - 5
- 6 - 173
- 174 - 260
- 261 - 347
- 347 - 433
- 434 - 520

Water Source

- Springs
- Well
- Area of Investigation
- 6 Month WHPA
- 1 Year WHPA
- 5 Year WHPA
- 10 Year WHPA
- Area where Osceola mudflow (Qom) aquitard is not present

WELL 7

WELL 6

Cem

Park

Hosp

Washington Sch

AUBURN

BM 74

BM 87

BM 96

BM 90

PO

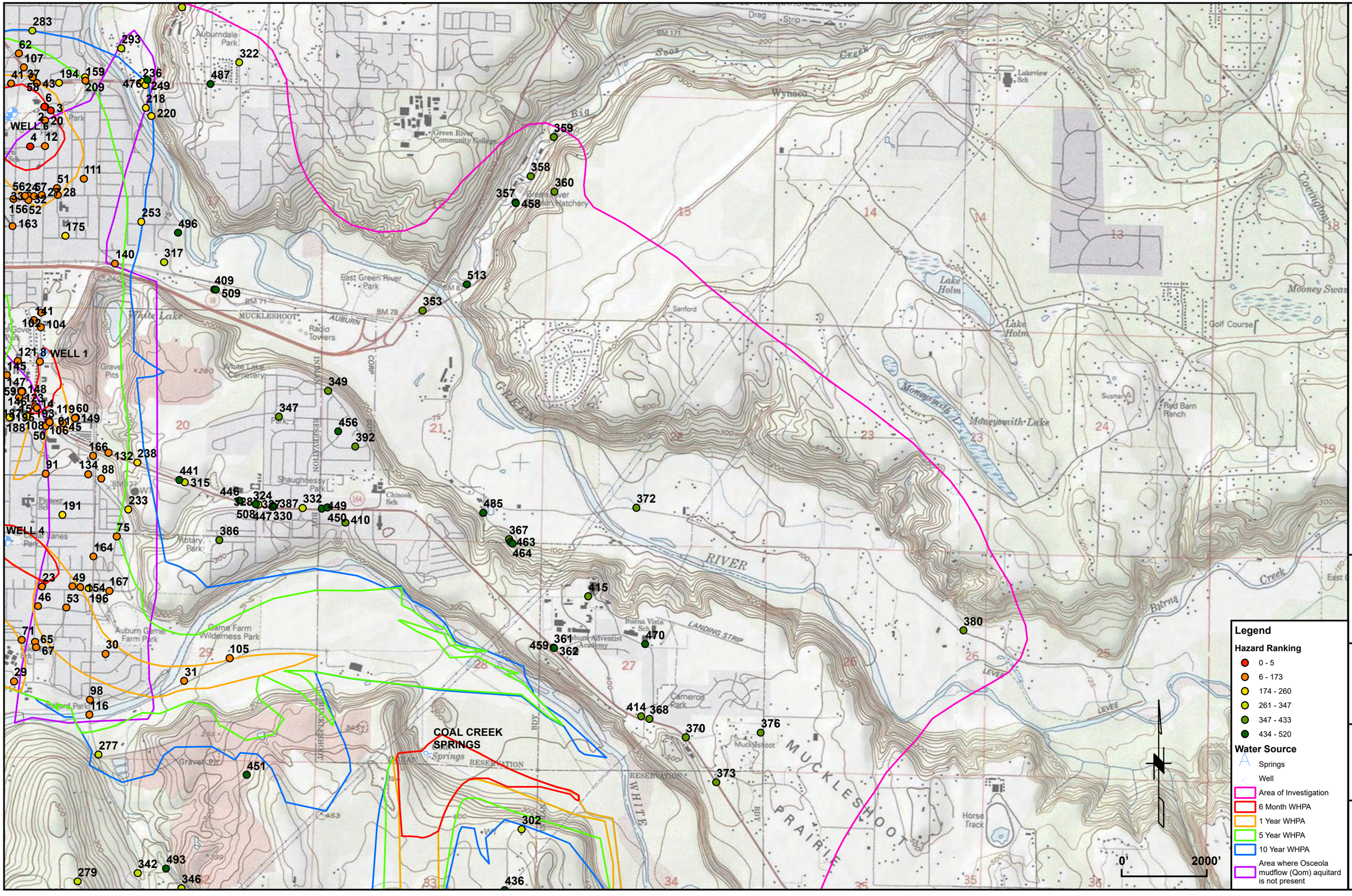
0’ 500’

ROBINSON NOBLE	Note: Image from ESRI ArcGIS	PM: BGC November 2014 1051-005B	King County T 21 N/R 04 E Scale 1” = 500’	Figure 4 Hazard Site Location Map City of Auburn: Water Comprehensive Plan Update

Figure 5

Hazard Site Location Map

City of Auburn: Water Comprehensive Plan Update

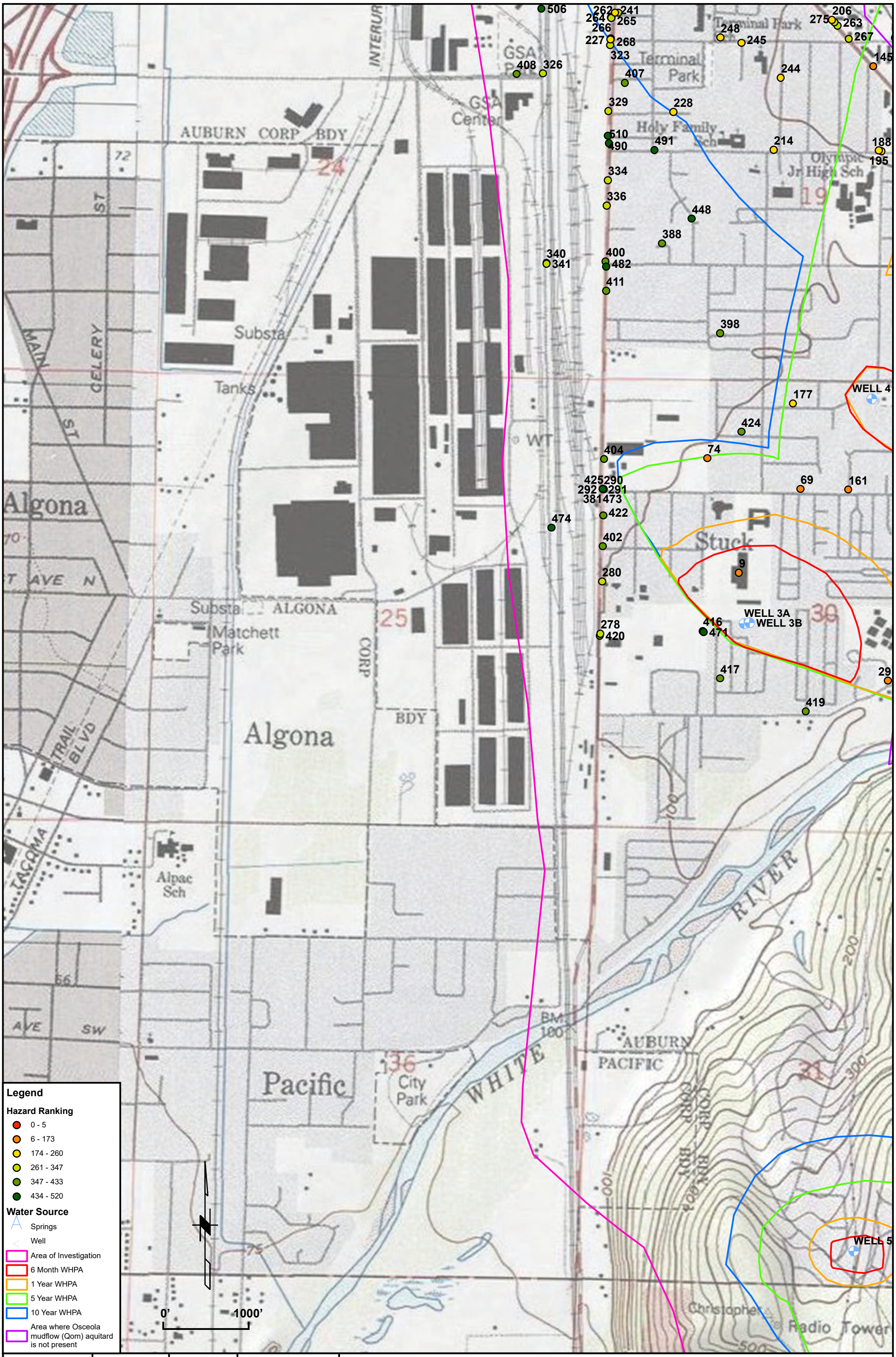


King County
T 21 N/R 05 E
Scale 1" = 2000'

PM: BGC
November 2014
1051-005B

Note: Image from ESRI ArcGIS

ROBINSON NOBLE

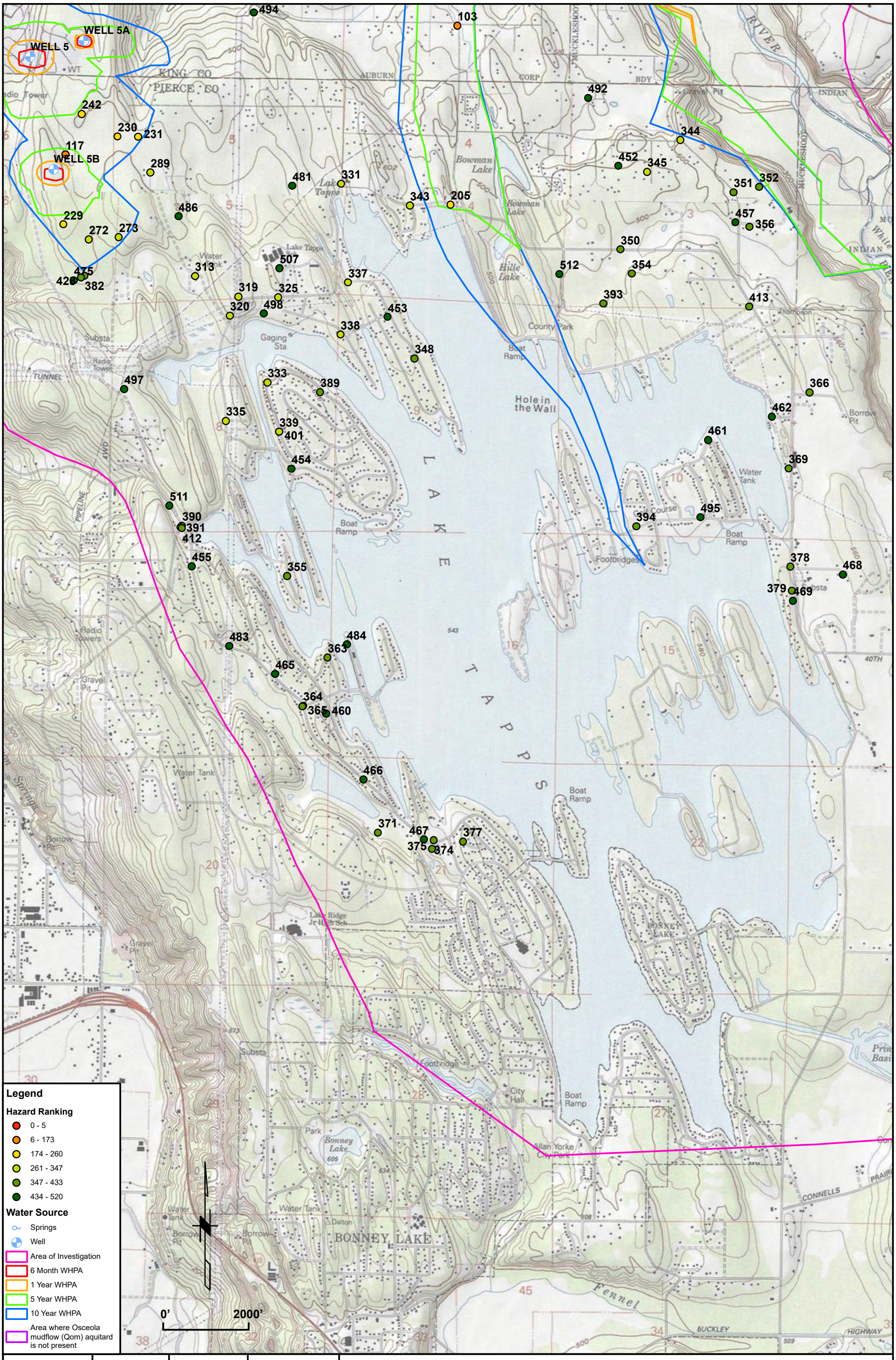


ROBINSON NOBLE	Note: Image from ESRI ArcGIS	PM: BGC October 2014 1051-005B	King County T 21 N/R 04 E Scale 1” = 1000’

Figure 6

Hazard Site Location Map

City of Auburn: Water Comprehensive Plan Update



Legend

Hazard Ranking

- 0 - 5
- 6 - 173
- 174 - 260
- 261 - 347
- 347 - 433
- 434 - 520

Water Source

- Springs
- Well
- Area of Investigation
- 6 Month WHPA
- 1 Year WHPA
- 5 Year WHPA
- 10 Year WHPA
- Area where Osceola mudflow (Qom) aquitard is not present

ROBINSON NOBLE

Note: Image from ESRI ArcGIS

PM: BGC
November 2014
1051-005B

King County
T 21 N/R 04 E
Scale 1” = 2000’

Figure 7

Hazard Site Location Map

City of Auburn: Water Comprehensive Plan Update

WEST HILL SPRINGS

WELL 6

WELL 7

WELL 2

WELL 1

WELL 4

WELL 3A

WELL 3B

COAL CREEK SPRINGS

WELL 5

WELL 5A

WELL 5B

0’ 4200’

Legend

Water Service Boundary

Auburn City Limits

Water Source

	Hazard Ranking
Springs	
Well	
Olympic Pipeline	*125*

Zoning

Industrial	*16*
Commercial	*11*
Mixed Use	*10*
Residential Low (1 DU/ACRE)	*274*
Residential Medium (4-10 DU/ACRE)	*18*
Residential High (11+ DU/ACRE)	*19*
Rural (1 DU/4 ACRES)	*7*
Mining	*54*

ROBINSON NOBLE

Note: Image from ESRI ArcGIS

PM: BGC
November 2014
1051-005B

King County
T 21 N/R 04 E
Scale 1” = 4200’

Figure 8

Zoning Map

City of Auburn: Water Comprehensive Plan Update

ID	Water Source	Time of Travel Boundary	Contaminant Source Name	Street	City	State	ZIP	FSID	Data Source Description	Status	Notes
~~1~~	~~Wells 2 and 6~~	~~6 month~~	~~ALCAL SPECIALTY CONTRACTING WAREHOUSE~~	~~111 3RD ST NE~~	~~AUBURN~~	~~WA~~	~~98002~~	~~69581~~	~~Emergency/Haz Chem Rpt TIER2~~	Eliminated based on 2024 City Survey	Invalid address
~~2~~	~~Wells 2 and 6~~	~~6 month~~	~~Big Wheel Auto Parts 2~~	~~9461 DELRIDGE WAY SW~~	~~SEATTLE~~	~~WA~~	~~98106~~	~~86177265~~	~~Hazardous Waste Generator~~	Eliminated based on 2024 City Survey	Unable to find business in Auburn
~~3~~	~~Wells 3A and 3B~~	~~6 month~~	~~Auburn Barrel Fire~~	~~1800 BLOCK OF 29TH SE~~	~~AUBURN~~	~~WA~~	~~98001~~	~~59751336~~	~~Hazardous Waste Generator~~	Eliminated based on 2024 City Survey	Water source is not in service
4	Wells 3A and 3B	6 month	ROHR INC	3130 D ST SE	AUBURN	WA	98002-8034	61969547	Hazardous Waste Generator Emergency/Haz Chem Rpt TIER2 Toxics Release Inventory Hazardous Waste Planner Underground Storage Tank		Water source is not in service
5	Well 7	6 month	KING CNTY PARKS AUBURN POOL	516 4TH ST NE	AUBURN	WA	98002-5020	56127898	Emergency/Haz Chem Rpt TIER2		Water source is not in service
6	Well 7	6 month	CHURCH OF JESUS CHRIST LDS	331 4TH ST NE	AUBURN	WA	98002	2439	Independent Cleanup		Water source is not in service
~~7~~	~~Well 7~~	~~6 month~~	~~B & G Cleaners~~	~~420 AUBURN WAY N~~	~~AUBURN~~	~~WA~~	~~98002~~	~~44716426~~	~~Hazardous Waste Generator~~	Eliminated based on 2024 City Survey	Water source is not in service. **Now Mattress City**
~~8~~	~~Well 7~~	~~6 month~~	~~Goodyear Gemini Auto Service~~	~~423 AUBURN AVE~~	~~AUBURN~~	~~WA~~	~~98002~~	~~7639544~~	~~Hazardous Waste Generator~~ ~~Underground Storage Tank~~	Eliminated based on 2024 City Survey	Water source is not in service. **Now, U Haul Neighborhood Dealer**
9	Wells 3A and 3B	1 year	PSE Christopher Substation	1002 37TH ST SE	AUBURN	WA	98002	22920	Emergency/Haz Chem Rpt TIER2		Water source is not in service
10	Wells 3A and 3B	1 year	Gildo Ray School Improvements	1005 37TH ST SE	AUBURN	WA	98002	11586	Independent Cleanup		Water source is not in service
11	Well 1	1 year	Walgreens 7480	1701 Auburn Way S	Auburn	WA	98002-6348	99999855	Hazardous Waste Generator		
12	Fulmer Wellfield	1 year	EAST MAIN SHORT STOP	520 MAIN ST E	AUBURN	WA	98002	76772635	Underground Storage Tank Emergency/Haz Chem Rpt TIER2		
~~13~~	~~Fulmer Wellfield~~	~~1 year~~	~~AUBURN TIRE CENTER~~	~~402 E MAIN ST~~	~~AUBURN~~	~~WA~~	~~98002~~	~~16219646~~	~~Underground Storage Tank~~	Eliminated based on 2024 City Survey	Office building with Zolas Café
~~14~~	~~Fulmer Wellfield~~	~~1 year~~	~~Holiday Cleaners~~	~~430 E MAIN ST~~	~~AUBURN~~	~~WA~~	~~98002~~	~~52815618~~	~~Hazardous Waste Generator~~ ~~Voluntary Cleanup Sites~~	Eliminated based on 2024 City Survey	Closed per Yelp. Listed as VERSOLENKO CLEANERS on King County. 3708 S 304TH ST AUBURN WA 98001
15	Fulmer Wellfield	1 year	Auburn City Imports	1148 E MAIN ST	AUBURN	WA	98002-5867	19777843	Underground Storage Tank Hazardous Waste Generator LUST Facility Haz Waste Management Activity		
16	Fulmer Wellfield	1 year	Arco 6120	1204 E MAIN ST	AUBURN	WA	98002	6214861	LUST Facility Hazardous Waste Generator Emergency/Haz Chem Rpt TIER2 Voluntary Cleanup Sites Underground Storage Tank		Now a Shell gas station. Resent letter on 7/11/24
17	Fulmer Wellfield	1 year	Gosney Motor Parts Inc	220 AUBURN WAY N	AUBURN	WA	98002	91199132	Hazardous Waste Generator Hazardous Waste Planner Haz Waste Management Activity		
18	Fulmer Wellfield	1 year	Auburn School Dist 408 Auburn HS	711 E MAIN ST	AUBURN	WA	98002	75264151	Hazardous Waste Generator Underground Storage Tank Haz Waste Management Activity Independent Cleanup		
19	Fulmer Wellfield	1 year	7 ELEVEN FOOD STORE 230320249	1302 8TH NE	AUBURN	WA	98002	52518173	Underground Storage Tank Emergency/Haz Chem Rpt TIER2 Voluntary Cleanup Sites		
20	Fulmer Wellfield	1 year	GREEN RIVER AUTOMOTIVE	810 HARVEY RD NE	AUBURN	WA	98002	75212439	Underground Storage Tank		
21	Coal Creek Springs	5 year	LAKE TAPPS GROCERY	18929 9TH AVE	SUMNER	WA	98390-6407	83174321	Underground Storage Tank Voluntary Cleanup Sites LUST Facility		
~~22~~	~~Valley Wellfield~~	~~5 year~~	~~WA PARKS Puget Sound Region HQ~~	~~1602 29TH ST SE~~	~~AUBURN~~	~~WA~~	~~98002~~	~~47562299~~	~~Hazardous Waste Generator~~ ~~LUST Facility~~ ~~Underground Storage Tank~~ ~~Haz Waste Management Activity~~	Eliminated based on 2024 City Survey	Invalid address
23	Valley Wellfield	5 year	Pioneer Elementary School Auburn	2301 M St SE	Auburn	WA	98002	81432	Hazardous Waste Generator		
~~24~~	~~Valley Wellfield~~	~~5 year~~	~~Coal Creek Pump Station~~	~~2108 Howard RD~~	~~Auburn~~	~~WA~~	~~98001~~	~~6689~~	~~Underground Storage Tank~~	Eliminated based on 2024 City Survey	
25	Valley Wellfield	5 year	7 ELEVEN STORE 230314481L	1539 SE 21ST ST	AUBURN	WA	98002-0000	6556758	Underground Storage Tank Emergency/Haz Chem Rpt TIER2		
~~26~~	~~Valley Wellfield~~	~~5 year~~	~~Canham Property~~	~~1225 21ST ST SE~~	~~AUBURN~~	~~WA~~	~~98002~~	~~7503879~~	~~State Cleanup Site~~	Eliminated based on 2024 City Survey	Remove from list. SFR property. Canham no longer property owner
~~27~~	~~Valley Wellfield~~	~~5 year~~	~~Mikes Honda Parts Inc~~	~~2015 R ST SE~~	~~AUBURN~~	~~WA~~	~~98002~~	~~8592585~~	~~Hazardous Waste Generator~~	Eliminated based on 2024 City Survey	Invalid address
28	Valley Wellfield	5 year	Valley Regional Fire Authority	1951 R St SE	AUBURN	WA	98002	7425	Independent Cleanup		
~~29~~	~~Valley Wellfield~~	~~5 year~~	~~AUBURN SHOPPING CENTER~~	~~1815 Howard Rd~~	~~Auburn~~	~~WA~~	~~98002~~	~~2421044~~	~~Voluntary Cleanup Sites~~	Eliminated based on 2024 City Survey	Invalid address
30	Valley Wellfield	5 year	BP Service Station 11065	1111 17TH ST SE	AUBURN	WA	98002	98619798	Emergency/Haz Chem Rpt TIER2 LUST Facility Hazardous Waste Generator Voluntary Cleanup Sites Underground Storage Tank Haz Waste Management Activity		
31	Valley Wellfield	5 year	Rite Aid 5172	1509 AUBURN WAY S	AUBURN	WA	98002	6438351	Hazardous Waste Generator		
32	Valley Wellfield	5 year	ROGERS FURNITURE	1407 AUBURN WAY S	AUBURN	WA	98002	22372684	Underground Storage Tank		Now, Habitat for Humanity Thirft store - Resent letter on 7/12/24

33	Valley Wellfield	5 year	PCL Construction Services Inc	1201 M ST SE UNIT A	AUBURN	WA	98002	77145631	Hazardous Waste Generator		Now, Miles Gravel CO Muckleshoot Indian Tribe 39015 172ND AVE SE
34	Valley Wellfield	5 year	Auburn Muffler & Brake Inc	1301 AUBURN WAY S	AUBURN	WA	98002-6743	4396551	Hazardous Waste Generator		
35	Valley Wellfield	5 year	AUBURN VALLEY YMCA	1005 12TH ST SE	AUBURN	WA	98002-6259	75864862	Underground Storage Tank		
36	Valley Wellfield	5 year	GREEN RIVER HOMES	1103 9TH ST SE	AUBURN	WA	98002-6230	15827666	Underground Storage Tank		
~~37~~	~~Valley Wellfield~~	~~5 year~~	~~U Haul Co of Auburn~~	~~917 AUBURN WAY S~~	~~AUBURN~~	~~WA~~	~~98002-6031~~	~~41255524~~	~~Underground Storage Tank~~ ~~Hazardous Waste Generator~~ ~~Underground Injection Control~~	Eliminated based on 2024 City Survey	Temporarily Closed per google. Vacant commercial building per King County.
38	Valley Wellfield	5 year	7 ELEVEN STORE 230325087J	813 AUBURN WAY S	AUBURN	WA	98002-0000	56122859	Underground Storage Tank Emergency/Haz Chem Rpt TIER2		Location is now La Favorita Mexican Store. Resent on 7/12/24
39	Valley Wellfield	5 year	BROWN BEAR CAR WASH 5473	814 AUBURN WAY S	AUBURN	WA	98002	1289197	Underground Storage Tank LUST Facility Voluntary Cleanup Sites		
40	Valley Wellfield	5 year	Cenex Harvest States Auburn	238 8TH ST SE	AUBURN	WA	98002	2487	Underground Storage Tank Emergency/Haz Chem Rpt TIER2 Hazardous Waste Generator LUST Facility State Cleanup Site Enforcement Final		
~~41~~	~~Valley Wellfield~~	~~5 year~~	~~AUBURN ABANDONED FIRE Sta~~	~~700 AUBURN WAY S~~	~~AUBURN~~	~~WA~~	~~98002~~	~~2240~~	~~LUST Facility~~ ~~Underground Storage Tank~~ ~~Independent Cleanup~~	Eliminated based on 2024 City Survey	Invalid address
~~42~~	~~Valley Wellfield~~	~~5 year~~	~~AUBURN CITY MAINTENANCE FACILITY~~	~~AUBURN WAY S & SR 18 OFF RAMP~~	~~AUBURN~~	~~WA~~	~~98002~~	~~91188982~~	~~State Cleanup Site~~	Eliminated based on 2024 City Survey	
43	Valley Wellfield	5 year	ConocoPhillips Site 2705928	601 AUBURN WAY S	AUBURN	WA	98002	12222643	Underground Storage Tank LUST Facility Haz Waste Management Activity Voluntary Cleanup Sites		
~~44~~	~~Valley Wellfield~~	~~5 year~~	~~U SAVE OIL CO AUBURN~~	~~615 AUBURN WAY S~~	~~AUBURN~~	~~WA~~	~~98002-6031~~	~~62451633~~	~~Emergency/Haz Chem Rpt TIER2~~	Eliminated based on 2024 City Survey	Invalid address
~~45~~	~~Valley Wellfield~~	~~5 year~~	~~BNSF Railway Company Auburn1~~	~~6TH & A ST SW~~	~~AUBURN~~	~~WA~~	~~98002~~	~~36586859~~	~~Hazardous Waste Generator~~ ~~Hazardous Waste Planner~~ ~~Haz Waste Management Activity~~	Eliminated based on 2024 City Survey	
46	Valley Wellfield	5 year	QUICK STUFF 7758	524 A ST SE	AUBURN	WA	98002	3875407	Underground Storage Tank Hazardous Waste Generator Haz Waste Management Activity		
~~47~~	~~Valley Wellfield~~	~~5 year~~	~~Electrofinishing Co~~	~~510 A ST SE~~	~~AUBURN~~	~~WA~~	~~98002~~	~~2247~~	~~Hazardous Waste Generator~~ ~~State Cleanup Site~~	Eliminated based on 2024 City Survey	No longer at this address. Located in Kent per google. Now, POTTERY MFG 13306 SE 30TH ST BELLEVUE WA 98005
~~48~~	~~Valley Wellfield~~	~~5 year~~	~~ARD LLC~~	~~512 A ST SE~~	~~AUBURN~~	~~WA~~	~~98002~~	~~192519~~	~~Hazardous Waste Generator~~	Eliminated based on 2024 City Survey	Invalid address
~~49~~	~~Valley Wellfield~~	~~5 year~~	~~Auburn Auto Wrecking~~	~~512 A ST SE~~	~~AUBURN~~	~~WA~~	~~98002~~	~~3539302~~	~~Voluntary Cleanup Sites~~ ~~State Cleanup Site~~	Eliminated based on 2024 City Survey	Invalid address
~~50~~	~~Valley Wellfield~~	~~5 year~~	~~Puget Sound Recycling~~	~~523 A ST SE~~	~~AUBURN~~	~~WA~~	~~98002~~	~~111375~~	~~Haz Waste Management Activity~~ ~~State Cleanup Site~~	Eliminated based on 2024 City Survey	Address brings up 119 A ST SE 98002 on King County owned by BNSF PO BOX 961089 FORT WORTH TX 76161
~~51~~	~~Valley Wellfield~~	~~5 year~~	~~BURLINGTON NORTHERN RAILROAD UST 10211~~	~~15TH & A ST SECTION HOUSE~~	~~AUBURN~~	~~WA~~	~~98002~~	~~82446475~~	~~Underground Storage Tank~~	Eliminated based on 2024 City Survey	
~~52~~	~~Valley Wellfield~~	~~5 year~~	~~PSE Mineral Oil Spill Auburn Way S~~	~~409 AUBURN WAY S~~	~~AUBURN~~	~~WA~~	~~98002~~	~~31784~~	~~State Cleanup Site~~	Eliminated based on 2024 City Survey	Invalid address
53	Valley Wellfield	5 year	Unocal SS No 5377	407 AUBURN WAY S	AUBURN	WA	98002	33431837	Emergency/Haz Chem Rpt TIER2 Hazardous Waste Generator LUST Facility Underground Storage Tank Independent Remedial Actn Prg		
54	Valley Wellfield	5 year	SHELL STATION ALS SHELL	305 A ST SE	AUBURN	WA	98002	83888595	Emergency/Haz Chem Rpt TIER2 Underground Storage Tank Voluntary Cleanup Sites LUST Facility		
55	Valley Wellfield	5 year	ART FETTER LOGGING CO INC	525 R ST SE	AUBURN	WA	98002-5873	15264683	Underground Storage Tank		Listed as Gravel pit - MUCKLESHOOT INDIAN TRIBE 39015 172ND AVE SE AUBURN WA 98092
~~56~~	~~Valley Wellfield~~	~~5 year~~	~~Auburn Sunshine Ctr Cleaners~~	~~120 CROSS ST SE~~	~~AUBURN~~	~~WA~~	~~98002~~	~~75549945~~	~~Hazardous Waste Generator~~	Eliminated based on 2024 City Survey	Could not find business. Addess is for Fit City juice bar.
57	Valley Wellfield	5 year	Q LUBE 1540	307 AUBURN WAY S	AUBURN	WA	98002	21867559	Underground Storage Tank		
58	Valley Wellfield	5 year	A Street Automotive	225 A ST SE	AUBURN	WA	98002	1195126	LUST Facility Underground Storage Tank Hazardous Waste Generator		
59	Valley Wellfield	5 year	Frontier Cleaners	126 AUBURN WAY S	AUBURN	WA	98002	36568747	Hazardous Waste Generator		
~~60~~	~~Valley Wellfield~~	~~5 year~~	~~1342 SE 3rd St Auburn~~	~~1342 SE 3RD ST 3~~	~~AUBURN~~	~~WA~~	~~98002~~	~~89653585~~	~~Hazardous Waste Generator~~	Eliminated based on 2024 City Survey	Apartment building

61	Valley Wellfield	5 year	Shell Station 120849	201 AUBURN WAY S	AUBURN	WA	98002	53454594	Hazardous Waste Generator Emergency/Haz Chem Rpt TIER2 LUST Facility Hazardous Waste Planner Underground Storage Tank Haz Waste Management Activity		
~~62~~	~~Valley Wellfield~~	~~5 year~~	~~Chevron USA A St Auburn~~	~~206 A ST~~	~~AUBURN~~	~~WA~~	~~98002~~	~~61289713~~	~~Hazardous Waste Generator~~ ~~LUST Facility~~ ~~Underground Storage Tank~~	Eliminated based on 2024 City Survey	Incomplete address. 206 A St SE is a WaFD bank
63	Valley Wellfield	5 year	Schucks Auto Supply 4204	222 A ST SE	AUBURN	WA	98002-5429	32854268	Hazardous Waste Generator Haz Waste Management Activity		
~~64~~	~~Valley Wellfield~~	~~5 year~~	~~Texaco Station 632320508~~	~~202 AUBURN WAY S~~	~~AUBURN~~	~~WA~~	~~98002~~	~~22669936~~	~~Emergency/Haz Chem Rpt TIER2~~ ~~Hazardous Waste Generator~~ ~~Underground Storage Tank~~	Eliminated based on 2024 City Survey	Now, Timberland Bank
~~65~~	~~Valley Wellfield~~	~~5 year~~	~~Dales Autobody~~	~~111 S DIVISION ST~~	~~AUBURN~~	~~WA~~	~~98001~~	~~86639153~~	~~Hazardous Waste Generator~~	Eliminated based on 2024 City Survey	No longer exists. Location is now the Verge apartments.
~~66~~	~~Valley Wellfield~~	~~5 year~~	~~PACIFIC FIRST FACILITY~~	~~55 A ST SE~~	~~AUBURN~~	~~WA~~	~~98002~~	~~51983738~~	~~LUST Facility~~ ~~Underground Storage Tank~~	Eliminated based on 2024 City Survey	Now a retail building
67	Valley Wellfield	5 year	SAFEWAY FUEL CTR 531	101 AUBURN WAY S	AUBURN	WA	98002	9403664	Underground Storage Tank Hazardous Waste Generator		
68	Valley Wellfield	5 year	Legacy Plaza Senior Living	21 S DIVISION ST	AUBURN	WA	98001	60822	Independent Cleanup		
~~69~~	~~Valley Wellfield~~	~~5 year~~	~~AUBURN PROMENADE PROJECT~~	~~12 & 16 DIVISION ST S in R-O-W~~	~~AUBURN~~	~~WA~~	~~98001~~	~~11202~~	~~Underground Storage Tank~~ ~~LUST Facility~~ ~~State Cleanup Site~~ ~~Voluntary Cleanup Sites~~	Eliminated based on 2024 City Survey	
70	Valley Wellfield	5 year	Auburn City Main & Division	2 W Main St	Auburn	WA	98002	21171	Independent Cleanup		
71	Valley Wellfield	5 year	CAVANAUGH ACE HARDWARE	26 E MAIN ST	AUBURN	WA	98002-4903	42357767	Underground Storage Tank		
72	Valley Wellfield	5 year	WEST MAIN SHORT STOP	210 MAIN ST W	AUBURN	WA	98002	28758183	Emergency/Haz Chem Rpt TIER2 Underground Storage Tank		
73	Valley Wellfield	5 year	Venture Construction Inc	4005 W VALLEY HWY	AUBURN	WA	98071-0878	88323277	Underground Storage Tank		
~~74~~	~~Valley Wellfield~~	~~5 year~~	~~W Main St Auburn~~	~~1500 BLOCK OF W MAIN ST~~	~~AUBURN~~	~~WA~~	~~98002~~	~~27197361~~	~~Hazardous Waste Generator~~	Eliminated based on 2024 City Survey	
~~75~~	~~Valley Wellfield~~	~~5 year~~	~~Lincoln Apartments~~	~~124 W MAIN ST~~	~~AUBURN~~	~~WA~~	~~98001~~	~~99826415~~	~~Hazardous Waste Generator~~	Eliminated based on 2024 City Survey	Now, Harold's Plumbing.
76	Valley Wellfield	5 year	AUBURN CITY PARKS	25 W MAIN ST	AUBURN	WA	98001	51845861	Underground Storage Tank		
77	Valley Wellfield	5 year	AUBURN CITY OF	25 W MAIN ST	AUBURN	WA	98001	9576	Municipal SW Phase II Western WA GP AP Aquatic Mosquito Control GP		
78	Valley Wellfield	5 year	FRED MEYER FUEL	801 AUBURN WAY	AUBURN	WA	98002	7318689	Underground Storage Tank		
79	Valley Wellfield	5 year	AUBURN PROFESSIONAL PLAZA LLC	15 AUBURN AVE NE	AUBURN	WA	98002	99996979	Underground Storage Tank LUST Facility		
~~80~~	~~Valley Wellfield~~	~~5 year~~	~~SOUTHWIRE CO SEATTLE FASST SERVICE CENTER~~	~~3703 1ST NW~~	~~AUBURN~~	~~WA~~	~~98001~~	~~69124~~	~~Emergency/Haz Chem Rpt TIER2~~	Eliminated based on 2024 City Survey	Invalid address
~~81~~	~~Valley Wellfield~~	~~5 year~~	~~Bills Repair 132nd~~	~~107 S DIVISION~~	~~AUBURN~~	~~WA~~	~~98001~~	~~4257198~~	~~Hazardous Waste Generator~~	Eliminated based on 2024 City Survey	Address not found. Located at 34020 186th St SE Auburn, WA 98092
82	Valley Wellfield	5 year	Vics Radiator Auburn	102 AUBURN WAY N	AUBURN	WA	98002	84278339	Hazardous Waste Generator		Now Auburn Drivetrain. Resent letter 7/12/24
~~83~~	~~Valley Wellfield~~	~~5 year~~	~~PHILLIPS 66 COMPANY SS070816~~	~~124 AUBURN WAY~~	~~AUBURN~~	~~WA~~	~~98002~~	~~94247487~~	~~Underground Storage Tank~~	Eliminated based on 2024 City Survey	No Phillips 66 in Auburn. Location is now Auburn Licensing Agency
84	Valley Wellfield	5 year	LYLE & LOUISE SCHNEIDER		AUBURN	WA	98002-9999	61524452	Underground Storage Tank	Eliminated based on 2024 City Survey	
85	Valley Wellfield	5 year	QWEST COMMUNICATIONS W00015	10 2ND ST SE	AUBURN	WA	98002	63931956	Hazardous Waste Generator Emergency/Haz Chem Rpt TIER2 Underground Storage Tank		
86	Valley Wellfield	5 year	Multicare Auburn Medical center	210 N Division St	Auburn	WA	98001	100000156	Non Enforcement Final		
~~87~~	~~Valley Wellfield~~	~~5 year~~	~~Tyson Heating Oil Tank~~	~~229 N DIVISION ST~~	~~AUBURN~~	~~WA~~	~~98001~~	~~64569~~	~~State Cleanup Site~~	Eliminated based on 2024 City Survey	Invalid address
88	Valley Wellfield	5 year	JACKPOT FOOD MART 309	415 AUBURN WAY N	AUBURN	WA	98002	42261182	Underground Storage Tank Emergency/Haz Chem Rpt TIER2 LUST Facility Voluntary Cleanup Sites Underground Injection Control		
89	Valley Wellfield	5 year	Scarff Ford Isuzu	501 AUBURN WAY N	AUBURN	WA	98002	13578522	Hazardous Waste Generator Underground Storage Tank		
~~90~~	~~Valley Wellfield~~	~~5 year~~	~~Mil Lor Co Inc~~	~~3210 B ST NE~~	~~AUBURN~~	~~WA~~	~~98002~~	~~5567739~~	~~Hazardous Waste Generator~~	Eliminated based on 2024 City Survey	Warehouse owned by The Feroy Family Trust 4014 110TH AV E
91	Valley Wellfield	5 year	Mohawk Northern Plastics Inc	701 A ST NE	AUBURN	WA	98002-4026	1696293	Hazardous Waste Generator Hazardous Waste Planner Industrial SW GP Toxics Release Inventory SEA Project Site		
92	Valley Wellfield	5 year	Auburn Foreign Car Inc	725 AUBURN WAY N	AUBURN	WA	98002	57583297	Hazardous Waste Generator		
93	Valley Wellfield	5 year	Car Wash Enterprises CWE	814 AUBURN WAY S	AUBURN	WA	98002	22489285	Emergency/Haz Chem Rpt TIER2 Hazardous Waste Generator		
94	Valley Wellfield	5 year	Auburn One Hour Cleaners	911 HARVEY RD	AUBURN	WA	98002	24681824	Hazardous Waste Generator Revised Site Visit Program		

95	Valley Wellfield	5 year	FRED MEYER AUBURN	801 AUBURN WAY N	AUBURN	WA	98002	20474	Independent Remedial Actn Prg		
96	West Hill Springs	5 year	AT&T Wireless Auburn 2	5800 S 316TH ST	AUBURN	WA	98001-3843	47615657	Underground Storage Tank Emergency/Haz Chem Rpt TIER2		
97	West Hill Springs	5 year	Mentzer Property	30610 52ND AVE S	AUBURN	WA	98001	3561	State Cleanup Site		
~~98~~	~~Coal Creek Springs~~	~~10 year~~	~~Tapps Lake Dike No 4~~	~~-~~	~~BONNEY L~~	~~WA~~	~~98390~~	~~98134177~~	~~Dam Site~~	Eliminated based on 2024 City Survey	
~~99~~	~~Coal Creek Springs~~	~~10 year~~	~~Tapps Lake Dike No 5~~	~~-~~	~~BONNEY L~~	~~WA~~	~~98390~~	~~13594965~~	~~Dam Site~~	Eliminated based on 2024 City Survey	
~~100~~	~~Coal Creek Springs~~	~~10 year~~	~~LAKE TAPPS COUNTY PARK~~	~~1715 198TH AVE E~~	~~SUMNER~~	~~WA~~	~~98390~~	~~7873982~~	~~Underground Storage Tank~~ ~~LUST Facility~~ ~~Voluntary Cleanup Sites~~	Eliminated based on 2024 City Survey	
~~101~~	~~Coal Creek Springs~~	~~10 year~~	~~Tapps Lake Dike No 3~~	~~-~~	~~BONNEY L~~	~~WA~~	~~98390~~	~~76644586~~	~~Dam Site~~	Eliminated based on 2024 City Survey	
102	Valley Wellfield	10 year	US EPA Hartung Property Auburn Resident	424 12TH ST SE	AUBURN	WA	98002	64661969	Hazardous Waste Generator		
103	Valley Wellfield	10 year	Auburn Valley Chevron	1156 AUBURN WAY S	AUBURN	WA	98002	5722273	Emergency/Haz Chem Rpt TIER2 Hazardous Waste Generator LUST Facility Underground Storage Tank Voluntary Cleanup Sites Enforcement Final		
104	Valley Wellfield	10 year	Terminal Park Elementary School	1101 D St SE	Auburn	WA	98002-6097	99997357	Hazardous Waste Generator		
~~105~~	~~Valley Wellfield~~	~~10 year~~	~~TERN BOAT PROPERTY~~	~~106 11TH ST SE~~	~~AUBURN~~	~~WA~~	~~98002~~	~~5576416~~	~~Underground Storage Tank~~	Eliminated based on 2024 City Survey	Location closed. Retail building per King County.
106	Valley Wellfield	10 year	Steves Quality Auto Refinishin	114 11TH ST SE	AUBURN	WA	98002	51893897	Hazardous Waste Generator		
~~107~~	~~Valley Wellfield~~	~~10 year~~	~~RENTAL MARTS UST 4275~~	~~1018 AUBURN WAY S~~	~~AUBURN~~	~~WA~~	~~98002-6132~~	~~85372715~~	~~Underground Storage Tank~~	Eliminated based on 2024 City Survey	Now a parking lot.
~~108~~	~~Valley Wellfield~~	~~10 year~~	~~BURLINGTON NORTHERN RR AUBURN~~	~~A ST SE & SE 9TH ST~~	~~AUBURN~~	~~WA~~	~~98002~~	~~2573~~	~~State Cleanup Site~~	Eliminated based on 2024 City Survey	
~~109~~	~~Valley Wellfield~~	~~10 year~~	~~Pep Boys 1471 Auburn~~	~~220 8th St SE~~	~~Auburn~~	~~WA~~	~~98002~~	~~7374~~	~~Hazardous Waste Generator~~ ~~Haz Waste Management Activity~~	Eliminated based on 2024 City Survey	Location closed
110	Valley Wellfield	10 year	Laramore Enterprises Corp Auburn	124 7th St SE	Auburn	WA	98002	26509	Hazardous Waste Generator Hazardous Waste Planner		
~~111~~	~~Valley Wellfield~~	~~10 year~~	~~AUBURN PRINT33 LS051 3RDSUB MP 21.5~~	~~A ST SE & SE 7TH ST~~	~~AUBURN~~	~~WA~~	~~98001~~	~~53142972~~	~~LUST Facility~~ ~~Underground Storage Tank~~	Eliminated based on 2024 City Survey	
112	Valley Wellfield	10 year	Associated Sign Graphics	535 C ST SW	AUBURN	WA	98001-5907	97852292	Hazardous Waste Generator		
113	Valley Wellfield	10 year	Bartkowski Property	110 2nd St SW	Auburn	WA	98002	99997176	Underground Storage Tank		Owned by Sound Transit 401 S JACKSON ST SEATTLE WA 98104
~~114~~	~~Valley Wellfield~~	~~10 year~~	~~AUBURN PRINT466 LS51 3RDSUB MP 22~~	~~7TH 15TH & A ST~~	~~AUBURN~~	~~WA~~	~~98001~~	~~75229551~~	~~Underground Storage Tank~~	Eliminated based on 2024 City Survey	
~~115~~	~~Valley Wellfield~~	~~10 year~~	~~Wickham & Sons~~	~~23 A ST SW~~	~~AUBURN~~	~~WA~~	~~98001~~	~~2728393~~	~~Hazardous Waste Generator~~ ~~Hazardous Waste Planner~~ ~~LUST Facility~~ ~~Underground Storage Tank~~ ~~Voluntary Cleanup Sites~~	Eliminated based on 2024 City Survey	Invalid address
116	Valley Wellfield	10 year	Auburn Collision Center	233 W MAIN	AUBURN	WA	98001	31398434	Hazardous Waste Generator LUST Facility Underground Storage Tank		
~~117~~	~~Valley Wellfield~~	~~10 year~~	~~V DUB CENTRAL~~	~~123 W MAIN ST~~	~~AUBURN~~	~~WA~~	~~98001~~	~~56777688~~	~~Hazardous Waste Generator~~ ~~Underground Storage Tank~~	Eliminated based on 2024 City Survey	Now, Main Street Garage. C/O MICHAEL JOHN KLEIN CPA 5737 KANAN RD #627
118	Valley Wellfield	10 year	UNOCAL BULK PLANT 0028	112 3RD ST NW	AUBURN	WA	98001	2448	LUST Facility Hazardous Waste Generator Underground Storage Tank Independent Cleanup		
119	Valley Wellfield	10 year	DON SMALL & SONS DIST CO AUBURN	112 3RD ST NW	AUBURN	WA	98001	59342541	Emergency/Haz Chem Rpt TIER2 Industrial SW GP		
~~120~~	~~Valley Wellfield~~	~~10 year~~	~~CORLISS REDI MIX INC~~	~~29910 ENUMCLAW CHINOOK PASS HWY~~	~~ENUMCLA~~	~~WA~~	~~98022~~	~~84521135~~	~~Underground Storage Tank~~	Eliminated based on 2024 City Survey	16805 64th St E Sumner Wa, 98390 address per google.
121	Valley Wellfield	10 year	DASCOMP INC	19 CLAY ST NW	AUBURN	WA	98002	46324771	Underground Storage Tank		Mailing Address P O BOX 988 AUBURN, WA 98071-0988 Resent letter on
~~122~~	~~Valley Wellfield~~	~~10 year~~	~~WR GRACE & CO CONST PROD DIV~~	~~110 SW ST~~	~~AUBURN~~	~~WA~~	~~98002~~	~~5614998~~	~~Underground Storage Tank~~	Eliminated based on 2024 City Survey	No an actual address
123	Valley Wellfield	10 year	FRITO LAY SALES DIST CENTER UST 10545	302 WESTERN ST NW	AUBURN	WA	98002	83727478	Underground Storage Tank Emergency/Haz Chem Rpt TIER2		
~~124~~	~~Valley Wellfield~~	~~10 year~~	~~LEA HILL PUMP STATION~~	~~10406 LEA HILL RD~~	~~AUBURN~~	~~WA~~	~~98001~~	~~53452247~~	~~Underground Storage Tank~~	Eliminated based on 2024 City Survey	
125	Valley Wellfield	10 year	MILES SAND & GRAVEL COMPANY INC AUBURN	1201 M ST SE	AUBURN	WA	98002-6707	87547247	Underground Storage Tank Sand and Gravel GP		Duplicate on list. Resent letter on 7/11/24. Miles Gravel Muckleshoot Indian Tribe 39015 172ND AVE SE Auburn, WA 98092
126	West Hill Springs	10 year	Federal Way Water Dist 305th S	5600 BLK S 305TH ST	AUBURN	WA	98001	33656732	Hazardous Waste Generator		

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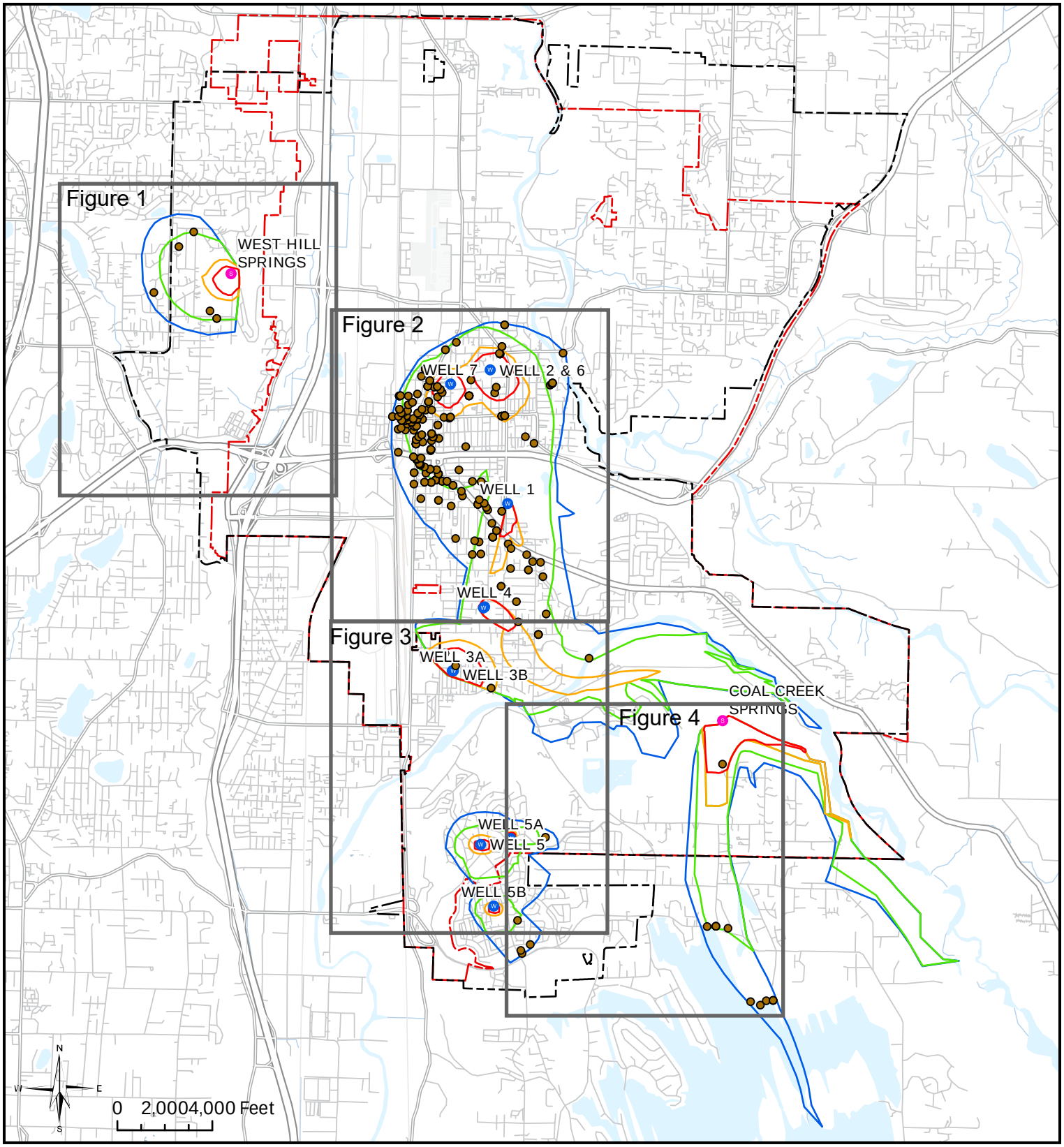
2024 Updated Wellhead Protection Area CSI Maps



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Project No. 22-3425

Legend

- 6 Month WHPA
- 1 Year WHPA
- 5 Year WHPA
- 10 Year WHPA
- Hazard Site
- Spring
- Well
- Auburn City Limits
- Retail Water Service Area

consor

CITY OF AUBURN WASHINGTON

City of Auburn
Comprehensive Water System Plan

Wellhead Protection Area Hazard Sites - Overview Map

May 2024

Data Sources:List all data sources, e.g. Public Utility, Sept 2020; Metropolis City, April 2018. Service Layer Credits: World Terrain Base: King County, WA State Parks GIS, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA, USFWS

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet

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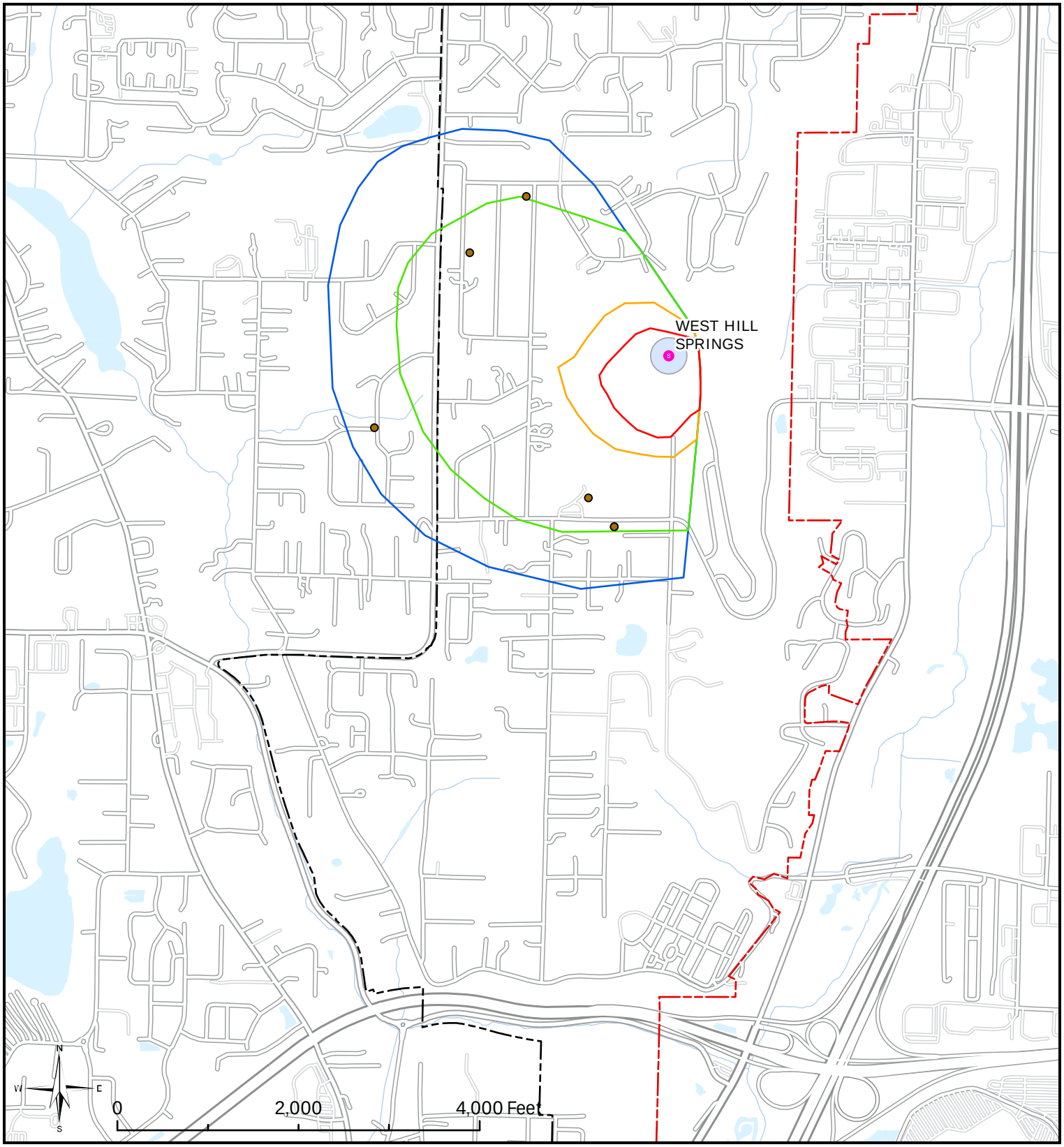

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Project No. 22-3425

Legend

- 6 Month WHPA
- 1 Year WHPA
- 5 Year WHPA
- 10 Year WHPA
- Hazard Site
- Spring
- Sanitary Control Area
- Auburn City Limits
- Retail Water Service Area

consor

CITY OF AUBURN WASHINGTON

City of Auburn Comprehensive Water System Plan

Wellhead Protection Area Hazard Sites - Figure 1

May 2024

Data Sources: List all data sources, e.g. Public Utility, Sept 2020; Metropolis City, April 2018. Service Layer Credits: World Terrain Base: Esri Community Maps Contributors, King County, WA State Parks GIS, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, USFWS

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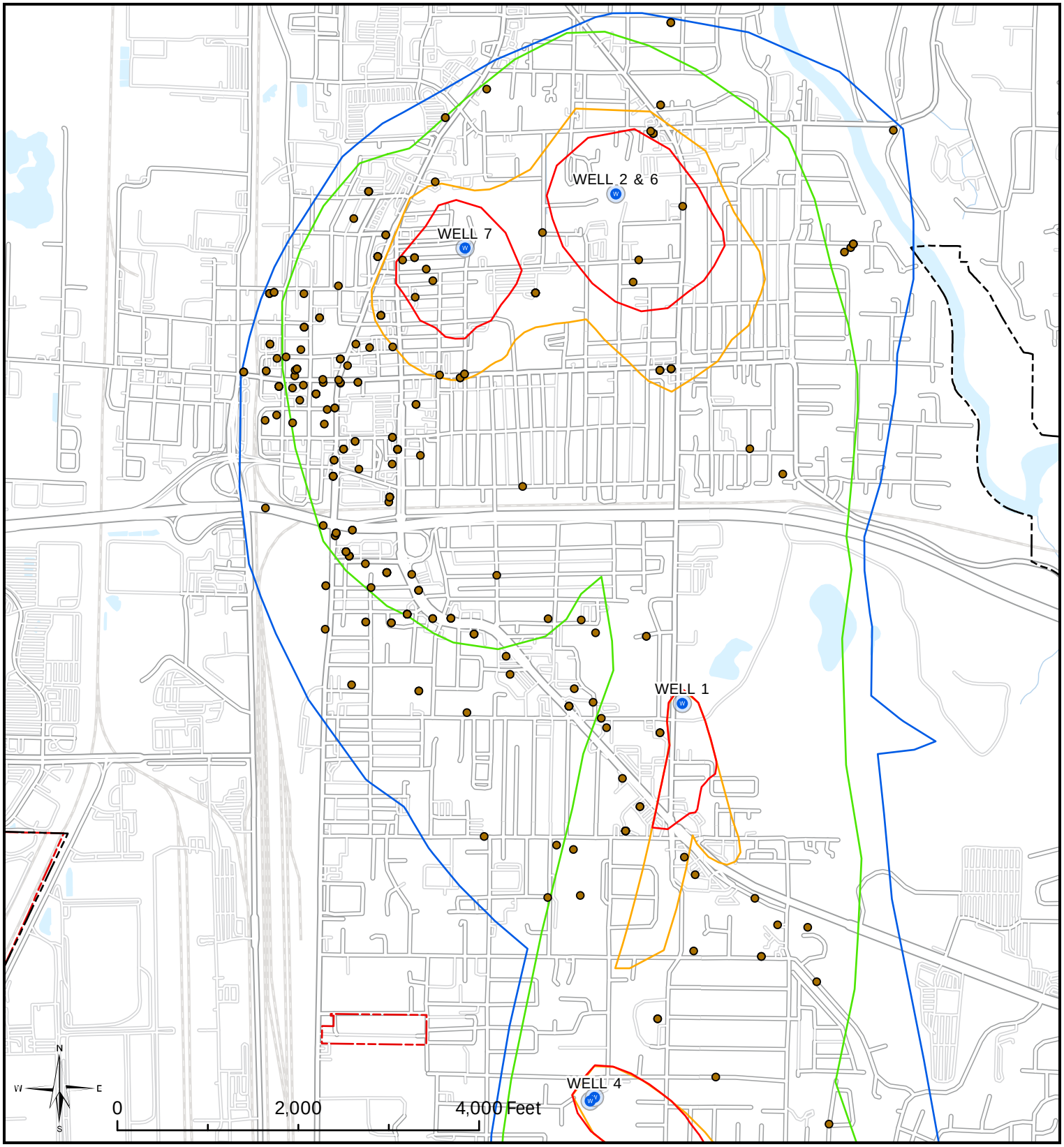

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Legend

- 6 Month WHPA
- 1 Year WHPA
- 5 Year WHPA
- 10 Year WHPA
- Hazard Site
- Well
- Sanitary Control Area
- Auburn City Limits
- Retail Water Service Area

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CITY OF AUBURN WASHINGTON

City of Auburn Comprehensive Water System Plan

Wellhead Protection Area Hazard Sites - Figure 2

Project No. 22-3425

May 2024

Data Sources: List all data sources, e.g. Public Utility, Sept 2020; Metropolis City, April 2018. Service Layer Credits: World Terrain Base: Esri Community Maps Contributors, King County, WA State Parks GIS, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, USFWS

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet

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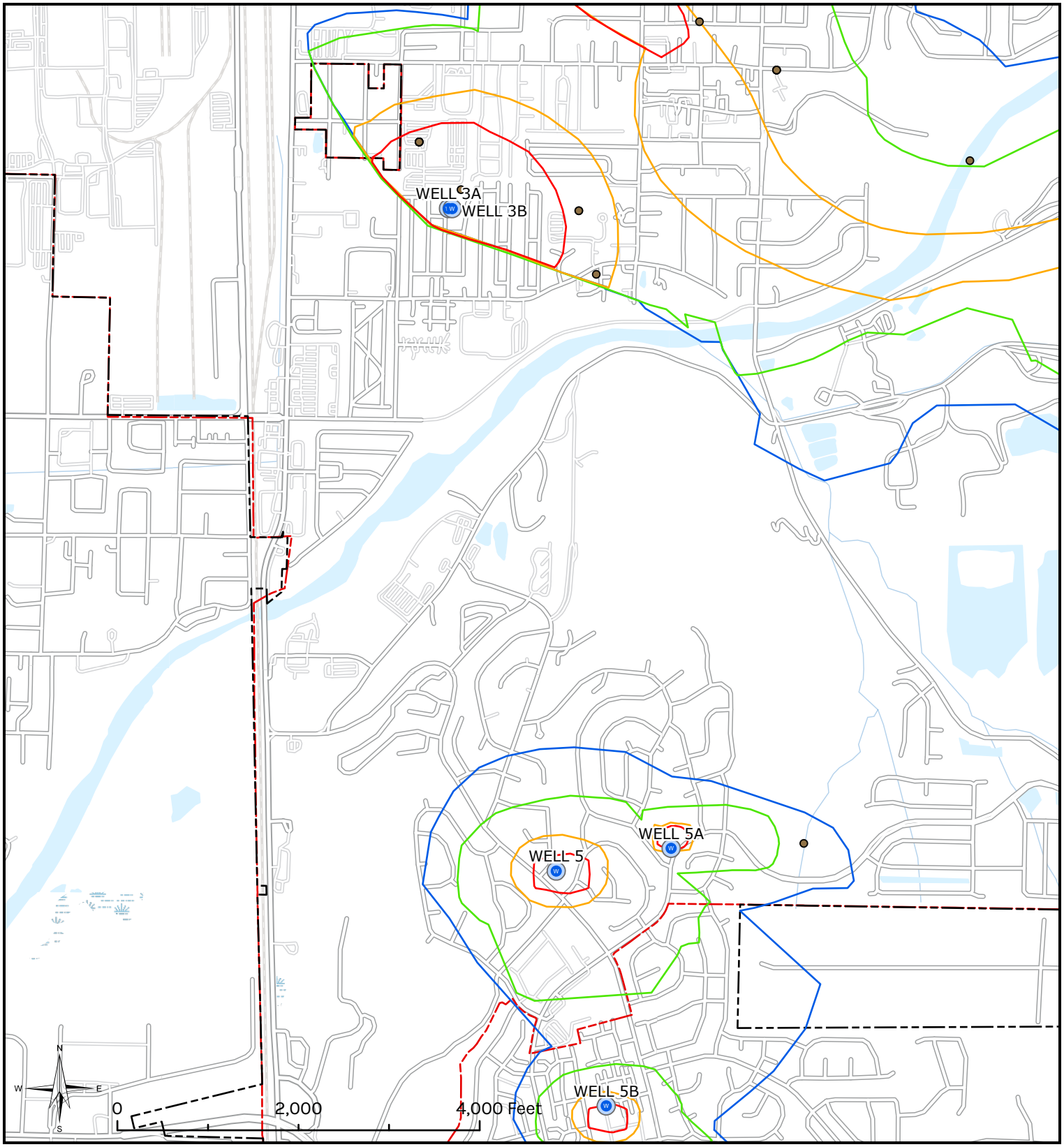

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Project No. 22-3425

Legend

- 6 Month WHPA
- 1 Year WHPA
- 5 Year WHPA
- 10 Year WHPA
- Well
- Hazard Site
- Sanitary Control Area
- Auburn City Limits
- Retail Water Service Area

consor

CITY OF AUBURN WASHINGTON

City of Auburn
Comprehensive Water System Plan

Wellhead Protection Area Hazard Sites - Figure 3

April 2024

Data Sources:List all data sources, e.g. Public Utility, Sept 2020; Metropolis City, April 2018. Service Layer Credits: World Terrain Base: Esri Community Maps Contributors, King County, WA State Parks GIS, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, USFWS

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet

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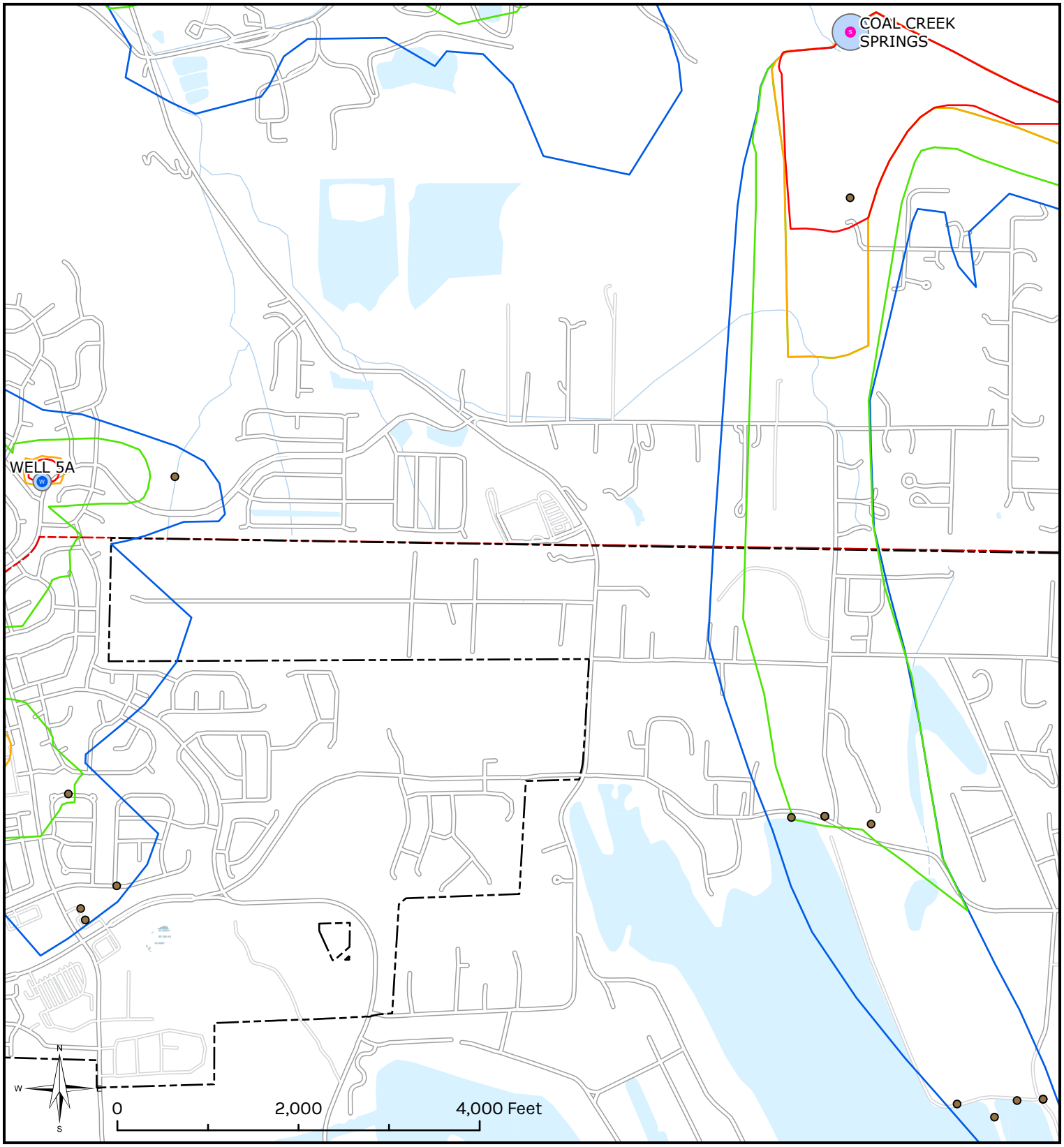

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Legend

- 6 Month WHPA
- 1 Year WHPA
- 5 Year WHPA
- 10 Year WHPA
- Well
- Spring
- Hazard Site
- Sanitary Control Area
- Auburn City Limits
- Retail Water Service Area

consor

CITY OF AUBURN WASHINGTON

City of Auburn
Comprehensive Water System Plan

Wellhead Protection Area Hazard Sites - Figure 4

Project No. 22-3425

Data Sources:List all data sources, e.g. Public Utility, Sept 2020; Metropolis City, April 2018. Service Layer Credits: World Terrain Base: Esri Community Maps Contributors, King County, WA State Parks GIS, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, USFWS

Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Disclaimer: Consor and The City of Auburn make no representations, express or implied, as to the accuracy, completeness and timeliness of the information displayed. This map is not suitable for legal, engineering, or surveying purposes. Notification of any errors is appreciated.

April 2024

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2024 Notification Letter Templates

MM/DD/2024

LETTER OF NOTIFICATION – SITE WITHIN AN AUBURN WELLHEAD PROTECTION AREA

To whom it may concern,

The City of Auburn (City) relies on groundwater for our drinking water source, and a Wellhead Protection Plan (Plan) has been developed to help maintain drinking water quality for City residents. The Plan is based on the Washington Department of Health (DOH) Washington Administrative Code (WAC) 246-290-135(3) regulations. As part of that Plan, maps were prepared that show the Wellhead Protection Areas (WHPA), which are the areas around each well where chemical spills or other sources of contamination may contaminate the water source.

The City has approximately 15,000 service connections and serves approximately 64,000 residents. There are several sources within our system that were rated as highly susceptible to contamination by DOH. This means that surface spills could potentially infiltrate into the aquifer, placing our water sources at risk.

The City of Auburn's WHPAs are shown on the enclosed maps. Our records indicate that your property is located within the City's WHPAs and that activities on the property may include the generation, use, or storage of chemicals or hazardous substances. This notice is a reminder that your business, or the business on your property, can help protect our drinking water by preventing the release of chemicals and hazardous substances onto the ground, to stormwater systems, and to septic systems. Prevention methods include the following:

- Providing proper storage of chemicals on site, and regular inspection of storage areas and containers, to ensure that containers or tanks are not leaking.
- Verifying that the site has up-to-date spill plans and training for staff so that on-site staff know what to do if a spill does occur.

As the potential exists that a contaminant spill on your facility property may adversely impact the City's drinking water supply, please notify the City immediately in the event of a contaminant spill at 253-931-3048 on weekdays between 6:00AM and 3:30PM or call 911 if outside these timeframes. All spills in King County should be reported to the Department of Ecology by dialing 206-594-0000.

Thank you for assisting us in protecting our water supply. If you have any questions, please contact me at 256-931-3086 or via email at rvondrak@auburnwa.gov.

Sincerely,

Ryan L. Vondrak, P.E.

Utilities Engineering Manager

City of Auburn

MM/DD/2024

LETTER OF NOTIFICATION – AUBURN CONTAMINANT SOURCE INVENTORY UPDATE

To [Agency/Local Government],

The City of Auburn (City) relies on groundwater for our drinking water source, and a Wellhead Protection Plan (Plan) has been developed to help maintain drinking water quality for City residents. The Plan is based on the Washington Department of Health (DOH) Washington Administrative Code (WAC) 246-290-135(3) regulations. As part of that Plan, maps were prepared that show the Wellhead Protection Areas (WHPA), which are the areas around each well where chemical spills or other sources of contamination may contaminate the water source. Per DOH, the City must coordinate with agencies responsible for incident/spill response procedures.

The City has approximately 15,000 service connections and serves approximately 64,000 residents. There are several sources within our system that were rated as highly susceptible to contamination by DOH. The enclosed maps show the 6-month, 1-year, 5-year, and 10-year time-of-travel boundaries for our WHPAs. We're also sending you a list of facilities or activities of concern.

The findings of the Plan indicate that, due to geologic setting, there is only limited protection for the City's aquifer from low-permeability materials at the ground surface. Therefore, surface spills could quickly infiltrate into the groundwater, placing our water sources at risk. Regardless of the apparent surface material conditions, care should still be exercised because the geologic conditions can vary substantially over short distances.

The City asks that you consider the protection of our sources when responding to chemical spills or other sources of contamination. If you are responding to a chemical spill or other hazard that is located within the WHPA, and there may be a risk of contamination of City sources, please take a moment and include us in your spill response plan by contacting the City at 256-931-3048, on weekdays between 6:00AM and 3:30PM, or call 911 if outside these timeframes.

Thank you for your support in protecting the City's drinking water supply. If you have any questions, please contact me at 253-931-3086 or via email at rvondrak@auburnwa.gov.

Sincerely,

Ryan L. Vondrak, P.E.

Utilities Engineering Manager

City of Auburn

consor

2024 Water Source Loss Mitigation Plan

SOP 5.2.1
Water Source Loss Mitigation Plan

Potential threats applicable for all sources: Contamination, Earthquake, and Physical Assault.

Coal Creek Springs – Capacity 3,500 gpm
Additional potential threats: Flood, Landslide, Wildfire, Volcano/Lahar
If no water is available from Coal Creek Springs, Well No. 4 and Well No.1 will continue to supply water to Reservoir 1. Operators may have to lower the operating position of the 16 inch pressure reducing valve (PRV) at Howard Road Treatment Facility to maintain adequate water supply in Reservoir 1. More reliance will be placed on Well No. 4, Well No. 1, Well No. 2 and Well No. 6. Perhaps not critical to normal operation, getting this facility back online is of high priority.

Notify Parks Department that Game Farm Wilderness will not have water until this source is returned to operation.

16 Inch PRV at Howard Road Treatment Facility
Should auto-control of the 16 inch PRV be lost, this valve may be opened or closed locally by the control panel located in the vault. If the PRV is completely out of service, Valley Service Area pressure can still be controlled by use of a stand-by 8 inch PRV located adjacent to the 16 inch valve. The 8 inch valve is a strictly manual valve. Control is adjusted by manipulation of the pilot control valve (CRD).

A supplemental PRV to the 8 inch PRV is located at 25th & K Street SE. This is a 12 inch PRV and is manually adjusted by manipulation of the pilot control valve (CRD).

25th St SE and K St SE PRV
If the water produced by Well No. 4 is not needed or cannot reach Reservoir 1, the water can be sent directly into the Valley Service Area by changing valving and making use of this PRV.

- Valve off Well No. 4 discharges to Reservoir 1 (valve # 2151), open valve 2152 to valley zone.
- Turn on Well No. 4.
- Set operation setpoint for Reservoir 1 level to unobtainable level to keep Well No. 4 running in Auto. If Reservoir 1 level signal is not available, Well No. 4 will need to be run in “Manual Mode” locally.
- If Well No. 4 flow is not needed, force it to shut down by changing Res 1 level setpoint.

Well No. 1 – Capacity 2,100 gpm
Additional potential threats: Flood, Volcano/Lahar
Loss of Well No. 1 is not critical for maintaining domestic use and fire protection, however it would be important to restore it as soon as possible. Should this station be out of service, Wells 4, 2, and 6, as well as Coal Creek Springs will continue to provide water to the valley. Operators may have to lower the operating position of the 16 inch PRV at Howard Road Treatment Facility to maintain adequate water supply in Reservoir 1.

Well No. 4 – Capacity 2,600 gpm
Additional potential threats: Flood, Volcano/Lahar
Water from Well No. 4 is not critical for maintaining domestic use and fire protection. If no water is available from Well No. 4, water from Coal Creek Springs and Well No. 1 will continue to supply the Valley Service Area. Operators may have to lower the operating position of the 16 inch PRV at Howard Road Treatment Facility to maintain adequate water supply in Reservoir 1. Significantly more reliance will be placed on Coal Creek Springs, Wells 1, 2, and 6.

The operation of Well No. 4 is normally controlled by the water level in Reservoir 1. However, there is the option of controlling Well No. 4 by Reservoir 2 through the SCADA telemetry page for Well No. 4. On/off levels for the well will have to be changed to that of Well No. 2 and No. 6.

Well No. 2 and Well No. 6 – Capacity 1,115 gpm and 1,200 gpm
Additional potential threats: Flood
Water from this facility is critical for maintaining domestic use and fire protection. If no water is available from one of these two wells (if one well is out of service), changes to the normal operation of the water system will be required. The 16 inch PRV at Howard Road Treatment Facility may need to be opened moderately to maintain sufficient water supply in Reservoir 2. More reliance will need to be placed on the operation of Well No. 1 and No. 4, as well as Coal Creek Springs. The B Street Tacoma intertie may need to be opened as well.

However, because these two wells are so close to each other, and because they share power and telemetry, loss of both wells should be considered. If no water is available from either well, a greater reliance will be placed on all sources, especially Well No. 1 and No. 4, as well as Coal Creek Springs. The B Street Tacoma intertie may need to be opened as well. The 16 inch PRV at Howard Road Treatment Facility will have to be opened to maintain sufficient water supply in Reservoir 2.

Well No. 5 – Capacity 760 gpm
Water from Well No. 5 is not critical for maintaining domestic use and fire protection. If no water is available from Well No. 5, water will continue to be supplied by Well No. 5A. Water will also continue to be supplied by Terrace View Booster Pump Station (PS). Water may have to be procured from Bonney Lake Water Utility to meet demand via the emergency intertie. As a last option, water may be supplied by means of the portable pump.

Well No. 5A – Capacity 180 gpm
If no water is available from Well No. 5A, water will be supplied by Well No. 5 and Terrace View Booster PS. During peak demand summer months, it may be necessary to procure water from Bonney Lake Water Utility through the emergency intertie to supplement water from Well No. 5. Perhaps not critical to normal operation, getting this facility back online is of high priority.

West Hill Springs – Capacity 600 gpm
Additional potential threats: Landslide
Water from West Hill Springs is not critical for maintaining domestic use and fire protection. If no water is available from West Hill Springs, no modifications to the operation of the water system will be needed. Water will continue to be supplied from other sources.

Well No. 3A and Well No. 3B - Capacity 0 gpm
Additional potential threats: Flood
Wells No. 3A and No. 3B are not in service due to high manganese and iron levels and have no impact on water supply. However, it should be noted that both wells are operational and can be utilized, if necessary, during emergency scenarios. Wells No. 3A and No. 3B each have a capacity of 1,650 gpm (3,300 gpm total). These wells do not have chlorine or operational chlorine equipment on site, and complaints regarding color and staining may be received should the wells be put into operation.

Well No. 5B – Capacity 0 gpm
Well No. 5B is not in service and has no impact on water supply.

Well No. 7 – Capacity 0 gpm
Additional potential threats: Flood
Well No. 7 is not in service and has no impact on water supply.

City of Auburn
Ground Water Contamination
Susceptibility Assessment Survey
May 1994

Information compiled by, The City of Auburn:

Mark Silberling - Water Division
Nass Diallo - Utilities Planning Engineer
William B. Scheder - Water Division Supervisor
Chris Thorn - Water Quality Compliance

Graphic by:

J.R. Smith - Utilities Technician

System I.D.: 03350V

Contact Individual: William B. Scheder (206-931-3066)

City of Auburn Wellhead Protection Program

Study Area with Water Supply Aquifers

West Hill Springs

Ressional Delta Aquifer

Well 2

Well 1

Gravel Pits

Well 4

Well 3A

Well 3B

Well 5A

Well 5

Coal Creek Springs

FEDERAL WAY

INTERSTATE 5

HIGHWAY 18

HIGHWAY 18

GREEN RIVER

WHITE RIVER

Algona

Pacific

Auburn

Milton

Muckleshoot

KING COUNTY

PIERCE COUNTY

LAKE TAPPS

Water Supply Aquifer Area

City of Auburn Service Area

Muckleshoot Indian Reservation

Margin of Upland Areas

Gravel Pit

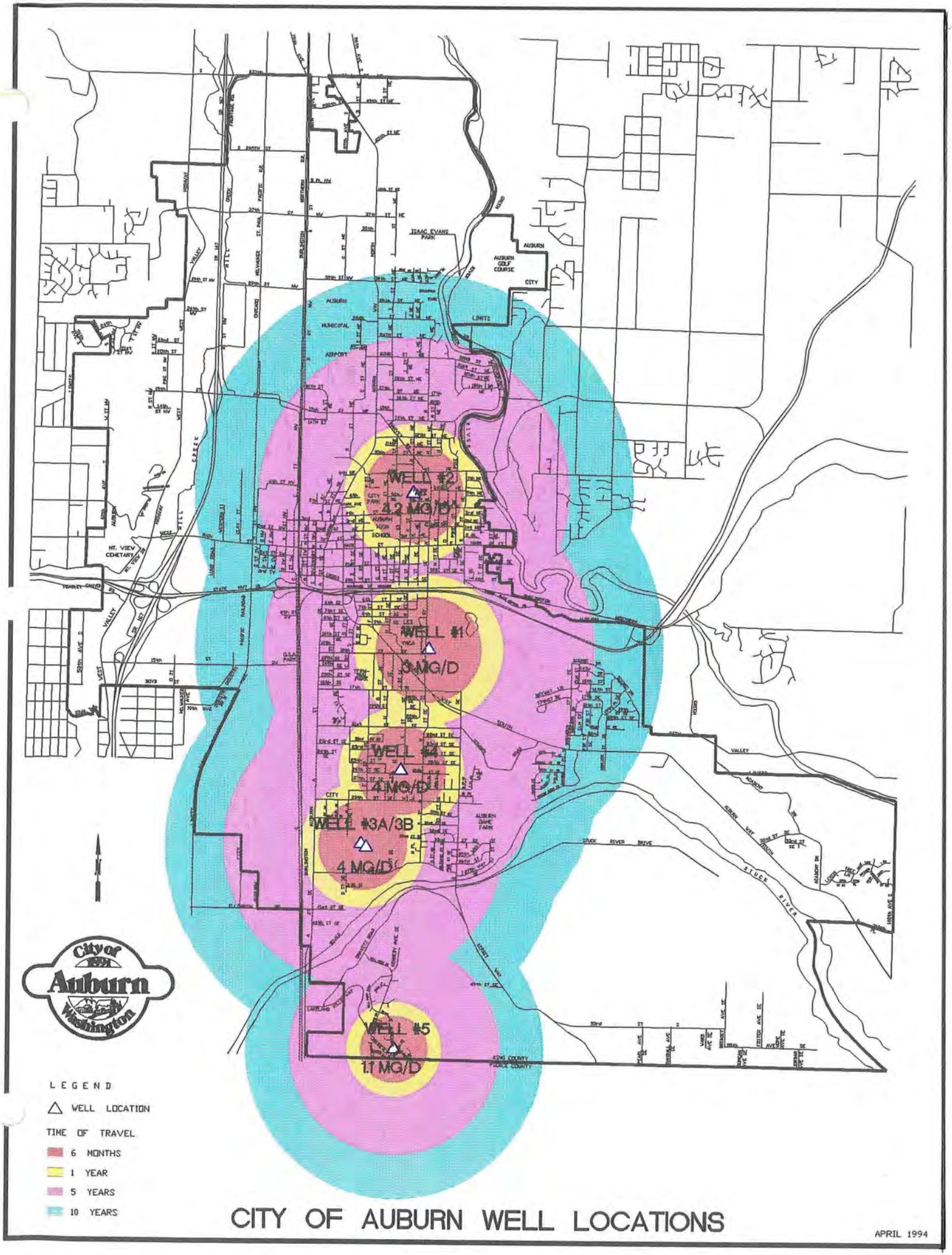
6 Month Time and Travel

N

0 400 800

Scale in Feet

Figure 1



CITY OF AUBURN WELL LOCATIONS

APRIL 1994

POTENTIAL CONTAMINATION SOURCES WITHIN 5 YEAR T.O.T.

WEST HILL SPRINGS

SCHOOL WITH PLAYING FIELDS
LAKE
RESIDENTIAL WITH SEPTIC SYSTEMS

COAL CREEK SPRINGS

LAKES
RESIDENTIAL WITH SEPTIC SYSTEMS

WELL 1

SERVICE STATIONS
SCHOOLS WITH PLAYING FIELDS
PUBLIC POOLS
CITY PARKS
RAILROAD AND RAILROAD SWITCHING YARD
GRAVEL QUARRY
PLASTICS MANUFACTURING
PUBLIC STORAGE FACILITIES
UNDERGROUND STORAGE TANKS
SEVERAL SMALL BUSINESSES CONTAINING SMALL AMOUNTS OF HAZARDOUS MATERIALS

WELL 2

SERVICE STATIONS
AIRPORT WITH UNDERGROUND STORAGE TANKS
RAILROAD
SCHOOLS WITH PLAYING FIELDS
PUBLIC POOL
CITY PARKS
STATE HIGHWAY
PLASTICS MANUFACTURING
NUMEROUS WAREHOUSES/DISTRIBUTION FACILITIES
SEVERAL SMALL BUSINESSES CONTAINING SMALL AMOUNTS OF HAZARDOUS MATERIALS

WELL 3A/3B

CITY PARKS
SCHOOLS WITH PLAYING FIELDS
RAILROAD AND RAILROAD SWITCHING YARD
SERVICE STATIONS
AUTO WRECKING YARDS
PLASTICS MANUFACTURING
SEVERAL SMALL BUSINESSES CONTAINING SMALL AMOUNTS OF HAZARDOUS MATERIALS

WELL 4

CITY PARKS
SCHOOLS WITH PLAYING FIELDS
RAILROAD AND RAILROAD SWITCHING YARD
SERVICE STATIONS
AUTO WRECKING YARDS
PLASTICS MANUFACTURING
GRAVEL QUARRY
PUBLIC POOL
PUBLIC STORAGE FACILITIES
SEVERAL SMALL BUSINESSES CONTAINING SMALL AMOUNTS OF HAZARDOUS MATERIALS

WELL 5\5A

CITY PARKS
SCHOOLS WITH PLAYING FIELDS

Ground Water Contamination
Susceptibility Assessment Survey Form
Version 2.1

IMPORTANT! Please complete one form for each ground water source (well, wellfield, spring) used in your water system. Photocopy as necessary.

PART I: System Information

Well owner/manager : CITY OF AUBURN

Water system name : AUBURN WATER DIVISION

County: KING

Water system number: 03350V Source number: S01

Well depth: _____ (ft.) (*From WFI form*)

Source name: SPRING #1 COAL CREEK

WA well identification tag number: ___ ___ ___-___ ___ ___

X well not tagged

Number of connections: 13,000 Population served: 40,000

Township: 21N Range: 05E

Section: 28 1/4 1/4 Section: SE/SW

Latitude/longitude (if available): N 47 16' 19.95 / W 127 10' 22.55

How was lat./long. determined?

_____ global positioning device X survey _____ topographic map
____other: _____

* Please refer to Assistance Packet for details and explanations of all questions in Parts II through V.

PART II: Well Construction and Source Information

1) Date well originally constructed: ___ / ___ / 1925 month/day/year

last reconstruction: ___ / ___ / 1965 month/day/year

_____ information unavailable

2) Well driller: SPRING

___ well driller unknown

3) Type of well:

___Drilled: ___ rotary ___ bored ___ cable (percussion) __ Dug

___ Other: X spring(s) ___ lateral collector (Ranney)

___ driven ___ jetted ___ other: _____

Additional comments: CONSTRUCTED UNDERGROUND COLLECTION SYSTEM IN CONTROLED WATERSHED AREA.

4) Well report available? ___ YES (attach copy to form) ___ NO

If no well log is available, please attach any other records documenting well construction; e.g. boring logs, "as built" sheets, engineering reports, well reconstruction logs.

5) Average pumping rate: 4,500 (gallons/min)

Source of information: WF1/LOGS/ MONTHLY REPORTS

If not documented, how was pumping rate determined? _____

__ Pumping rate unknown

6) Is this source treated? YES

If so, what type of treatment:

X disinfection ___ filtration ___ carbon filter ___ air stripper ___ other

Purpose of treatment (describe materials to be removed or controlled by treatment):

BACTERIAL

7) If source is chlorinated, is a chlorine residual maintained: X YES ___ NO

Residual level: 0.8 MG/L (*At the point closest to the source.*)

PART III: Hydrogeologic Information

1) Depth to top of open interval: [check one]

X < 20 ft ___ 20–50 ft ___ 50–100 ft ___ 100–200 ft ___ >200 ft

___ information unavailable *('< ' means less than; '> ' means greater than)*

2) Depth to ground water (static water level):

X < 20 ft ___ 20–50 ft ___ 50–100 ft ___ > 100 ft

___ flowing well/spring (artesian)

How was water level determined?

___ well log X other: DIRECT MEASUREMENT ON UNDERGROUND COLLECTION SYSTEM

___ depth to ground water unknown

3) If source is a flowing well or spring, what is the confining pressure:

12 psi (pounds per square inch)
or
_____ feet above wellhead

4) If source is a flowing well or spring, is there a surface impoundment, reservoir, or catchment associated with this source: X YES ___ NO UNDERGROUND CATCHMENT NETWORK OF PIPING

5) Wellhead elevation (height above mean sea level): 100 (ft)

How was elevation determined? X topographic map ___ Drilling/Well Log ___ altimeter

___ other: _____

___ information unavailable

6) Confining layers: (This can be completed only for those sources with a drilling log, well log or geologic report describing subsurface conditions. Please refer to assistance package for example.) NA

___ evidence of a confining layer in well log

___ no evidence of a confining layer in well log

If there is evidence of a confining layer, is the depth to ground water more than 20 feet above the top of the open interval? ___ YES ___ NO

___ information unavailable

7) Sanitary setback:

___ < 100 ft* ___ 100–120 ft ___ 120–200 ft X > 200 ft
* if less than 100 ft describe the site conditions:

8) Wellhead construction:

___ wellhead enclosed in a wellhouse

X controlled access (describe): FENCED; CONTROLLED ACCESS FULL SECTION OF LAND WITH MULTIPLY LOCKED ACCESS GATES AND UNDERGROUND INTAKE OF SPRING.

___ other uses for wellhouse (describe): _____

___ no wellhead control

9) Surface seal: NA

___ 18 ft

___ < 18 ft (no Department of Ecology approval) ('< ' *means less than*)

___ < 18 ft (Approved by Ecology, include documentation) ('< ' *means less than*)

___ > 18 ft ('> ' *means greater than*)

___ depth of seal unknown

___ no surface seal

10) Annual rainfall (inches per year):

___ < 10 in/yr ___ 10–25 in/yr X > 25 in/yr

PART IV: Mapping Your Ground Water Resource

1) Annual volume of water pumped: 75,140,000 (gallons) 1993

How was this determined?

X meter

___ estimated: ___ pumping rate (_____)

___ pump capacity (_____)

___ other: _____

2) "Calculated Fixed Radius" estimate of ground water movement:
(see Instruction Packet)

6 month ground water travel time : SEE ATTACHED (ft)

1 year ground water travel time : CRITICAL WELL DEVELOPMENT AREA MAP (ft)

5 year ground water travel time: _____(ft)

10 year ground water travel time: _____(ft)

Information available on length of screened/open interval?

__ YES __ NO

Length of screened/open interval: _____(ft)

3) Is there a river, lake, pond, stream, or other obvious surface water body within the 6 month time of travel boundary? ___ YES X NO (mark and identify on map).

4) Is there a stormwater and/or wastewater facility, treatment lagoon, or holding pond located within the 6 month time of travel boundary? ___ YES ___ NO (mark and identify on map).

Comments: _____

_____

_____

_____

_____

PART V: Assessment of Water Quality

1) Regional sources of risk to ground water:

Please indicate if any of the following are present within a circular area around your water source having a radius up to and including the five year ground water travel time:

	6 month	1 year	5 year	unknown
likely pesticide application				
stormwater injection wells				
other injection wells				
abandoned ground water well				
landfills, dumps, disposal areas				
known hazardous materials clean-up site				
water system(s) with known quality problems				
population density > 1 house/acre		X	X	
residences commonly have septic tanks			X	
Wastewater treatment lagoons				
sites used for land application of waste				

Mark and identify on map any of the risks listed above which are located within the 6 month time of travel boundary? (*Please include a map of the wellhead and time of travel areas with this form. Please locate and mark any of the following.*)

If other recorded or potential sources of ground water contamination exist within the ten year time of travel circular zone around your water supply, please describe:

NONE

2) Source specific water quality records:

Please indicate the occurrence of any test results since 1986 that meet the following conditions: (Unless listed on assessment, MCLs are listed in assistance package.)

A. Nitrate: (Nitrate MCL = 10 mg/l)	YES	NO
Results greater than MCL	___	x
< 2 mg/liter nitrate	x	___
2–5 mg/liter nitrate	___	x
> 5 mg/liter nitrate	___	x

___ Nitrate sampling records unavailable

B. VOCs: (VOC detection level 0.5 ug/l or 0.0005 mg/l.)	YES	NO
Results greater than MCL or SAL	___	x
VOCs detected at least once	___	x
VOCs never detected	x	___

___ VOC sampling records unavailable

C. EDB/DBCP:	YES	NO
(EDB MCL = 0.05 ug/l or 0.00005 mg/l. DBCP MCL = 0.2 ug/l or 0.0002 mg/l.)		
EDB/DBCP detected below MCL at least once	___	___
EDB/DBCP detected above MCL at least once	___	___
EDB/DBCP never detected	___	___

___ EDB/DBCP tests required but not yet completed

x EDB/DBCP tests not required

D. Other SOCs (Pesticides):	YES	NO
Other SOCs detected	___	___
(pesticides and other synthetic organic chemicals)		

___ Other SOC tests performed but none detected
(list test methods in comments

x Other SOC tests not performed

If any SOCs in addition to EDB/DBCP were detected, please identify and date. If other SOC tests were performed, but no SOCs detected, list test methods here: _____

_____

_____

_____

E. Bacterial contamination:

	YES	NO
Any bacterial detection(s) in the past 3 years in samples taken from the source (not distribution sampling records).	___	x
Has source (in past 3 years) had a bacteriological contamination problem found in distribution samples that was attributed to the source.	___	x

___ Source sampling records for bacteria unavailable

Part VI: Geographic or Hydrologic Factors Contributing to a Non-Circular Zone of Contribution

The following questions will help identify those ground water systems which may not be accurately represented by the calculated fixed radius (CFR) method described in Part IV. For these sources, the CFR areas should be used as a preliminary delineation of the critical time of travel zones for that source. As a system develops its Wellhead Protection Plan for theses sources, a more detailed delineation method should be considered.

1) Is there evidence of obvious hydrologic boundaries within the 10 year time of travel zone of the CFR? (Does the largest circle extend over a stream, river, lake, up a steep hillside, and/or over a mountain or ridge?)

x YES ___ NO

Describe with references to map produced in Part IV:

_____

_____

2) Aquifer Material:

A) Does the drilling log, well log or other geologic/engineering reports identify that the well is located in an area where the underground conditions are identified as fractured rock and/or basalt terrain?

___ YES x NO

B) Does the drilling log, well log or other geologic/engineering reports indicate that the well is located in an area where the underground conditions are primarily identified as coarse sand and gravel?

x YES ___ NO

3) Is the source located in an aquifer with a high horizontal flow rate? (These can include sources located on flood plains of large rivers, artesian wells with high water pressure, and/or shallow flowing wells and springs.)

X YES ___ NO

4) Are there other high capacity wells (agricultural, municipal and/or industrial) located within the CFRs?

a) Presence of ground water extraction wells removing more than approximately 500 gal/min within...

	YES	NO	unknown
< 6 month travel time	___	X	___
6 month–1 year travel time	___	X	___
1–5 year travel time	___	X	___
5–10 year travel time	___	___	X

b) Presence of ground water recharge wells (dry wells) or heavy irrigation within...

	YES	NO	unknown
< 1 year travel time	___	X	___
1–5 year travel time	___	X	___
5–10 year travel time	___	X	___

Please identify or describe additional hydrologic or geographic conditions that you believe may affect the shape of the zone of contribution for this source. Where possible, reference them to locations on the map produced in Part IV.

WATER APPEARS TO BE FLOWING FROM THE UPLANDS AREA TO THE SOUTH AND EAST OF THE SPRING SITE. HYDROLOGIC STUDIES BY HART CROUSER IN 1980 SUGGEST THAT THE SPRINGS MAY ORIGINATE IN THE MT. RAINIER OR ENUMCLAW AREA.

Suggestions and Comments

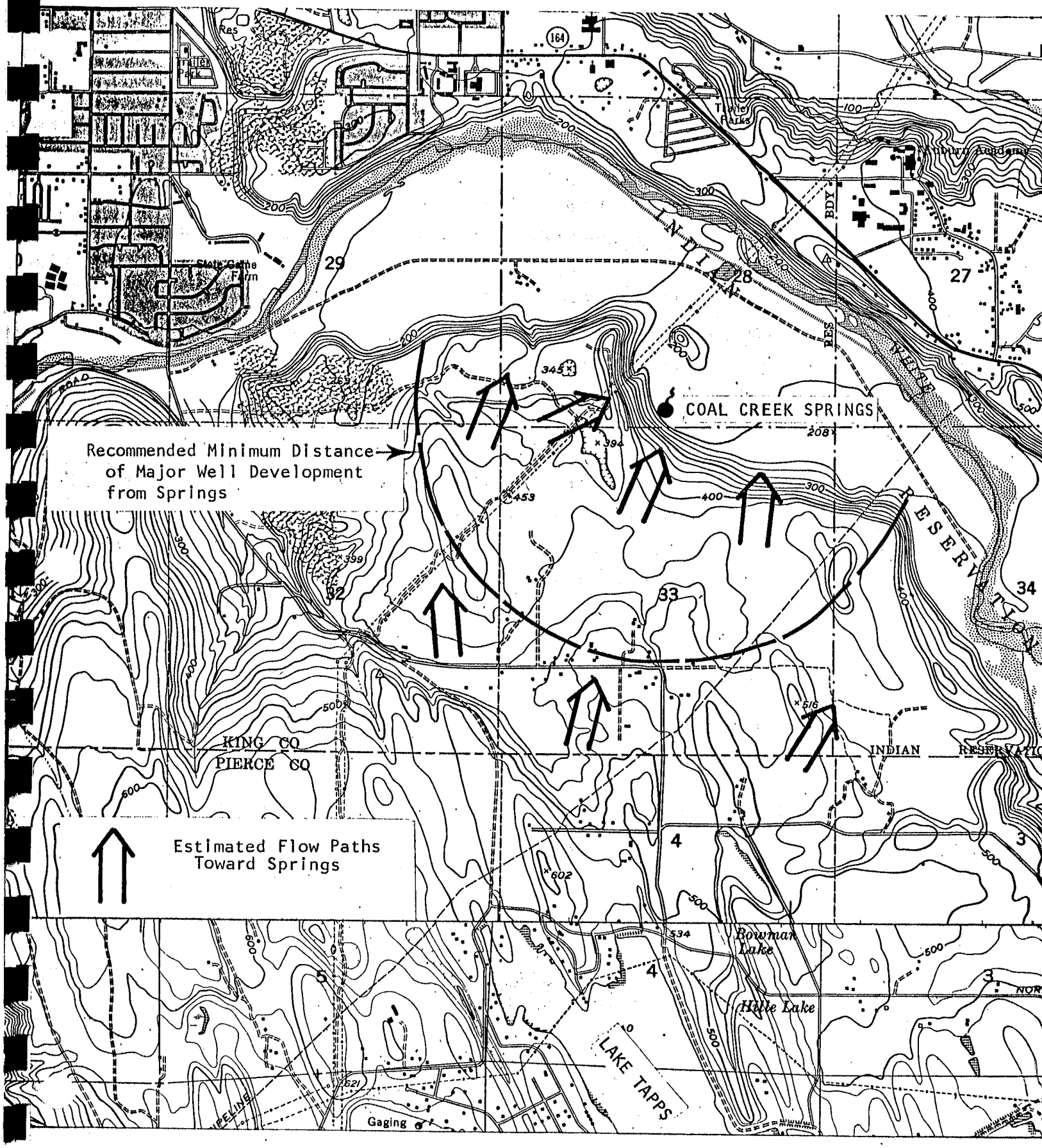
Did you attend one of the susceptibility workshops? ___ YES X NO

Did you find it useful? ___ YES ___ NO

Did you seek outside assistance to complete the assessment? ___ YES X NO

This form and instruction packet are still in the process of development. Your comments, suggestions and questions will help us upgrade and improve this assessment form. If you found particular sections confusing or problematic please let us know. How could this susceptibility assessment be improved or made clearer? Did the instruction package help you find the information needed to complete the assessment? How much time did it take you to complete the form? Were you able to complete the assessment without additional/outside expertise? Do you feel the assessment was valuable as a learning experience? Any other comments or constructive criticisms you have would be appreciated.

CRITICAL WELL DEVELOPMENT AREA



J-888 February 1980
HART-CROWSER & associates inc.
Figure 5

Ground Water Contamination
Susceptibility Assessment Survey Form
Version 2.1

IMPORTANT! Please complete one form for each ground water source (well, wellfield, spring) used in your water system. Photocopy as necessary.

PART I: System Information

Well owner/manager : CITY OF AUBURN

Water system name : AUBURN WATER DIVISION

County: KING

Water system number: 03350V Source number: So2

Well depth: _____ (ft.) (*From WFI form*)

Source name: SPRING #2 WEST HILL

WA well identification tag number: ___ ___ ___-___ ___ ___

X well not tagged

Number of connections: 13,000 Population served: 40,000

Township: 21N Range: 056

Section: 11 1/4 1/4 Section: SW/NE

Latitude/longitude (if available): N 47 19' 25.46" / W 122 15' 31.86"

How was lat./long. determined?

_____ global positioning device X survey _____ topographic map
____other: _____

* Please refer to Assistance Packet for details and explanations of all questions in Parts II through V.

PART II: Well Construction and Source Information

1) Date well originally constructed: ___ / ___ / 1920's month/day/year

last reconstruction: ___ / ___ /___ month/day/year

_____ information unavailable

2) Well driller: NA

___ well driller unknown

3) Type of well:

___Drilled: ___ rotary ___ bored ___ cable (percussion) __ Dug

___ Other: _X_ spring(s) ___ lateral collector (Ranney)

___ driven ___ jetted ___ other: _____

Additional comments: _____

4) Well report available? ___ YES (attach copy to form) _X_ NO NA

If no well log is available, please attach any other records documenting well construction; e.g. boring logs, "as built" sheets, engineering reports, well reconstruction logs.

5) Average pumping rate: 486 FREE FLOWING (gallons/min)

Source of information: METERED SOURCE/ SOURCE DAILY LOGS

If not documented, how was pumping rate determined? _____

__ Pumping rate unknown

6) Is this source treated? YES

If so, what type of treatment:

_X_ disinfection ___ filtration ___ carbon filter ___ air stripper ___ other

Purpose of treatment (describe materials to be removed or controlled by treatment):

BACTERIAL

7) If source is chlorinated, is a chlorine residual maintained: _X_ YES ___ NO

Residual level: 0.8 MG/L *(At the point closest to the source.)*

PART III: Hydrogeologic Information

1) Depth to top of open interval: [check one]

X < 20 ft ___ 20–50 ft ___ 50–100 ft ___ 100–200 ft ___ > 200 ft

___ information unavailable (*'<' means less than; '>' means greater than*)

2) Depth to ground water (static water level):

___ < 20 ft ___ 20–50 ft ___ 50–100 ft ___ > 100 ft

X flowing well/spring (artesian)

How was water level determined?

___ well log X other: DIRECT OBSERVATION

___ depth to ground water unknown

3) If source is a flowing well or spring, what is the confining pressure: NOT KNOWN

_____ psi (pounds per square inch)
or
_____ feet above wellhead

4) If source is a flowing well or spring, is there a surface impoundment, reservoir, or catchment associated with this source: X YES ___ NO UNDERGROUND CATCHMENT PIPING

5) Wellhead elevation (height above mean sea level): 305 (ft)

How was elevation determined? X topographic map ___ Drilling/Well Log ___ altimeter

___ other: _____

___ information unavailable

6) Confining layers: (This can be completed only for those sources with a drilling log, well log or geologic report describing subsurface conditions. Please refer to assistance package for example.)

___ evidence of a confining layer in well log

___ no evidence of a confining layer in well log

If there is evidence of a confining layer, is the depth to ground water more than 20 feet above the top of the open interval? ___ YES ___ NO

X information unavailable

7) Sanitary setback:

___ < 100 ft* ___ 100–120 ft ___ 120–200 ft _X_ > 200 ft
* if less than 100 ft describe the site conditions:

_____

_____

_____

_____

8) Wellhead construction:

___ wellhead enclosed in a wellhouse

_X_ controlled access (describe): FENCED LOCKED ACCESS GATES

_____

___ other uses for wellhouse (describe): _____

_____

___ no wellhead control

9) Surface seal: NA

___ 18 ft

___ < 18 ft (no Department of Ecology approval) ('< ' *means less than*)

___ < 18 ft (Approved by Ecology, include documentation) ('< ' *means less than*)

___ > 18 ft ('> ' *means greater than*)

___ depth of seal unknown

___ no surface seal

10) Annual rainfall (inches per year):

___ < 10 in/yr ___ 10–25 in/yr _X_ > 25 in/yr

PART IV: Mapping Your Ground Water Resource

1) Annual volume of water pumped: 1,052,019,000 (gallons) 1993

How was this determined?

X meter

___ estimated: ___ pumping rate (_____)

___ pump capacity (_____)

___ other: _____

2) "Calculated Fixed Radius" estimate of ground water movement:
(see Instruction Packet)

6 month ground water travel time : _____(ft)

1 year ground water travel time : _____(ft)

5 year ground water travel time: _____(ft)

10 year ground water travel time: _____(ft)

Information available on length of screened/open interval?

__ YES __ NO

Length of screened/open interval: _____(ft)

3) Is there a river, lake, pond, stream, or other obvious surface water body within the 6 month time of travel boundary? ___ YES X NO (mark and identify on map).

4) Is there a stormwater and/or wastewater facility, treatment lagoon, or holding pond located within the 6 month time of travel boundary? ___ YES X NO (mark and identify on map).

Comments: _____

_____

_____

_____

_____

PART V: Assessment of Water Quality

1) Regional sources of risk to ground water:

Please indicate if any of the following are present within a circular area around your water source having a radius up to and including the five year ground water travel time:

	6 month	1 year	5 year	unknown
likely pesticide application		X		
stormwater injection wells				
other injection wells				X
abandoned ground water well				X
landfills, dumps, disposal areas				X
known hazardous materials clean-up site				
water system(s) with known quality problems				
population density > 1 house/acre		X	X	
residences commonly have septic tanks				
Wastewater treatment lagoons				
sites used for land application of waste				

Mark and identify on map any of the risks listed above which are located within the 6 month time of travel boundary? (*Please include a map of the wellhead and time of travel areas with this form. Please locate and mark any of the following.*)

If other recorded or potential sources of ground water contamination exist within the ten year time of travel circular zone around your water supply, please describe:

NONE KNOWN OF

2) Source specific water quality records:

Please indicate the occurrence of any test results since 1986 that meet the following conditions: (Unless listed on assessment, MCLs are listed in assistance package.)

A. Nitrate: (Nitrate MCL = 10 mg/l)	YES	NO
Results greater than MCL	___	x
< 2 mg/liter nitrate	___	x
2-5 mg/liter nitrate	x	___
> 5 mg/liter nitrate	___	x

___ Nitrate sampling records unavailable

B. VOCs: (VOC detection level 0.5 ug/l or 0.0005 mg/l.)	YES	NO
Results greater than MCL or SAL	___	x
VOCs detected at least once	___	x
VOCs never detected	x	___

___ VOC sampling records unavailable

C. EDB/DBCP:	YES	NO
(EDB MCL = 0.05 ug/l or 0.00005 mg/l. DBCP MCL = 0.2 ug/l or 0.0002 mg/l.)		
EDB/DBCP detected below MCL at least once	___	___
EDB/DBCP detected above MCL at least once	___	___
EDB/DBCP never detected	___	___

___ EDB/DBCP tests required but not yet completed

x EDB/DBCP tests not required

D. Other SOCs (Pesticides):	YES	NO
Other SOCs detected	___	___
(pesticides and other synthetic organic chemicals)		

___ Other SOC tests performed but none detected
(list test methods in comments

x Other SOC tests not performed

If any SOCs in addition to EDB/DBCP were detected, please identify and date. If other SOC tests were performed, but no SOCs detected, list test methods here: _____

_____

_____

_____

E. Bacterial contamination:

	YES	NO
Any bacterial detection(s) in the past 3 years in samples taken from the source (not distribution sampling records).	X	
Has source (in past 3 years) had a bacteriological contamination problem found in distribution samples that was attributed to the source.		X

___ Source sampling records for bacteria unavailable

Part VI: Geographic or Hydrologic Factors Contributing to a Non-Circular Zone of Contribution

The following questions will help identify those ground water systems which may not be accurately represented by the calculated fixed radius (CFR) method described in Part IV. For these sources, the CFR areas should be used as a preliminary delineation of the critical time of travel zones for that source. As a system develops its Wellhead Protection Plan for theses sources, a more detailed delineation method should be considered.

1) Is there evidence of obvious hydrologic boundaries within the 10 year time of travel zone of the CFR? (Does the largest circle extend over a stream, river, lake, up a steep hillside, and/or over a mountain or ridge?)

X YES ___ NO

Describe with references to map produced in Part IV:

SPRING ORIGINATES FROM SIDE OF HILL ON WEST SIDE OF AUBURN

APP. 200 ft. HIGHER THAN VALLEY ZONE IT IS FLOWING INTO.

2) Aquifer Material:

A) Does the drilling log, well log or other geologic/engineering reports identify that the well is located in an area where the underground conditions are identified as fractured rock and/or basalt terrain?

___ YES X NO

B) Does the drilling log, well log or other geologic/engineering reports indicate that the well is located in an area where the underground conditions are primarily identified as coarse sand and gravel?

X YES ___ NO

3) Is the source located in an aquifer with a high horizontal flow rate? (These can include sources located on flood plains of large rivers, artesian wells with high water pressure, and/or shallow flowing wells and springs.)

___ YES ___ NO

4) Are there other high capacity wells (agricultural, municipal and/or industrial) located within the CFRs?

a) Presence of ground water extraction wells removing more than approximately 500 gal/min within...

	YES	NO	unknown
< 6 month travel time	___	X	___
6 month–1 year travel time	___	X	___
1–5 year travel time	___	___	X
5–10 year travel time	___	___	X

b) Presence of ground water recharge wells (dry wells) or heavy irrigation within...

	YES	NO	unknown
< 1 year travel time	___	X	___
1–5 year travel time	___	X	___
5–10 year travel time	___	X	___

Please identify or describe additional hydrologic or geographic conditions that you believe may affect the shape of the zone of contribution for this source. Where possible, reference them to locations on the map produced in Part IV.

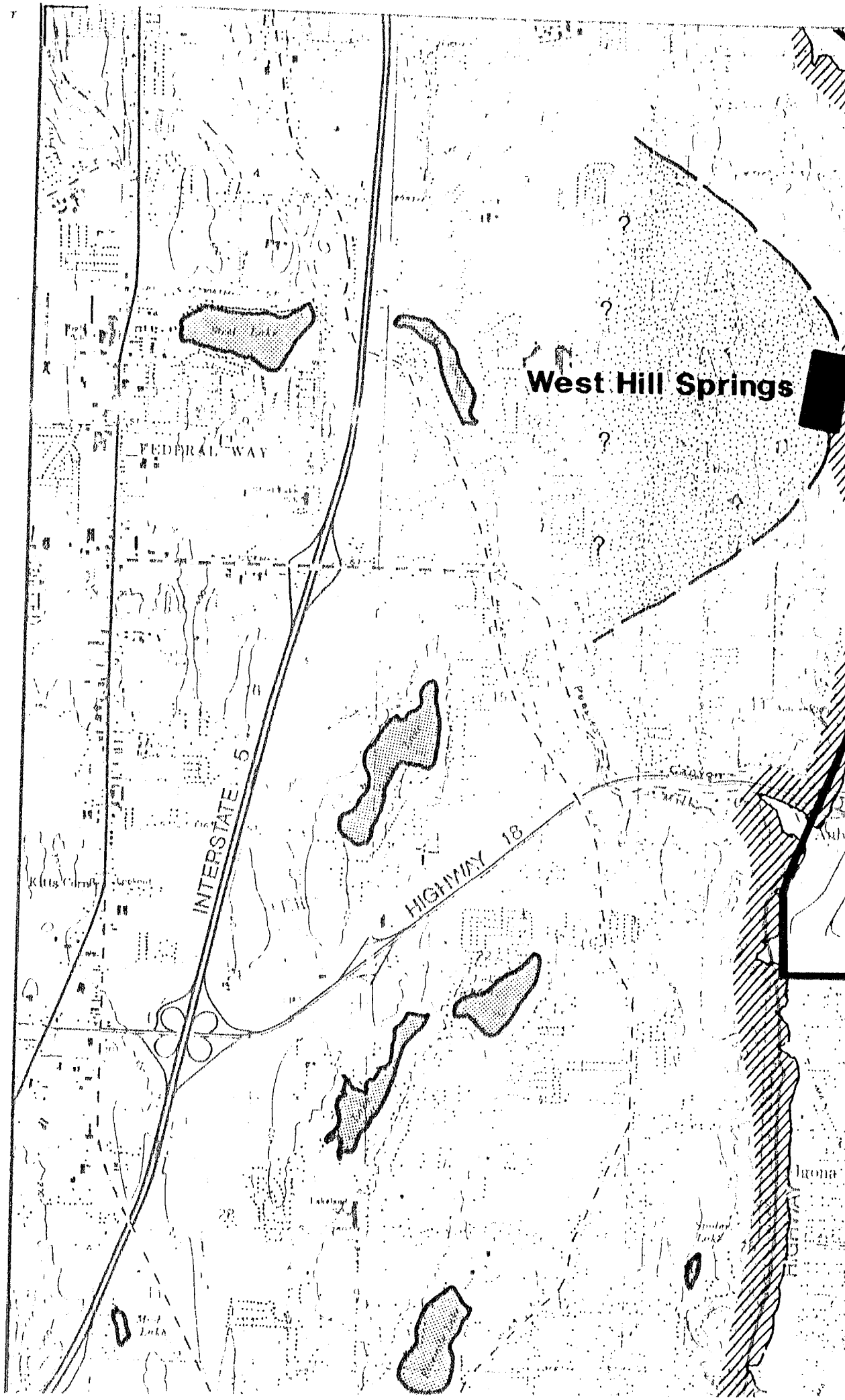
Suggestions and Comments

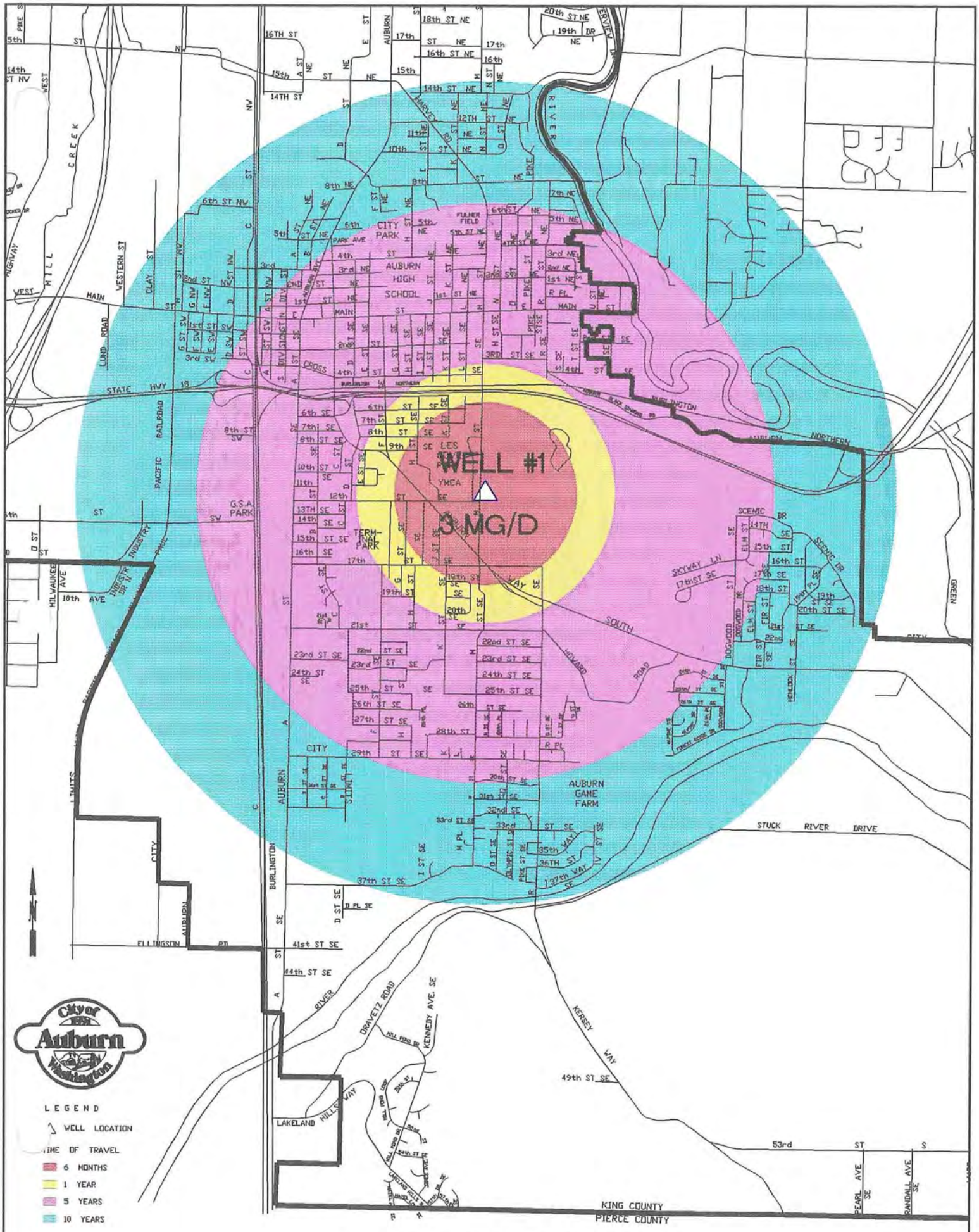
Did you attend one of the susceptibility workshops? ___ YES X NO

Did you find it useful? ___ YES ___ NO

Did you seek outside assistance to complete the assessment? ___ YES X NO

This form and instruction packet are still in the process of development. Your comments, suggestions and questions will help us upgrade and improve this assessment form. If you found particular sections confusing or problematic please let us know. How could this susceptibility assessment be improved or made clearer? Did the instruction package help you find the information needed to complete the assessment? How much time did it take you to complete the form? Were you able to complete the assessment without additional/outside expertise? Do you feel the assessment was valuable as a learning experience? Any other comments or constructive criticisms you have would be appreciated.


West Hill Springs
FEDERAL WAY
INTERSTATE 5
HIGHWAY 18



CITY OF AUBURN WELL #1

APRIL 1994

Ground Water Contamination
Susceptibility Assessment Survey Form
Version 2.1

IMPORTANT! Please complete one form for each ground water source (well, wellfield, spring) used in your water system. Photocopy as necessary.

PART I: System Information

Well owner/manager : CITY OF AUBURN

Water system name : AUBURN WATER DIVISION

County: KING

Water system number: 03350V Source number: S03

Well depth: 134 (ft.) (*From WFI form*)

Source name: WELL # 1

WA well identification tag number: ___ ___ ___-___ ___ ___

X well not tagged

Number of connections: 13,000 Population served: 40,000

Township: 21N Range: 05E

Section: 19 1/4 1/4 Section: NE/NE

Latitude/longitude (if available): N 47 17' 52.72 / W 122 12' 42.16"

How was lat./long. determined?

___ global positioning device X survey ___ topographic map
___ other: ___

* Please refer to Assistance Packet for details and explanations of all questions in Parts II through V.

PART II: Well Construction and Source Information

1) Date well originally constructed: ___ / ___ / 1925 month/day/year

last reconstruction: ___ / ___ / 1965 month/day/year

___ information unavailable

2) Well driller: _____

_____

_____

__X__ well driller unknown

3) Type of well:

__X__ Drilled: ___ rotary ___ bored ___ cable (percussion) ___ Dug

___ Other: ___ spring(s) ___ lateral collector (Ranney)

___ driven ___ jetted ___ other: _____

Additional comments: _____

_____

4) Well report available? __X__ YES (attach copy to form) ___ NO

If no well log is available, please attach any other records documenting well construction; e.g. boring logs, "as built" sheets, engineering reports, well reconstruction logs.

5) Average pumping rate: 2100 (gallons/min)

Source of information: WF1/DAILY RECORDS/ DATA ACQUISATION SYSTEM

If not documented, how was pumping rate determined? _____

_____

___ Pumping rate unknown

6) Is this source treated? NO

If so, what type of treatment:

___ disinfection ___ filtration ___ carbon filter ___ air stripper ___ other

Purpose of treatment (describe materials to be removed or controlled by treatment):

_____

_____

7) If source is chlorinated, is a chlorine residual maintained: ___ YES ___ NO

Residual level: _____ (*At the point closest to the source.*)

PART III: Hydrogeologic Information

) Depth to top of open interval: [check one]

___ < 20 ft ___ 20-50 ft ___ 50-100 ft X 100-200 ft ___ >200 ft

___ information unavailable (*'<' means less than; '>' means greater than*)

2) Depth to ground water (static water level):

___ < 20 ft X 20-50 ft ___ 50-100 ft ___ >100 ft

___ flowing well/spring (artesian)

How was water level determined?

X well log X other: LEVEL SOUNDING ON ROUTINE BASIS

___ depth to ground water unknown

3) If source is a flowing well or spring, what is the confining pressure:

_____ psi (pounds per square inch)
or
_____ feet above wellhead

4) If source is a flowing well or spring, is there a surface impoundment, reservoir, or catchment associated with this source: ___ YES ___ NO NA

5) Wellhead elevation (height above mean sea level): 70 (ft)

How was elevation determined? ___ topographic map X Drilling/Well Log ___ altimeter

___ other: _____

___ information unavailable

6) Confining layers: (This can be completed only for those sources with a drilling log, well log or geologic report describing subsurface conditions. Please refer to assistance package for example.)

X evidence of a confining layer in well log

___ no evidence of a confining layer in well log

If there is evidence of a confining layer, is the depth to ground water more than 20 feet above the top of the open interval? X YES ___ NO

___ information unavailable

7) Sanitary setback:

___ < 100 ft* _X_ 100-120 ft ___ 120-200 ft ___ > 200 ft
* if less than 100 ft describe the site conditions:

_____

_____

_____

_____

8) Wellhead construction:

_X_ wellhead enclosed in a wellhouse

_X_ controlled access (describe): FENCED

_____

___ other uses for wellhouse (describe): NONE

_____

___ no wellhead control

9) Surface seal:

___ 18 ft

___ < 18 ft (no Department of Ecology approval) ('< ' *means less than*)

___ < 18 ft (Approved by Ecology, include documentation) ('< ' *means less than*)

_X_ > 18 ft ('> ' *means greater than*)

___ depth of seal unknown

___ no surface seal

10) Annual rainfall (inches per year):

___ < 10 in/yr ___ 10-25 in/yr _X_ > 25 in/yr

PART IV: Mapping Your Ground Water Resource

1) Annual volume of water pumped: 663,989,000 (gallons)

How was this determined?

X meter

___ estimated: ___ pumping rate (_____)

___ pump capacity (_____)

___ other: _____

2) "Calculated Fixed Radius" estimate of ground water movement:
(see Instruction Packet)

6 month ground water travel time : 1887 (ft)

1 year ground water travel time : 2668 (ft)

5 year ground water travel time: 5967 (ft)

10 year ground water travel time: 8438 (ft)

Information available on length of screened/open interval?

X YES ___ NO

Length of screened/open interval: 30 (ft)

3) Is there a river, lake, pond, stream, or other obvious surface water body within the 6 month time of travel boundary? X YES ___ NO (mark and identify on map).

4) Is there a stormwater and/or wastewater facility, treatment lagoon, or holding pond located within the 6 month time of travel boundary? ___ YES X NO (mark and identify on map).

Comments: _____

PART V: Assessment of Water Quality

1) Regional sources of risk to ground water:

Please indicate if any of the following are present within a circular area around your water source having a radius up to and including the five year ground water travel time:

	6 month	1 year	5 year	unknown
likely pesticide application RESIDENTIAL	X	X	X	
stormwater injection wells				
other injection wells				
abandoned ground water well			X	
landfills, dumps, disposal areas				
known hazardous materials clean-up site				
water system(s) with known quality problems				
population density > 1 house/acre	X	X	X	
residences commonly have septic tanks				
Wastewater treatment lagoons				
sites used for land application of waste				

Mark and identify on map any of the risks listed above which are located within the 6 month time of travel boundary? (*Please include a map of the wellhead and time of travel areas with this form. Please locate and mark any of the following.*)

If other recorded or potential sources of ground water contamination exist within the ten year time of travel circular zone around your water supply, please describe:

DRYCLEANERS

SERVICE STATIONS - LOW POTENTIAL FOR CONTAMINATION

AUTO REPAIRS

2) Source specific water quality records:

Please indicate the occurrence of any test results since 1986 that meet the following conditions: (Unless listed on assessment, MCLs are listed in assistance package.)

A. Nitrate: (Nitrate MCL = 10 mg/l)

Results greater than MCL	YES	NO
< 2 mg/liter nitrate	___	X
2-5 mg/liter nitrate	X	___
> 5 mg/liter nitrate	___	X
___ Nitrate sampling records unavailable	___	X

B. VOCs: (VOC detection level 0.5 ug/l or 0.0005 mg/l.)

Results greater than MCL or SAL	YES	NO
VOCs detected at least once	___	X
VOCs never detected	___	X
___ VOC sampling records unavailable	X	___

C. EDB/DBCP:

(EDB MCL = 0.05 ug/l or 0.00005 mg/l. DBCP MCL = 0.2 ug/l or 0.0002 mg/l.)	YES	NO
EDB/DBCP detected below MCL at least once	___	___
EDB/DBCP detected above MCL at least once	___	___
EDB/DBCP never detected	___	___
___ EDB/DBCP tests required but not yet completed		
X EDB/DBCP tests not required		

D. Other SOCs (Pesticides):

Other SOCs detected	YES	NO
(pesticides and other synthetic organic chemicals)	___	X

___ Other SOC tests performed but none detected
(list test methods in comments

X Other SOC tests not performed

If any SOCs in addition to EDB/DBCP were detected, please identify and date. If other SOC tests were performed, but no SOCs detected, list test methods here: _____

E. Bacterial contamination:

	YES	NO
Any bacterial detection(s) in the past 3 years in samples taken from the source (not distribution sampling records).	___	X
Has source (in past 3 years) had a bacteriological contamination problem found in distribution samples that was attributed to the source.	___	X

___ Source sampling records for bacteria unavailable

Part VI: Geographic or Hydrologic Factors Contributing to a Non-Circular Zone of Contribution

The following questions will help identify those ground water systems which may not be accurately represented by the calculated fixed radius (CFR) method described in Part IV. For these sources, the CFR areas should be used as a preliminary delineation of the critical time of travel zones for that source. As a system develops its Wellhead Protection Plan for theses sources, a more detailed delineation method should be considered.

1) Is there evidence of obvious hydrologic boundaries within the 10 year time of travel zone of the CFR? (Does the largest circle extend over a stream, river, lake, up a steep hillside, and/or over a mountain or ridge?)

X YES ___ NO

Describe with references to map produced in Part IV:

HIGHER ELEVATION TO WEST & EAST OF VALLEY - FLOW SOUTH TO NORTH IN VALLEY.

2) Aquifer Material:

A) Does the drilling log, well log or other geologic/engineering reports identify that the well is located in an area where the underground conditions are identified as fractured rock and/or basalt terrain?

___ YES X NO

B) Does the drilling log, well log or other geologic/engineering reports indicate that the well is located in an area where the underground conditions are primarily identified as coarse sand and gravel?

X YES ___ NO

3) Is the source located in an aquifer with a high horizontal flow rate? (These can include sources located on flood plains of large rivers, artesian wells with high water pressure, and/or shallow flowing wells and springs.)

___ YES X NO

4) Are there other high capacity wells (agricultural, municipal and/or industrial) located within the CFRs?

a) Presence of ground water extraction wells removing more than approximately 500 gal/min within...

	YES	NO	unknown
< 6 month travel time	___	X	___
6 month–1 year travel time	___	X	___
1–5 year travel time	X	___	___
5–10 year travel time	X	___	___

b) Presence of ground water recharge wells (dry wells) or heavy irrigation within...

	YES	NO	unknown
< 1 year travel time	___	X	___
1–5 year travel time	___	X	___
5–10 year travel time	X	___	___

Please identify or describe additional hydrologic or geographic conditions that you believe may affect the shape of the zone of contribution for this source. Where possible, reference them to locations on the map produced in Part IV.

AQIFER APPEARS TO FLOW SOUTH TO NORTH ACCORDING TO A GROUND WATER SUPPLY STUDY BY POOL ENG. INC. IN SEPTEMBER OF 1982. HYDROLOGY DONE BY HART CROUSER FOR REPORT.

Suggestions and Comments

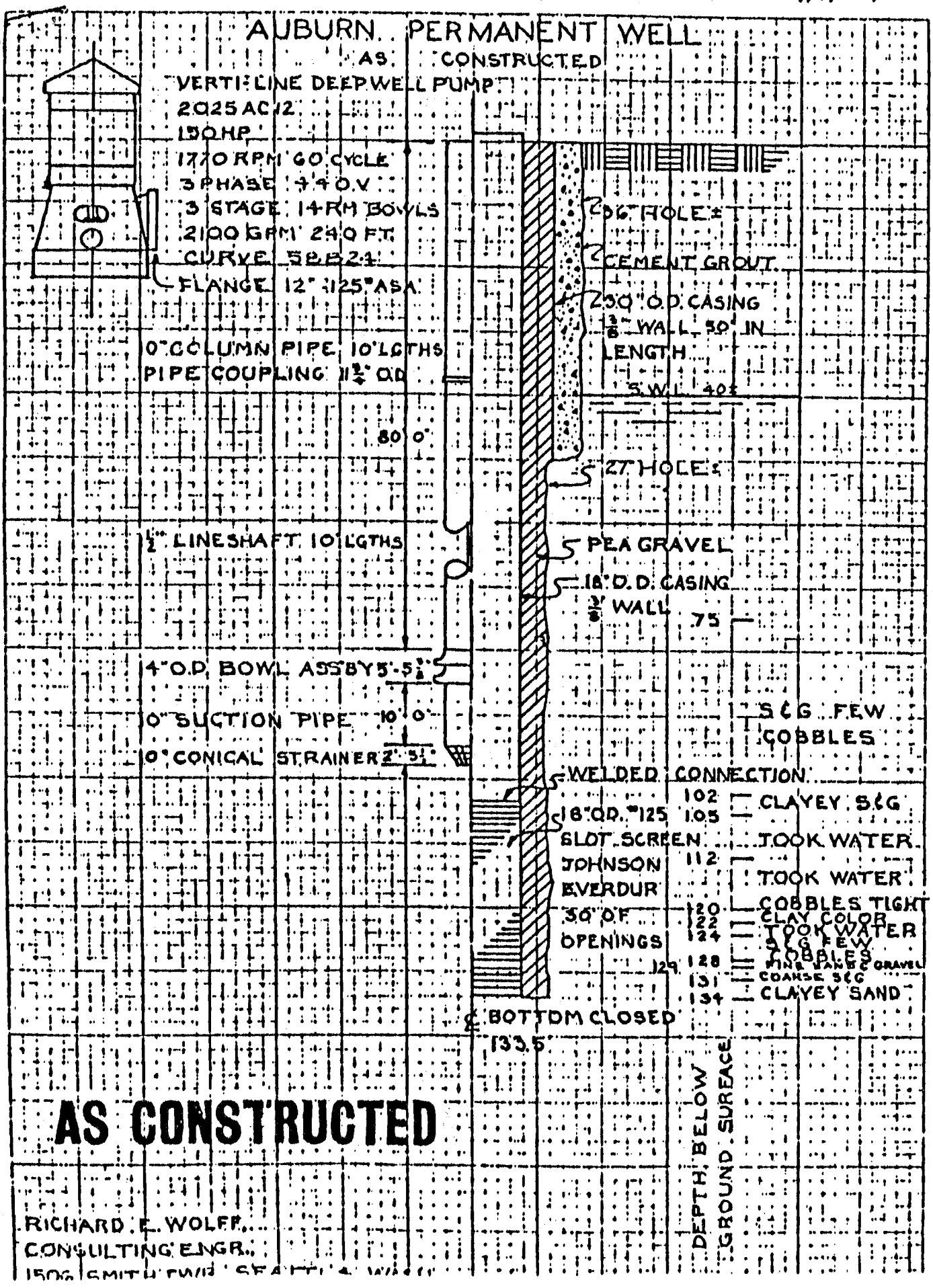
Did you attend one of the susceptibility workshops? ___ YES __X__ NO

Did you find it useful? ___ YES ___ NO

Did you seek outside assistance to complete the assessment? ___ YES __X__ NO

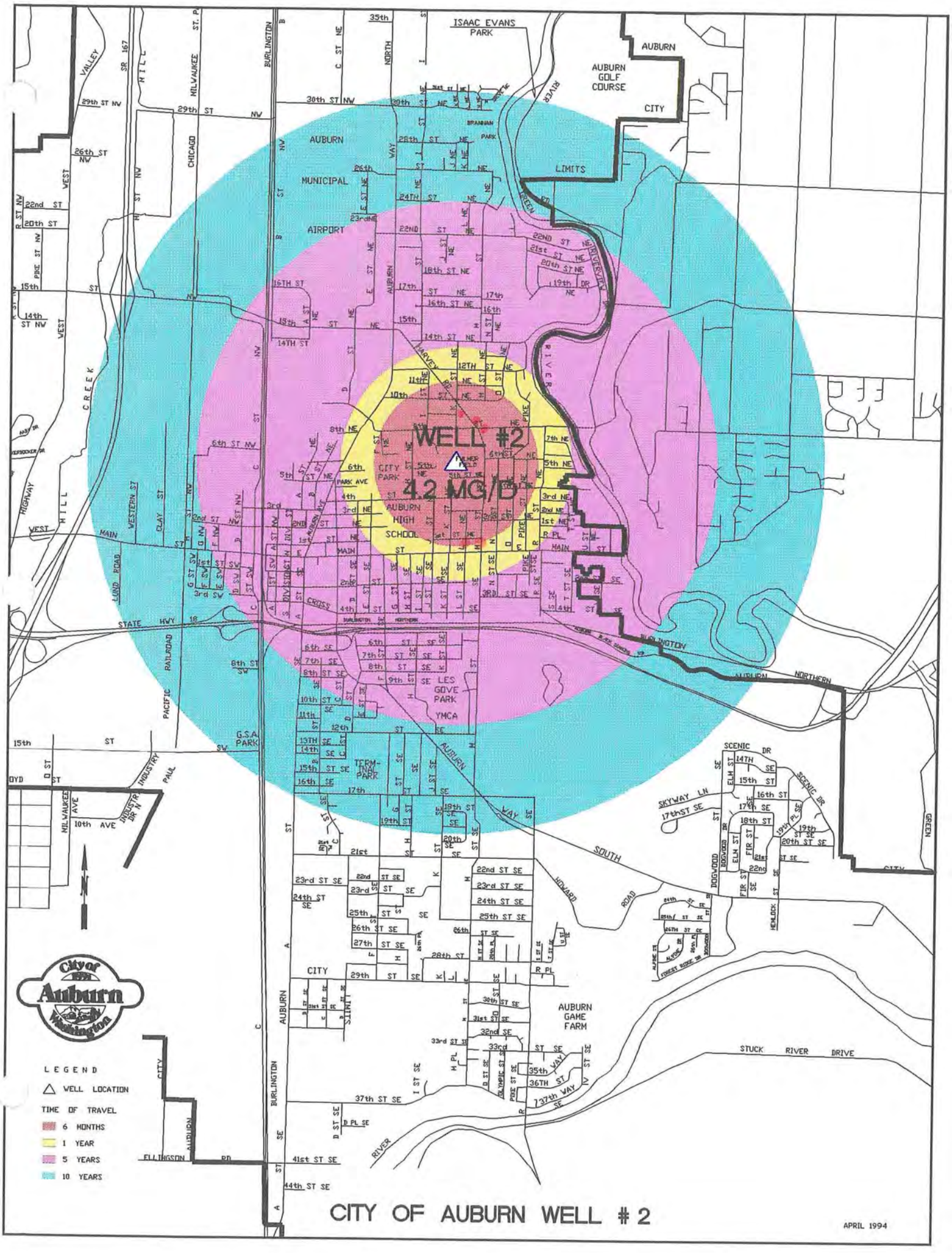
This form and instruction packet are still in the process of development. Your comments, suggestions and questions will help us upgrade and improve this assessment form. If you found particular sections confusing or problematic please let us know. How could this susceptibility assessment be improved or made clearer? Did the instruction package help you find the information needed to complete the assessment? How much time did it take you to complete the form? Were you able to complete the assessment without additional/outside expertise? Do you feel the assessment was valuable as a learning experience? Any other comments or constructive criticisms you have would be appreciated.

'M' ST. WELL. WELL #1



AS CONSTRUCTED

RICHARD E. WOLFF
CONSULTING ENGR.
1506 SMITH TWR SEATTLE WASH


WELL #2
4.2 MG/D
ISAAC EVANS PARK
AUBURN GOLF COURSE
AUBURN CITY LIMITS
AUBURN MUNICIPAL AIRPORT
AUBURN HIGH SCHOOL
CITY PARK
LES GOVE PARK
YMCA
G.S.A. PARK
TERMINAL PARK
AUBURN GAME FARM
SCENIC DR
SKYWAY LN
17thST SE
SOUTH HOWARD ROAD
STUCK RIVER DRIVE
BURLINGTON NORTHERN
PACIFIC RAILROAD
STATE HWY 18
MAIN ST
AUBURN WAY SE
LEGEND
WELL LOCATION
TIME OF TRAVEL
6 MONTHS
1 YEAR
5 YEARS
10 YEARS
CITY OF AUBURN WELL # 2
APRIL 1994

Ground Water Contamination
Susceptibility Assessment Survey Form
Version 2.1

IMPORTANT! Please complete one form for each ground water source (well, wellfield, spring) used in your water system. Photocopy as necessary.

PART I: System Information

Well owner/manager : CITY OF AUBURN

Water system name : AUBURN WATER DIVISION

County: KING

Water system number: 03350V Source number: S04

Well depth: 290 (ft.) (*From WFI form*)

Source name: WELL #2

WA well identification tag number: ___ ___ ___-___ ___ ___

X well not tagged

Number of connections: 13,000 Population served: 40,000

Township: 21N Range: 05F

Section: 18 1/4 1/4 Section: NW/NE

Latitude/longitude (if available): N 47 18' 47.64" / W 122 12' 52.29"

How was lat./long. determined?

___ global positioning device X survey ___ topographic map
___other: ___

* Please refer to Assistance Packet for details and explanations of all questions in Parts II through V.

PART II: Well Construction and Source Information

1) Date well originally constructed: 11 / 21 /68 month/day/year

last reconstruction: ___ / ___ /___ month/day/year

___ information unavailable

2) Well driller: R.E. DeREMER

RICHARDSON WELL DRILLING CO.

___ well driller unknown

3) Type of well:

X Drilled: ___ rotary ___ bored X cable (percussion) ___ Dug

___ Other: ___ spring(s) ___ lateral collector (Ranney)

___ driven ___ jetted ___ other: _____

Additional comments: _____

4) Well report available? X YES (attach copy to form) ___ NO

If no well log is available, please attach any other records documenting well construction; e.g. boring logs, "as built" sheets, engineering reports, well reconstruction logs.

5) Average pumping rate: 3000 (gallons/min)

Source of information: WF1/ DAILY LOGS/DATA/ ACQUISATION SYSTEM

If not documented, how was pumping rate determined? _____

___ Pumping rate unknown

6) Is this source treated? NO

If so, what type of treatment:

___ disinfection ___ filtration ___ carbon filter ___ air stripper ___ other

Purpose of treatment (describe materials to be removed or controlled by treatment):

7) If source is chlorinated, is a chlorine residual maintained: ___ YES ___ NO NA

Residual level: _____ (*At the point closest to the source.*)

PART III: Hydrogeologic Information

1) Depth to top of open interval: [check one]

___ < 20 ft ___ 20-50 ft ___ 50-100 ft ___ 100-200 ft X > 200 ft

___ information unavailable (*'< ' means less than; '> ' means greater than*)

2) Depth to ground water (static water level):

X < 20 ft ___ 20-50 ft ___ 50-100 ft ___ > 100 ft

___ flowing well/spring (artesian)

How was water level determined?

X well log X other: WELL PROB SOUNDING ON REGULAR BASIS

___ depth to ground water unknown

3) If source is a flowing well or spring, what is the confining pressure:

NA psi (pounds per square inch)
or
_____ feet above wellhead

4) If source is a flowing well or spring, is there a surface impoundment, reservoir, or catchment associated with this source: ___ YES ___ NO

5) Wellhead elevation (height above mean sea level): 64 (ft)

How was elevation determined? ___ topographic map X Drilling/Well Log ___ altimeter

___ other: _____

___ information unavailable

6) Confining layers: (This can be completed only for those sources with a drilling log, well log or geologic report describing subsurface conditions. Please refer to assistance package for example.)

X evidence of a confining layer in well log

___ no evidence of a confining layer in well log

If there is evidence of a confining layer, is the depth to ground water more than 20 feet above the top of the open interval? X YES ___ NO

___ information unavailable

7) Sanitary setback:

___ < 100 ft* _X_ 100-120 ft ___ 120-200 ft ___ > 200 ft
* if less than 100 ft describe the site conditions:

_____

_____

_____

_____

8) Wellhead construction:

_X_ wellhead enclosed in a wellhouse

_X_ controlled access (describe): FENCED

_____

___ other uses for wellhouse (describe): _____

_____

___ no wellhead control

9) Surface seal:

___ 18 ft

___ < 18 ft (no Department of Ecology approval) ('< ' *means less than*)

___ < 18 ft (Approved by Ecology, include documentation) ('< ' *means less than*)

_X_ > 18 ft ('> ' *means greater than*)

___ depth of seal unknown

___ no surface seal

10) Annual rainfall (inches per year):

___ < 10 in/yr ___ 10-25 in/yr _X_ > 25 in/yr

PART IV: Mapping Your Ground Water Resource

1) Annual volume of water pumped: 259,913,000 (gallons) 1993

How was this determined?

X meter

___ estimated: ___ pumping rate (_____)

___ pump capacity (_____)

___ other: _____

2) "Calculated Fixed Radius" estimate of ground water movement:
(see Instruction Packet)

6 month ground water travel time : 1765 (ft)

1 year ground water travel time : 2496 (ft)

5 year ground water travel time: 5580 (ft)

10 year ground water travel time: 7892 (ft)

Information available on length of screened/open interval?

X YES ___ NO

Length of screened/open interval: 49 (ft)

3) Is there a river, lake, pond, stream, or other obvious surface water body within the 6 month time of travel boundary? ___ YES X NO (mark and identify on map).

4) Is there a stormwater and/or wastewater facility, treatment lagoon, or holding pond located within the 6 month time of travel boundary? ___ YES X NO (mark and identify on map).

Comments: _____

PART V: Assessment of Water Quality

1) Regional sources of risk to ground water:

Please indicate if any of the following are present within a circular area around your water source having a radius up to and including the five year ground water travel time:

	6 month	1 year	5 year	unknown
likely pesticide application RESIDENTIAL	x	X	X	
stormwater injection wells				
other injection wells				
abandoned ground water well				
landfills, dumps, disposal areas				
known hazardous materials clean-up site				
water system(s) with known quality problems				
population density > 1 house/acre	X	X	X	
residences commonly have septic tanks				
Wastewater treatment lagoons				
sites used for land application of waste				

Mark and identify on map any of the risks listed above which are located within the 6 month time of travel boundary? (*Please include a map of the wellhead and time of travel areas with this form. Please locate and mark any of the following.*)

If other recorded or potential sources of ground water contamination exist within the ten year time of travel circular zone around your water supply, please describe:

AUTO REPAIR

DRY CLEANERS - LOW POTENTIAL

SERVICE STATIONS

PLASTICS MANUFACTURE

2) Source specific water quality records:

Please indicate the occurrence of any test results since 1986 that meet the following conditions: (Unless listed on assessment, MCLs are listed in assistance package.)

A. Nitrate: (Nitrate MCL = 10 mg/l)

Results greater than MCL	YES	NO
< 2 mg/liter nitrate	___	X
2-5 mg/liter nitrate	X	___
> 5 mg/liter nitrate	___	X
___ Nitrate sampling records unavailable	___	X

B. VOCs: (VOC detection level 0.5 ug/l or 0.0005 mg/l.)

Results greater than MCL or SAL	YES	NO
VOCs detected at least once	___	X
VOCs never detected	X	___
___ VOC sampling records unavailable	___	___

C. EDB/DBCP:

(EDB MCL = 0.05 ug/l or 0.00005 mg/l. DBCP MCL = 0.2 ug/l or 0.0002 mg/l.)

	YES	NO
EDB/DBCP detected below MCL at least once	___	___
EDB/DBCP detected above MCL at least once	___	___
EDB/DBCP never detected	___	___

___ EDB/DBCP tests required but not yet completed

X EDB/DBCP tests not required

D. Other SOCs (Pesticides):

	YES	NO
Other SOCs detected (pesticides and other synthetic organic chemicals)	___	___

___ Other SOC tests performed but none detected
(list test methods in comments

X Other SOC tests not performed

If any SOCs in addition to EDB/DBCP were detected, please identify and date. If other SOC tests were performed, but no SOCs detected, list test methods here: _____

E. Bacterial contamination:

	YES	NO
Any bacterial detection(s) in the past 3 years in samples taken from the source (not distribution sampling records).	___	X
Has source (in past 3 years) had a bacteriological contamination problem found in distribution samples that was attributed to the source.	___	X

___ Source sampling records for bacteria unavailable

Part VI: Geographic or Hydrologic Factors Contributing to a Non-Circular Zone of Contribution

The following questions will help identify those ground water systems which may not be accurately represented by the calculated fixed radius (CFR) method described in Part IV. For these sources, the CFR areas should be used as a preliminary delineation of the critical time of travel zones for that source. As a system develops its Wellhead Protection Plan for theses sources, a more detailed delineation method should be considered.

1) Is there evidence of obvious hydrologic boundaries within the 10 year time of travel zone of the CFR? (Does the largest circle extend over a stream, river, lake, up a steep hillside, and/or over a mountain or ridge?)

X YES ___ NO

Describe with references to map produced in Part IV:

HIGHER ELEVATION WEST & EAST OF VALLEY FLOW SOUTH

TO NORTH UP VALLEY.

2) Aquifer Material:

A) Does the drilling log, well log or other geologic/engineering reports identify that the well is located in an area where the underground conditions are identified as fractured rock and/or basalt terrain?

___ YES X NO

B) Does the drilling log, well log or other geologic/engineering reports indicate that the well is located in an area where the underground conditions are primarily identified as coarse sand and gravel?

X YES ___ NO

3) Is the source located in an aquifer with a high horizontal flow rate? (These can include sources located on flood plains of large rivers, artesian wells with high water pressure, and/or shallow flowing wells and springs.)

___ YES X NO

4) Are there other high capacity wells (agricultural, municipal and/or industrial) located within the CFRs?

a) Presence of ground water extraction wells removing more than approximately 500 gal/min within...

	YES	NO	unknown
< 6 month travel time	___	X	___
6 month–1 year travel time	___	X	___
1–5 year travel time	X	___	___
5–10 year travel time	X	___	___

b) Presence of ground water recharge wells (dry wells) or heavy irrigation within...

	YES	NO	unknown
< 1 year travel time	___	X	___
1–5 year travel time	___	X	___
5–10 year travel time	___	X	___

Please identify or describe additional hydrologic or geographic conditions that you believe may affect the shape of the zone of contribution for this source. Where possible, reference them to locations on the map produced in Part IV.

AQUIFER FLOW APPEARS TO BE FROM SOUTH TO NORTH ACCORDING TO A GROUND WATER SUPPLY STUDY BY POOL ENGINEERING, INC. IN SEPTEMBER, 1982. HYDROLOGY DONE BY HART CROUSER FOR REPORT.

Suggestions and Comments

Did you attend one of the susceptibility workshops? ___ YES X NO

Did you find it useful? ___ YES ___ NO

Did you seek outside assistance to complete the assessment? ___ YES X NO

This form and instruction packet are still in the process of development. Your comments, suggestions and questions will help us upgrade and improve this assessment form. If you found particular sections confusing or problematic please let us know. How could this susceptibility assessment be improved or made clearer? Did the instruction package help you find the information needed to complete the assessment? How much time did it take you to complete the form? Were you able to complete the assessment without additional/outside expertise? Do you feel the assessment was valuable as a learning experience? Any other comments or constructive criticisms you have would be appreciated.

Original and First Copy with
Division of Water Resources
Copy — Owner's Copy
Copy — Driller's Copy

WATER WELL REPORT well #2

STATE OF WASHINGTON

Application No. 9229
Permit No. 8732

(1) OWNER: Name City of Auburn Address 20 "A" St. N.W. Auburn, Wash. 98002

(2) LOCATION OF WELL: County King
NW ¼ NE ¼ Sec. 18 T. 21 N., R. 5 W.M.
Bearing and distance from section or subdivision corner 610' east, 685' south from N¼ corner Sect. 18

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☒
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) 2
New well ☒ Method: Dug ☐ Bored ☒
Deepened ☐ Cable ☒ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 24 inches.
Drilled 293 ft. Depth of completed well 293 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 24" Diam. from 0 ft. to ft.
Threaded ☐ 30" Diam. from 0 ft. to 90 ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☒ No ☐
Manufacturer's Name Johnson
Type Stainless Model No.
Diam. 24 Slot size 80 from 242 ft. to 282 ft.
Diam. 24 Slot size 40 from 282 ft. to 291 ft.
24 Blank 239 242

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 90 ft.
Material used to seal 30" csg. / casing
Did any strata contain unusable water? Yes ☒ No ☐
Type of water? high iron Depth of strata to 85'
Method of sealing strata off 30" casing driven into imp. strata

(7) PUMP: Manufacturer's Name None installed
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level USGS 64 ft.
Static level 7' 6" ft. below top of well Date 11-20-68
Artesian pressure lbs. per square inch Date
Artesian water controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☒ No ☐ If yes, by whom? driller
Yield: 2000 gal./min. with 60' ft. drawdown after 24 hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
30	9'-0"				
03-00	8'-6"				
10-00	7'-6"				

Date of test 11-20, 11-21-'68
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☒ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
sand & gravel	0	20'
sand & gravel - hard streaks	20	37'
fine & coarse sand & grv.	37	52'
" " " & " - brown clay, hard streaks	52	71'
fine to med. sand w/yel. clay	71	78'
coarse grv. sand layers	78	84'
cemented sand & gravel	84	98'
blue & gray clay-large grv.-silty sand	98	105'
large grv. sand & blue clay	105	117
hard packed yellow & brown snd. & grv.	117	138
loose snd. & grv., brown	138	146
cemented snd. & grv. brwn silt	146	150
med. brown peat, sand, silt	150	160
gray, coarse sand, some grv. silty	160	166
hard packed sand & gravel	166	178
cemented sand & gravel	178	196
fine & coarse sand & gravel	196	198
yellow clay, snd & grv, hard	198	210
varigated clay, snd. & grv.	210	213
hard packed sand & gravel	213	225
cemented sand & gravel in-layers, med. & coarse sand	225	238
varigated clay, sand & coarse gravel, hard	238	264
hard packed sand & gravel-cemented slightly	264	270
Yellow clay, sand & gravel-hard streaks	270	279
fine & coarse snd., med to coas. grv. cemented layers	279	290
varigated clay, fine & coas. sand & gravel	290	291
hard packed snd. & grv.	291	293

Work started 11-21-68 19 Completed 11-21-68 19

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Richardson Well Drilling Co.
(Person, firm, or corporation) (Type or print)
Address 219 S. 115th St. Tacoma, Wa.

[Signed] [illegible]
(Well Driller)

License No. 223-02-6500 Date 1-13, 1969

State of Washington Department of Public Health Laboratories
1610 NE 150th Street, Seattle, Washington 98155 (206) 361-2898

VOLATILE ORGANIC CHEMICAL REPORT

Results of Analysis by EPA Method 524.2
Measurement of Purgeable Organic Compounds in Water by Capillary Column
Gas Chromatography/Mass Spectrometry

Send Report To:
City of Auburn
1305 C Street SW
Auburn, WA 98001-5910

Bill To: Auburn Water
1305 C street SW
Auburn, WA 98001-5910

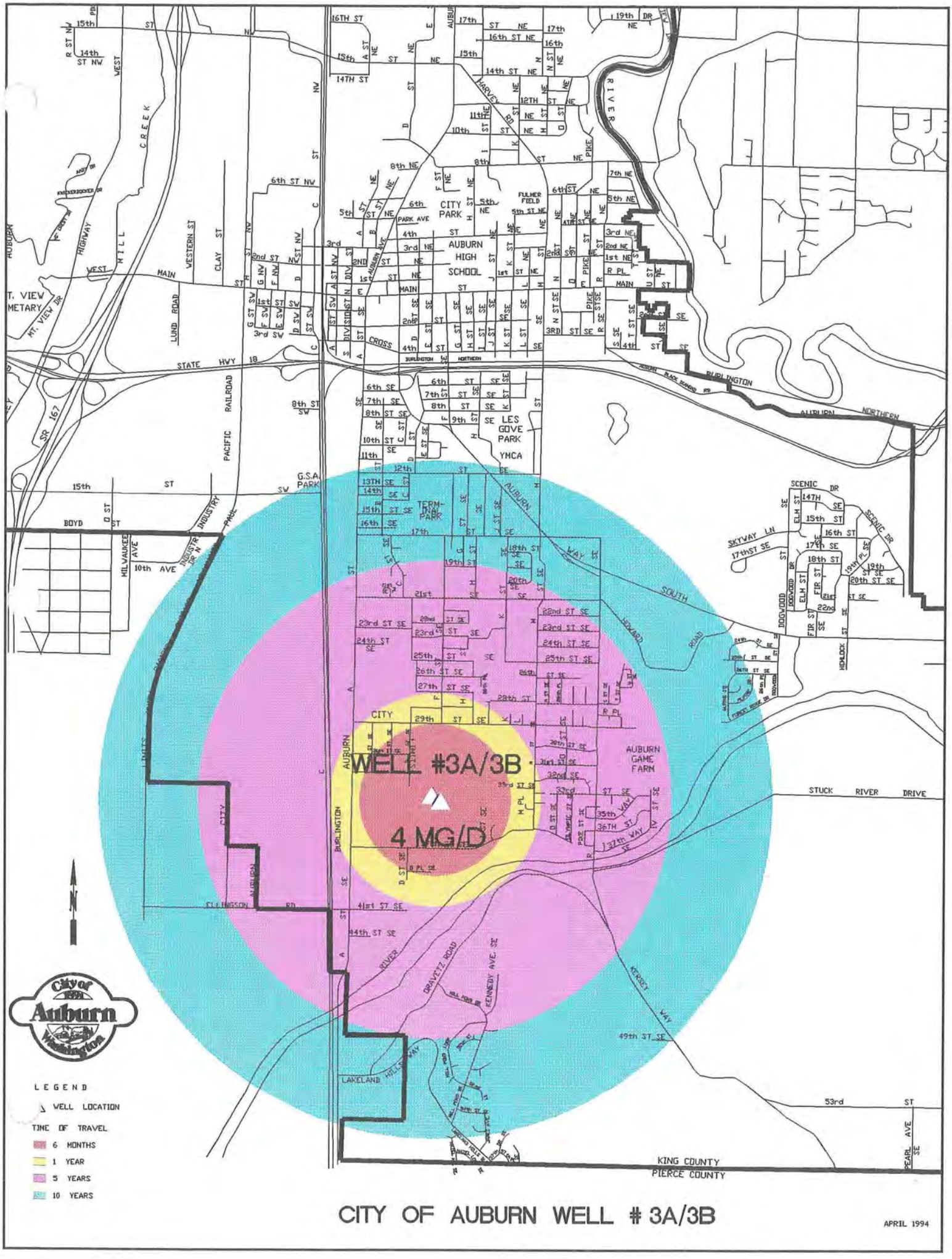
#225 (S)

COUNTY : King
SYSTEM NAME : City of Auburn
SYSTEM ID NO. : 03350V
DATE COLLECTED : 03/08/94
DATE ANALYZED : 03/10/94
SOURCE NUMBER : S04
SOURCE TYPE : Well #2

LABORATORY NO. : 5408721
DATA FILE : >3C10K
ANALYST : Harold
DATE OF REPORT : 3-23-94
SUPERVISOR'S INITIALS : PH

EPA CODE	NAME OF COMPOUND	MCL* µg/L	AMOUNT µg/L	EPA CODE	NAME OF COMPOUND	AMOUNT µg/L
	REGULATED COMPOUNDS				UNREGULATED COMPOUNDS	
2976	VINYL CHLORIDE	2	ND	2210	CHLOROMETHANE	ND
2977	1,1-DICHLOROETHYLENE	7	ND	2214	BROMOMETHANE	ND
2981	1,1,1-TRICHLOROETHANE	200	ND	2216	CHLOROETHANE	ND
2982	CARBON TETRACHLORIDE	5	ND	2978	1,1-DICHLOROETHANE	ND
2990	BENZENE	5	ND	2416	2,2-DICHLOROPROPANE	ND
2980	1,2-DICHLOROETHANE	5	ND	2410	1,1-DICHLOROPROPENE	ND
2984	TRICHLOROETHYLENE	5	2.0	2408	DIBROMOMETHANE	ND
2969	P-DICHLOROBENZENE	75	ND	2412	1,3-DICHLOROPROPANE	ND
2979	T-1,2-DICHLOROETHYLENE	100	ND	2986	1,1,1,2-TETRACHLOROETHANE	ND
2380	CIS-1,2-DICHLOROETHYLENE	70	0.9	2993	BROMOBENZENE	ND
2983	1,2-DICHLOROPROPANE	5	ND	2414	1,2,3-TRICHLOROPROPANE	ND
2991	TOLUENE	1000	ND	2988	1,1,2,2-TETRACHLOROETHANE	ND
2987	TETRACHLOROETHYLENE	5	2.5	2965	O-CHLOROTOLUENE	ND
2989	CHLOROBENZENE	100	ND	2966	P-CHLOROTOLUENE	ND
2992	ETHYL BENZENE	700	ND	2967	M-DICHLOROBENZENE	ND
2995	M/P-XYLENE (total xylene MCL=10000)		ND	2212	DICHLORODIFLUOROMETHANE	ND
2997	O-XYLENE (total xylene MCL=10000)		ND	2218	TRICHLOROFLUOROMETHANE	ND
2996	STYRENE	100	ND	2430	BROMOCHLOROMETHANE	ND
2968	O-DICHLOROBENZENE	600	ND	2994	ISOPROPYLBENZENE	ND
2964	METHYLENE CHLORIDE	5	ND	2998	N-PROPYLBENZENE	ND
2985	1,1,2-TRICHLOROETHANE	5	ND	2424	1,3,5-TRIMETHYLBENZENE	ND
2378	1,2,4-TRICHLOROBENZENE	70	ND	2426	TERT-BUTYLBENZENE	ND
	TRIHALOMETHANES (THM)			2428	SEC-BUTYLBENZENE	ND
2941	CHLOROFORM		ND	2030	P-ISOPROPYLTOLUENE	ND
2943	BROMODICHLOROMETHANE		ND	2422	N-BUTYLBENZENE	ND
2944	CHLORODIBROMOMETHANE		ND	2418	1,2,4-TRIMETHYLBENZENE	ND
2942	BROMOFORM		ND	2248	NAPHTHALENE	ND
				2246	HEXACHLOROBUTADIENE	ND
				2420	1,2,3-TRICHLOROBENZENE	ND
				2228	CIS-1,3-DICHLOROPROPENE	ND
				2224	TRANS-1,3-DICHLOROPROPENE	ND

*MCL : Maximum Contaminant level
NOTE : ND indicates that the true concentration is less than the method detection limit of 0.5 µg/L.


WELL #3A/3B
4 MG/D
LEGEND
WELL LOCATION
TIME OF TRAVEL
6 MONTHS
1 YEAR
5 YEARS
10 YEARS
City of Auburn Washington
CITY OF AUBURN WELL # 3A/3B
APRIL 1994

Ground Water Contamination
Susceptibility Assessment Survey Form
Version 2.1

IMPORTANT! Please complete one form for each ground water source (well, wellfield, spring) used in your water system. Photocopy as necessary.

PART I: System Information

Well owner/manager : CITY OF AUBURN

Water system name : AUBURN WATER DIVISION

County: KING

Water system number: 03350V Source number: S05

Well depth: 310 (ft.) (*From WFI form*)

Source name: WELL 3A

WA well identification tag number: ___ ___ ___ - ___ ___ ___

X well not tagged

Number of connections: 13,000 Population served: 40,000

Township: 21N Range: 05E

Section: 30 1/4 1/4 Section: NE/SW

Latitude/longitude (if available): N 47 16' 42.71" / 122 13' 13.54"

How was lat./long. determined?

___ global positioning device X survey ___ topographic map
___other: ___

* Please refer to Assistance Packet for details and explanations of all questions in Parts II through V.

PART II: Well Construction and Source Information

1) Date well originally constructed: ___ / ___ / 83 month/day/year

last reconstruction: ___ / ___ / ___ month/day/year

___ information unavailable

2) Well driller: RICHARDSON DRILLING

___ well driller unknown

3) Type of well:

X Drilled: ___ rotary ___ bored X cable (percussion) ___ Dug

___ Other: ___ spring(s) ___ lateral collector (Ranney)

___ driven ___ jetted ___ other: _____

Additional comments: _____

4) Well report available? X YES (attach copy to form) ___ NO

If no well log is available, please attach any other records documenting well construction; e.g. boring logs, "as built" sheets, engineering reports, well reconstruction logs.

5) Average pumping rate: 1600 (gallons/min)

Source of information: WF1/DAILY LOGS/ DATA SYSTEM

If not documented, how was pumping rate determined? _____

___ Pumping rate unknown

6) Is this source treated? YES

If so, what type of treatment:

X disinfection ___ filtration ___ carbon filter ___ air stripper ___ other

Purpose of treatment (describe materials to be removed or controlled by treatment):

7) If source is chlorinated, is a chlorine residual maintained: X YES ___ NO

Residual level: 0.8 (*At the point closest to the source.*)

PART III: Hydrogeologic Information

1) Depth to top of open interval: [check one]

___ < 20 ft ___ 20-50 ft ___ 50-100 ft ___ 100-200 ft _X_ > 200 ft

___ information unavailable (*'< ' means less than; '> ' means greater than*)

2) Depth to ground water (static water level):

___ < 20 ft _X_ 20-50 ft ___ 50-100 ft ___ > 100 ft

___ flowing well/spring (artesian)

How was water level determined?

_X_ well log ___ other: _____

___ depth to ground water unknown

3) If source is a flowing well or spring, what is the confining pressure:

_____ psi (pounds per square inch)
or
_____ feet above wellhead

4) If source is a flowing well or spring, is there a surface impoundment, reservoir, or catchment associated with this source: ___ YES ___ NO

5) Wellhead elevation (height above mean sea level): 112 (ft)

How was elevation determined? ___ topographic map _X_ Drilling/Well Log ___ altimeter

___ other: _____

___ information unavailable

6) Confining layers: (This can be completed only for those sources with a drilling log, well log or geologic report describing subsurface conditions. Please refer to assistance package for example.)

_X_ evidence of a confining layer in well log

___ no evidence of a confining layer in well log

If there is evidence of a confining layer, is the depth to ground water more than 20 feet above the top of the open interval? _X_ YES ___ NO

___ information unavailable

7) Sanitary setback:

___ < 100 ft* ___ 100–120 ft _x_ 120–200 ft ___ > 200 ft
* if less than 100 ft describe the site conditions:

_____

_____

_____

_____

8) Wellhead construction:

_x_ wellhead enclosed in a wellhouse

_x_ controlled access (describe): FENCED

_____

___ other uses for wellhouse (describe): _____

_____

___ no wellhead control

9) Surface seal:

___ 18 ft

___ < 18 ft (no Department of Ecology approval) ('< ' *means less than*)

___ < 18 ft (Approved by Ecology, include documentation) ('< ' *means less than*)

_x_ > 18 ft ('> ' *means greater than*)

___ depth of seal unknown

___ no surface seal

10) Annual rainfall (inches per year):

___ < 10 in/yr ___ 10–25 in/yr _x_ > 25 in/yr

PART IV: Mapping Your Ground Water Resource

1) Annual volume of water pumped: 0 (gallons) 1993

How was this determined?

X meter

___ estimated: ___ pumping rate (_____)

___ pump capacity (_____)

___ other: _____

2) "Calculated Fixed Radius" estimate of ground water movement:
(see Instruction Packet)

6 month ground water travel time : 1595 (ft)

1 year ground water travel time : 2255 (ft)

5 year ground water travel time: 5043 (ft)

10 year ground water travel time: 7132 (ft)

Information available on length of screened/open interval?

X YES ___ NO

Length of screened/open interval: 60 (ft)

3) Is there a river, lake, pond, stream, or other obvious surface water body within the 6 month time of travel boundary? ___ YES X NO (mark and identify on map).

4) Is there a stormwater and/or wastewater facility, treatment lagoon, or holding pond located within the 6 month time of travel boundary? ___ YES X NO (mark and identify on map).

Comments: _____

_____

_____

_____

_____

PART V: Assessment of Water Quality

1) Regional sources of risk to ground water:

Please indicate if any of the following are present within a circular area around your water source having a radius up to and including the five year ground water travel time:

		6 month	1 year	5 year	unknown
likely pesticide application	RESIDENTIAL	X	X	X	
stormwater injection wells					
other injection wells					
abandoned ground water well					
landfills, dumps, disposal areas					
known hazardous materials clean-up site					
water system(s) with known quality problems					
population density > 1 house/acre		X	X	X	
residences commonly have septic tanks					
Wastewater treatment lagoons					
sites used for land application of waste					

Mark and identify on map any of the risks listed above which are located within the 6 month time of travel boundary? (*Please include a map of the wellhead and time of travel areas with this form. Please locate and mark any of the following.*)

If other recorded or potential sources of ground water contamination exist within the ten year time of travel circular zone around your water supply, please describe:

DRY CLEANERS

AUTO REPAIR — LOW POTENTIAL

SERVICE STATION

PLASTICS MANUFACTURE

SALVAGE & RECYCLING

2) Source specific water quality records:

Please indicate the occurrence of any test results since 1986 that meet the following conditions: (Unless listed on assessment, MCLs are listed in assistance package.)

A. Nitrate: (Nitrate MCL = 10 mg/l)	YES	NO
Results greater than MCL	___	X
< 2 mg/liter nitrate	X	___
2-5 mg/liter nitrate	___	X
> 5 mg/liter nitrate	___	X
___ Nitrate sampling records unavailable		

B. VOCs: (VOC detection level 0.5 ug/l or 0.0005 mg/l.)	YES	NO
Results greater than MCL or SAL	___	X
VOCs detected at least once	___	X
VOCs never detected	X	___
___ VOC sampling records unavailable		

C. EDB/DBCP:	YES	NO
(EDB MCL = 0.05 ug/l or 0.00005 mg/l. DBCP MCL = 0.2 ug/l or 0.0002 mg/l.)		
EDB/DBCP detected below MCL at least once	___	___
EDB/DBCP detected above MCL at least once	___	___
EDB/DBCP never detected	___	___
___ EDB/DBCP tests required but not yet completed		
X EDB/DBCP tests not required		

D. Other SOCs (Pesticides):	YES	NO
Other SOCs detected	___	___
(pesticides and other synthetic organic chemicals)		
___ Other SOC tests performed but none detected		
(list test methods in comments		
X Other SOC tests not performed		

If any SOCs in addition to EDB/DBCP were detected, please identify and date. If other SOC tests were performed, but no SOCs detected, list test methods here: NA

E. Bacterial contamination:

	YES	NO
Any bacterial detection(s) in the past 3 years in samples taken from the source (not distribution sampling records).	___	X
Has source (in past 3 years) had a bacteriological contamination problem found in distribution samples that was attributed to the source.	___	X

___ Source sampling records for bacteria unavailable

Part VI: Geographic or Hydrologic Factors Contributing to a Non-Circular Zone of Contribution

The following questions will help identify those ground water systems which may not be accurately represented by the calculated fixed radius (CFR) method described in Part IV. For these sources, the CFR areas should be used as a preliminary delineation of the critical time of travel zones for that source. As a system develops its Wellhead Protection Plan for theses sources, a more detailed delineation method should be considered.

1) Is there evidence of obvious hydrologic boundaries within the 10 year time of travel zone of the CFR? (Does the largest circle extend over a stream, river, lake, up a steep hillside, and/or over a mountain or ridge?)

X YES ___ NO

Describe with references to map produced in Part IV:

HIGHER TERRAIN TO EAST & WEST OF VALLEY FLOW IS SOUTH TO NORTH.

2) Aquifer Material:

A) Does the drilling log, well log or other geologic/engineering reports identify that the well is located in an area where the underground conditions are identified as fractured rock and/or basalt terrain?

___ YES X NO

B) Does the drilling log, well log or other geologic/engineering reports indicate that the well is located in an area where the underground conditions are primarily identified as coarse sand and gravel?

X YES ___ NO

3) Is the source located in an aquifer with a high horizontal flow rate? (These can include sources located on flood plains of large rivers, artesian wells with high water pressure, and/or shallow flowing wells and springs.)

___ YES ___ NO

4) Are there other high capacity wells (agricultural, municipal and/or industrial) located within the CFRs?

a) Presence of ground water extraction wells removing more than approximately 500 gal/min within...

	YES	NO	unknown
< 6 month travel time	___	X	___
6 month–1 year travel time	___	X	___
1–5 year travel time	X	___	___
5–10 year travel time	X	___	___

b) Presence of ground water recharge wells (dry wells) or heavy irrigation within...

	YES	NO	unknown
< 1 year travel time	___	X	___
1–5 year travel time	___	X	___
5–10 year travel time	___	X	___

Please identify or describe additional hydrologic or geographic conditions that you believe may affect the shape of the zone of contribution for this source. Where possible, reference them to locations on the map produced in Part IV.

AQUIFER FLOW IS FROM SOUTH TO NORTH ACCORDING TO A GROUND WATER STUDY DONE BY POOL ENGINEERING IN SEPTEMBER 1982 . HART CROUSER DID THE HYDROLOGY WORK FOR THIS STUDY.

Suggestions and Comments

Did you attend one of the susceptibility workshops? ___ YES ___ NO

Did you find it useful? ___ YES ___ NO

Did you seek outside assistance to complete the assessment? ___ YES ___ NO

This form and instruction packet are still in the process of development. Your comments, suggestions and questions will help us upgrade and improve this assessment form. If you found particular sections confusing or problematic please let us know. How could this susceptibility assessment be improved or made clearer? Did the instruction package help you find the information needed to complete the assessment? How much time did it take you to complete the form? Were you able to complete the assessment without additional/outside expertise? Do you feel the assessment was valuable as a learning experience? Any other comments or constructive criticisms you have would be appreciated.

The Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. 21/5-30L

Permit No. G1-23629P

(1) OWNER: Name City of Auburn Address 25 West Main, Abubrn WA 98002

(2) LOCATION OF WELL: County King NE ¼ SW ¼ Sec. 30 T. 21 N., R. 5 W.M.

Bearing and distance from section or subdivision corner 762' West & 267' south of center section 30

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☒
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) #3A
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☒ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 16 inches.
Drilled 394.5 ft. Depth of completed well 365 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 16" Diam. from +2.5 ft. to 255 ft.
Threaded ☐ 12" Diam. from 255 ft. to 365 ft.
Welded ☒ ____" Diam. from ____ ft. to ____ ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations ____ in. by ____ in.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.

Screens: Yes ☒ No ☐
Manufacturer's Name Johnson
Type Stainless steel PVC Model No. 304
Diam. 12" Slot size 80 from 285 ft. to 295 ft.
Diam. 12" Slot size 100 from 320 ft. to 360 ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ____ ft. to ____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal cement grout
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name Test Pump
Type: Turbon H.P. 320

(8) WATER LEVELS: Land-surface elevation above mean sea level 112 ft.
Static level 39.1 ft. below top of well Date 11-29-82
Artesian pressure ____ lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level Hart
Was a pump test made? Yes ☒ No ☐ If yes, by whom? Crowser
Yield: 1650 gal./min. with 35.87 ft. drawdown after 10 min.
" 1650 " 41.94 " 100 "
" 1650 " 49.82 " 1000 "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
0 min	52.11'	4 min	51.42'	14min	49.86'
172 min	43.32'				

Date of test 11-30-82
Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.
Artesian flow ____ g.p.m. Date
Temperature of water ____ Was a chemical analysis made? Yes ☒ No ☐

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Topsoil	0	11
Clay bound sand & gravel with cobbles	11	49
Tight brown sand, gravel little water	49	56
Sand - gravel (water)	56	91
Large gravel, fine sand	91	109
Grey silty - sandy clay	109	165
Sand - gravel, some wood little water	165	175
Green sandy - silty clay	175	182
Water bearing greenish brown clay bound sand &gravel some wood	182	188
sandy clay	188	200
Clay, pet, wood, sand & graveel	200	222
Sand & gravel, some wood	222	236
Sandy clay, small layer sand & gravel water bearing	236	251
Brown sand & gravel	251	278
Clay bound sand &greavel	278	279
Gravel, wood. layer of silty clay	279	307
Loose gravel with wood	307	309
Brown sand & gravel little layers of silt & wood	309	391
Clay bound sand & gravel	391	394

Work started 9-25, 19 82 Completed 12-1-, 1982

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Armstrong Drilling, Inc.
(Person, firm, or corporation) (Type or print)

Address 10715 - 66th Ave. E.

[Signed] John E. Armstrong (Well Driller)

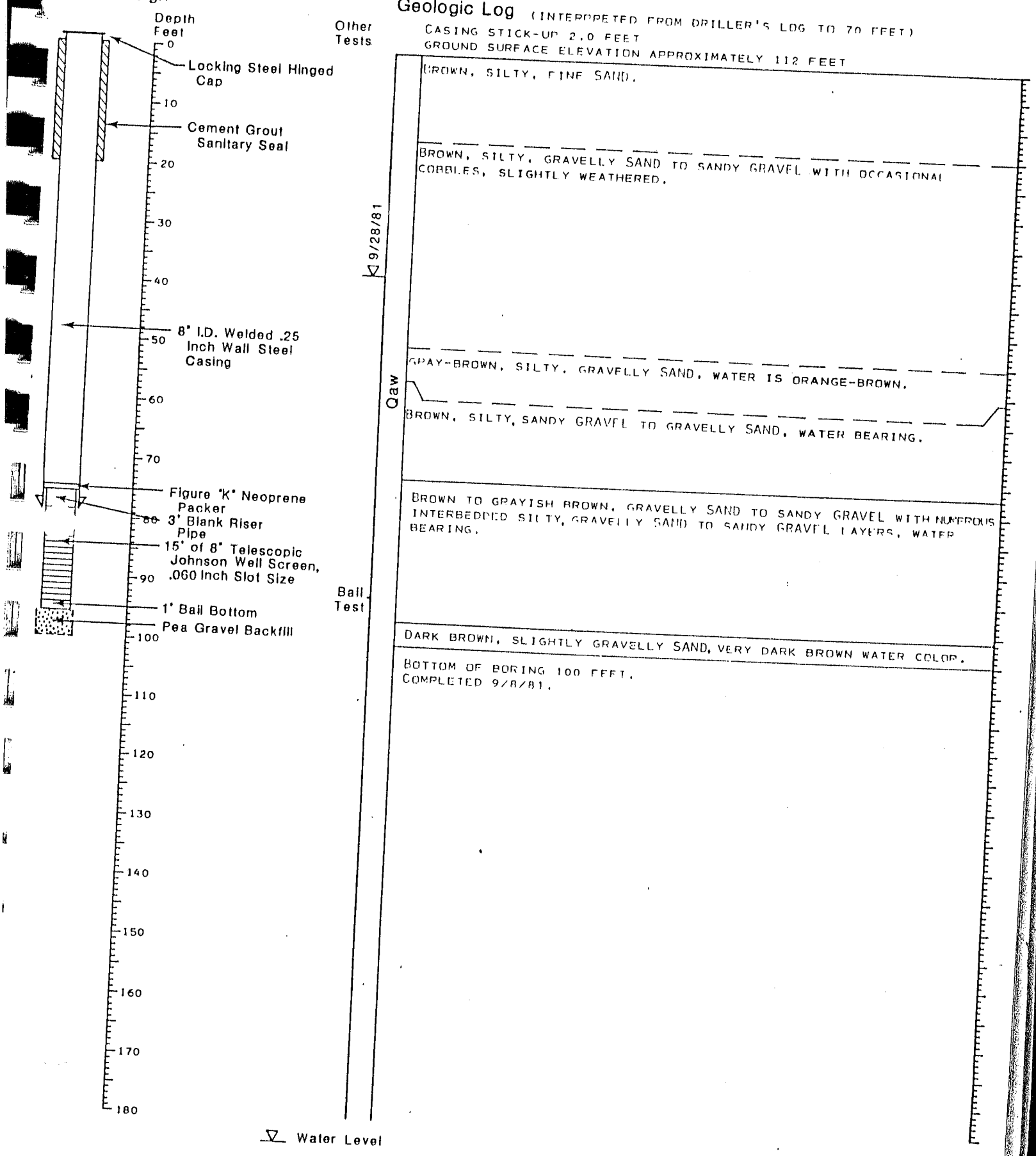
License No. 0012 Date 12-22, 1982

Note: This is first of two wells planned for construction at this location.

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7336—OS—(Rev. 4-71).

Well Boring and Construction Information T-3B Test Site #3



J-1004 November 1981
HART-CROWSER & associates inc.
Figure A-1

Ground Water Contamination
Susceptibility Assessment Survey Form
Version 2.1

IMPORTANT! Please complete one form for each ground water source (well, wellfield, spring) used in your water system. Photocopy as necessary.

PART I: System Information

Well owner/manager : CITY OF AUBURN

Water system name : AUBURN WATER DIVISION

County: KING

Water system number: 03350V Source number: S02

Well depth: 310 (ft.) (*From WFI form*)

Source name: WELL 3 B

WA well identification tag number:___ ___ ___-___ ___ ___

___X___ well not tagged

Number of connections: 13,000 Population served: 40,000

Township: 21N Range: 055

Section: 30 1/4 1/4 Section: NE/ SW

Latitude/longitude (if available): N 47 16' 42.71" / W 122 13' 13.54"

How was lat./long. determined?

_____ global positioning device ___X___ survey _____ topographic map
____other: _____

* Please refer to Assistance Packet for details and explanations of all questions in Parts II through V.

PART II: Well Construction and Source Information

1) Date well originally constructed: ___ / ___ /83 month/day/year

last reconstruction: ___ / ___ /___ month/day/year

_____ information unavailable

2) Well driller: RICHARDSON WELL DRILLING

___ well driller unknown

3) Type of well:

X Drilled: ___ rotary ___ bored X cable (percussion) ___ Dug

___ Other: ___ spring(s) ___ lateral collector (Ranney)

___ driven ___ jetted ___ other: _____

Additional comments: _____

4) Well report available? ___ YES (attach copy to form) ___ NO SEE WELL LOG 3A DRILLED 50FT APART

If no well log is available, please attach any other records documenting well construction; e.g. boring logs, "as built" sheets, engineering reports, well reconstruction logs.

5) Average pumping rate: 1500 (gallons/min)

Source of information: WF1/ DAILY LOGS/DATA ACQUISITION SYSTEM

If not documented, how was pumping rate determined? _____

___ Pumping rate unknown

6) Is this source treated? YES

If so, what type of treatment:

X disinfection ___ filtration ___ carbon filter ___ air stripper ___ other

Purpose of treatment (describe materials to be removed or controlled by treatment):

7) If source is chlorinated, is a chlorine residual maintained: X YES ___ NO

Residual level: 0.8 (*At the point closest to the source.*)

PART III: Hydrogeologic Information

1) Depth to top of open interval: [check one]

___ < 20 ft ___ 20–50 ft ___ 50–100 ft ___ 100–200 ft _X_ >200 ft

___ information unavailable (*'< ' means less than; '> ' means greater than*)

2) Depth to ground water (static water level):

___ < 20 ft _X_ 20–50 ft ___ 50–100 ft ___ >100 ft

___ flowing well/spring (artesian)

How was water level determined?

_X_ well log ___ other: _____

___ depth to ground water unknown

3) If source is a flowing well or spring, what is the confining pressure:

_____ psi (pounds per square inch)
or
_____ feet above wellhead

4) If source is a flowing well or spring, is there a surface impoundment, reservoir, or catchment associated with this source: ___ YES ___ NO

5) Wellhead elevation (height above mean sea level): _112_ (ft)

How was elevation determined? _X_ topographic map _X_ Drilling/Well Log ___ altimeter

___ other: _____

___ information unavailable

6) Confining layers: (This can be completed only for those sources with a drilling log, well log or geologic report describing subsurface conditions. Please refer to assistance package for example.)

_X_ evidence of a confining layer in well log

___ no evidence of a confining layer in well log

If there is evidence of a confining layer, is the depth to ground water more than 20 feet above the top of the open interval? _X_ YES ___ NO

___ information unavailable

7) Sanitary setback:

___ < 100 ft* ___ 100–120 ft _x_ 120–200 ft ___ > 200 ft
* if less than 100 ft describe the site conditions:

_____

_____

_____

_____

8) Wellhead construction:

_x_ wellhead enclosed in a wellhouse

_x_ controlled access (describe): _____

_____

___ other uses for wellhouse (describe): _____

_____

___ no wellhead control

9) Surface seal:

___ 18 ft

___ < 18 ft (no Department of Ecology approval) (*'<' means less than*)

___ < 18 ft (Approved by Ecology, include documentation) (*'<' means less than*)

_x_ > 18 ft (*'>' means greater than*)

___ depth of seal unknown

___ no surface seal

10) Annual rainfall (inches per year):

___ < 10 in/yr ___ 10–25 in/yr _x_ > 25 in/yr

PART IV: Mapping Your Ground Water Resource

1) Annual volume of water pumped: 866,000 (gallons) 1993

How was this determined?

X meter

___ estimated: ___ pumping rate (_____)

___ pump capacity (_____)

___ other: _____

2) "Calculated Fixed Radius" estimate of ground water movement:
(see Instruction Packet)

6 month ground water travel time : 1595 (ft)

1 year ground water travel time : 2255 (ft)

5 year ground water travel time: 5043 (ft)

10 year ground water travel time: 7132 (ft)

Information available on length of screened/open interval?

X YES ___ NO

Length of screened/open interval: _____(ft)

3) Is there a river, lake, pond, stream, or other obvious surface water body within the 6 month time of travel boundary? ___ YES X NO (mark and identify on map).

4) Is there a stormwater and/or wastewater facility, treatment lagoon, or holding pond located within the 6 month time of travel boundary? ___ YES X NO (mark and identify on map).

Comments: _____

_____

_____

_____

_____

PART V: Assessment of Water Quality

1) Regional sources of risk to ground water:

Please indicate if any of the following are present within a circular area around your water source having a radius up to and including the five year ground water travel time:

	6 month	1 year	5 year	unknown
likely pesticide application RESIDENTIAL	X	X	X	
stormwater injection wells				
other injection wells				
abandoned ground water well				
landfills, dumps, disposal areas				
known hazardous materials clean-up site				
water system(s) with known quality problems				
population density > 1 house/acre	X	X	X	
residences commonly have septic tanks				
Wastewater treatment lagoons				
sites used for land application of waste				

Mark and identify on map any of the risks listed above which are located within the 6 month time of travel boundary? (*Please include a map of the wellhead and time of travel areas with this form. Please locate and mark any of the following.*)

If other recorded or potential sources of ground water contamination exist within the ten year time of travel circular zone around your water supply, please describe:

DRY CLEANERS

AUTO REPAIR

SERVICE STATION LOW POTENTIAL

PLASTICS MANUFACTURE

HOSE MAT

SALVAGE & RECYCLING

2) Source specific water quality records:

Please indicate the occurrence of any test results since 1986 that meet the following conditions: (Unless listed on assessment, MCLs are listed in assistance package.)

A. Nitrate: (Nitrate MCL = 10 mg/l)	YES	NO
Results greater than MCL	___	x
< 2 mg/liter nitrate	x	___
2-5 mg/liter nitrate	___	x
> 5 mg/liter nitrate	___	x
___ Nitrate sampling records unavailable		

B. VOCs: (VOC detection level 0.5 ug/l or 0.0005 mg/l.)	YES	NO
Results greater than MCL or SAL	___	x
VOCs detected at least once	___	x
VOCs never detected	x	___
___ VOC sampling records unavailable		

C. EDB/DBCP:	YES	NO
(EDB MCL = 0.05 ug/l or 0.00005 mg/l. DBCP MCL = 0.2 ug/l or 0.0002 mg/l.)		
EDB/DBCP detected below MCL at least once	___	___
EDB/DBCP detected above MCL at least once	___	___
EDB/DBCP never detected	___	___
___ EDB/DBCP tests required but not yet completed		
x EDB/DBCP tests not required		

D. Other SOCs (Pesticides):	YES	NO
Other SOCs detected	___	___
(pesticides and other synthetic organic chemicals)		
___ Other SOC tests performed but none detected (list test methods in comments		
x Other SOC tests not performed		

If any SOCs in addition to EDB/DBCP were detected, please identify and date. If other SOC tests were performed, but no SOCs detected, list test methods here: _____

_____

_____

_____

E. Bacterial contamination:

	YES	NO
Any bacterial detection(s) in the past 3 years in samples taken from the source (not distribution sampling records).	___	X
Has source (in past 3 years) had a bacteriological contamination problem found in distribution samples that was attributed to the source.	___	X

___ Source sampling records for bacteria unavailable

Part VI: Geographic or Hydrologic Factors Contributing to a Non-Circular Zone of Contribution

The following questions will help identify those ground water systems which may not be accurately represented by the calculated fixed radius (CFR) method described in Part IV. For these sources, the CFR areas should be used as a preliminary delineation of the critical time of travel zones for that source. As a system develops its Wellhead Protection Plan for theses sources, a more detailed delineation method should be considered.

1) Is there evidence of obvious hydrologic boundaries within the 10 year time of travel zone of the CFR? (Does the largest circle extend over a stream, river, lake, up a steep hillside, and/or over a mountain or ridge?)

X YES ___ NO

Describe with references to map produced in Part IV:

HIGHER TERRAIN TO EAST & WEST OF VALLEY FLOW IS SOUTH TO NORTH UP VALLEY.

2) Aquifer Material:

A) Does the drilling log, well log or other geologic/engineering reports identify that the well is located in an area where the underground conditions are identified as fractured rock and/or basalt terrain?

___ YES X NO

B) Does the drilling log, well log or other geologic/engineering reports indicate that the well is located in an area where the underground conditions are primarily identified as coarse sand and gravel?

X YES ___ NO

3) Is the source located in an aquifer with a high horizontal flow rate? (These can include sources located on flood plains of large rivers, artesian wells with high water pressure, and/or shallow flowing wells and springs.)

___ YES ___ NO

4) Are there other high capacity wells (agricultural, municipal and/or industrial) located within the CFRs?

a) Presence of ground water extraction wells removing more than approximately 500 gal/min within...

	YES	NO	unknown
< 6 month travel time	___	X	___
6 month–1 year travel time	___	X	___
1–5 year travel time	X	___	___
5–10 year travel time	X	___	___

b) Presence of ground water recharge wells (dry wells) or heavy irrigation within...

	YES	NO	unknown
< 1 year travel time	___	X	___
1–5 year travel time	___	X	___
5–10 year travel time	___	X	___

Please identify or describe additional hydrologic or geographic conditions that you believe may affect the shape of the zone of contribution for this source. Where possible, reference them to locations on the map produced in Part IV.

AQUIFER FLOW IS FROM SOUTH TO NORTH ACCORDING TO A GROUND WATER STUDY BY POOL ENGINEERING, INC. IN SEPTEMBER 1982. HART CROUSER DID THE HYDROLOGICAL STUDY FOR THIS REPORT.

Suggestions and Comments

Did you attend one of the susceptibility workshops? ___ YES _X_ NO

Did you find it useful? ___ YES ___ NO

Did you seek outside assistance to complete the assessment? ___ YES _X_ NO

This form and instruction packet are still in the process of development. Your comments, suggestions and questions will help us upgrade and improve this assessment form. If you found particular sections confusing or problematic please let us know. How could this susceptibility assessment be improved or made clearer? Did the instruction package help you find the information needed to complete the assessment? How much time did it take you to complete the form? Were you able to complete the assessment without additional/outside expertise? Do you feel the assessment was valuable as a learning experience? Any other comments or constructive criticisms you have would be appreciated.

d First Copy with
Ecology
— Owner's Copy
Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON well 3A

Application No G1-23629

Permit No G1-23628P

OWNER: Name City of Auburn Address 25 West Main, Abuburn WA 98002

LOCATION OF WELL: County King NE ¼ SW ¼ Sec 30 T. 21 N., R. 5 W.M.

ng and distance from section or subdivision corner 762' West & 267' south of center section 30

PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☒
Irrigation ☐ Test Well ☐ Other ☐

TYPE OF WORK: Owner's number of well (If more than one) #3A
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☒ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

DIMENSIONS: Diameter of well 16 inches.
Drilled 394.5 ft. Depth of completed well 365 ft.

CONSTRUCTION DETAILS:

Casing installed: 16 " Diam. from +2.5 ft. to 255 ft.
Threaded ☐ 12 " Diam. from 255 ft. to 365 ft.
Welded ☒ ____ " Diam. from ____ ft. to ____ ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations ____ in. by ____ in.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.

Screens: Yes ☒ No ☐
Manufacturer's Name Johnson
Type Stainless steel Pipe Model No. 304
Diam. 12" Slot size 80 from 285 ft. to 295 ft.
Diam. 12" Slot size 100 from 320 ft. to 360 ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ____ ft. to ____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal cement grout
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

PUMP: Manufacturer's Name Test Pump
Type: Turbon H.P. 320

WATER LEVELS: Land-surface elevation above mean sea level 112 ft.
level 39.1 ft. below top of well Date 11-29-82
ian pressure ____ lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

WELL TESTS: Drawdown is amount water lowered below static level Hart
a pump test made? Yes ☒ No ☐ If yes, by whom? Crowser
d: 1650 gal./min. with 35.87 ft. drawdown after 10 min
1650 " 41.94 " 100 "
1650 " 49.82 " 1000 "

very data (time taken as zero when pump turned off) (water level
mea d from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
In	52.11'	4 min	51.42'	14min	49.86'
nin	43.32'				

Date of test 11-30-82
er test ____ gal./min. with ____ ft. drawdown after ____ hrs.
sian flow ____ g.p.m. Date
perature of water ____ Was a chemical analysis made? Yes ☒ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Topsoil	0	11
Clay bound sand & gravel with cobbles	11	49
Tight brown sand, gravel little water	49	56
Sand - gravel (water)	56	91
Large gravel, fine sand	91	109
Grey silty - sandy clay	109	165
Sand - gravel, some wood little water	165	175
Green sandy - silty clay	175	182
Water bearing greenish brown clay boundsand &gravel some wood	182	188
sandy clay	188	200
Clay, pet, wood, sand & graveel	200	222
Sand & gravel, some wood	222	236
Sandy clay, small layer sand & gravel water bearing	236	251
Brown sand & gravel	251	278
Clay bound sand &greavel	278	279
Gravel, wood, layer of silty clay	279	307
Loose gravel with wood	307	309
Brown sand & gravel little layers of silt & wood	309	391
Clay bound sand & gravel	391	394

Work started 9-25, 19 82 Completed 12-1-, 19 82

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

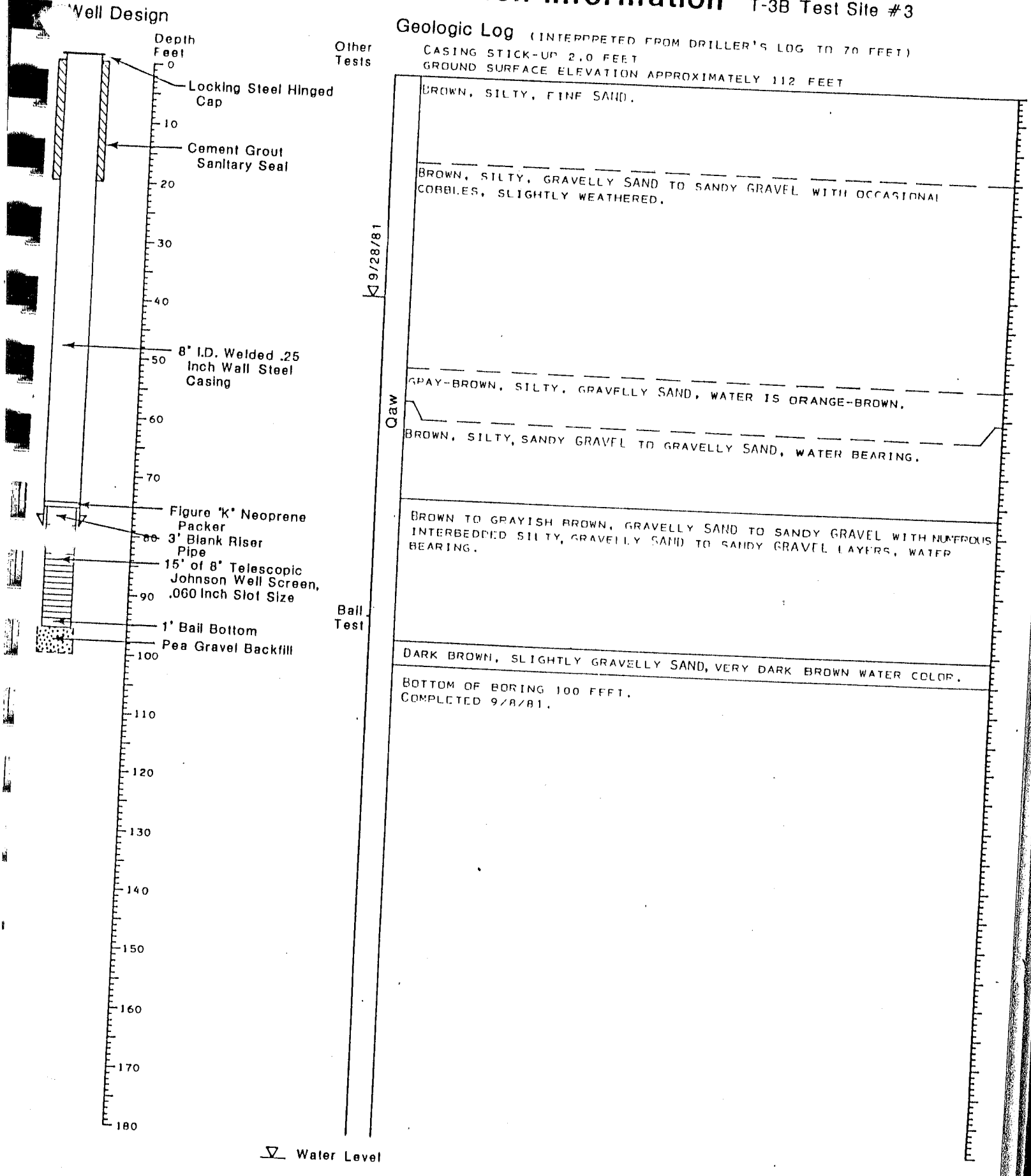
NAME Armstrong Drilling, Inc.
(Person, firm, or corporation) (Type or print)

Address 10715 - 66th Ave. E.

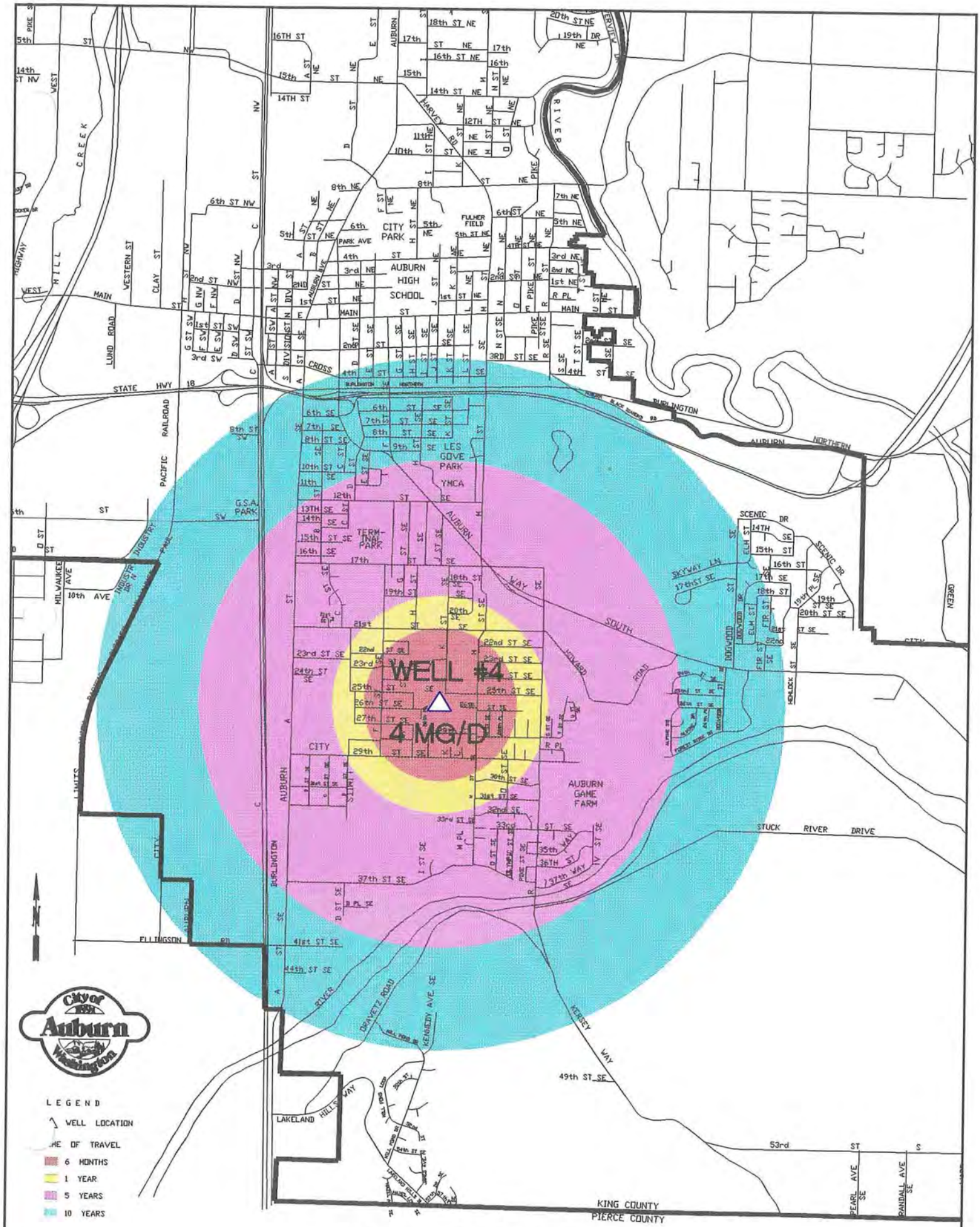
[Signed] John E. Armstrong
(Well Driller)

License No. 0012 Date 12-22, 1982

Well Boring and Construction Information T-3B Test Site #3



J-1004 November 1981
HART-CROWSER & associates inc.
Figure A-1



CITY OF AUBURN WELL # 4

APRIL 1994

Ground Water Contamination
Susceptibility Assessment Survey Form
Version 2.1

IMPORTANT! Please complete one form for each ground water source (well, wellfield, spring) used in your water system. Photocopy as necessary.

PART I: System Information

Well owner/manager : CITY OF AUBURN

Water system name : AUBURN WATER DIVISION

County: KING

Water system number: 03359V Source number: S07

Well depth: 320 (ft.) (*From WFI form*)

Source name: WELL #4

WA well identification tag number: ___ ___ ___-___ ___ ___

X well not tagged

Number of connections: 13,000 Population served: 40,000

Township: 21N Range: 05E

Section: 30 1/4 1/4 Section: NW/NE

Latitude/longitude (if available): N 47 17' 9.84" / W 122 12' 54.80"

How was lat./long. determined?

_____ global positioning device X survey _____ topographic map
____other: _____

* Please refer to Assistance Packet for details and explanations of all questions in Parts II through V.

PART II: Well Construction and Source Information

1) Date well originally constructed: 12 / ___ /83 month/day/year

last reconstruction: 04 / ___ /84 month/day/year

_____ information unavailable

2) Well driller: RICHARDSON WELL DRILLING

___ well driller unknown

3) Type of well:

X Drilled: ___ rotary ___ bored X cable (percussion) ___ Dug

___ Other: ___ spring(s) ___ lateral collector (Ranney)

___ driven ___ jetted ___ other: _____

Additional comments: _____

4) Well report available? X YES (attach copy to form) ___ NO

If no well log is available, please attach any other records documenting well construction; e.g. boring logs, "as built" sheets, engineering reports, well reconstruction logs.

5) Average pumping rate: 3000 (gallons/min)

Source of information: WF1/DAILY LOGS/DATA SYSTEM

If not documented, how was pumping rate determined? _____

___ Pumping rate unknown

6) Is this source treated? NO

If so, what type of treatment:

___ disinfection ___ filtration ___ carbon filter ___ air stripper ___ other

Purpose of treatment (describe materials to be removed or controlled by treatment):

7) If source is chlorinated, is a chlorine residual maintained: ___ YES ___ NO NA

Residual level: _____ (*At the point closest to the source.*)

PART III: Hydrogeologic Information

1) Depth to top of open interval: [check one]

___ < 20 ft ___ 20-50 ft ___ 50-100 ft ___ 100-200 ft _X_ >200 ft

___ information unavailable (*'< ' means less than; '> ' means greater than*)

2) Depth to ground water (static water level):

___ < 20 ft _X_ 20-50 ft ___ 50-100 ft ___ >100 ft

___ flowing well/spring (artesian)

How was water level determined?

_X_ well log ___ other: _____

__ depth to ground water unknown

3) If source is a flowing well or spring, what is the confining pressure: NA

_____ psi (pounds per square inch)
or
_____ feet above wellhead

4) If source is a flowing well or spring, is there a surface impoundment, reservoir, or catchment associated with this source: ___ YES ___ NO NA

5) Wellhead elevation (height above mean sea level): 119 (ft)

How was elevation determined? ___ topographic map _X_ Drilling/Well Log ___ altimeter

___ other: _____

___ information unavailable

6) Confining layers: (This can be completed only for those sources with a drilling log, well log or geologic report describing subsurface conditions. Please refer to assistance package for example.)

_X_ evidence of a confining layer in well log

___ no evidence of a confining layer in well log

If there is evidence of a confining layer, is the depth to ground water more than 20 feet above the top of the open interval? _X_ YES ___ NO

___ information unavailable

7) Sanitary setback:

___ < 100 ft* ___ 100–120 ft X 120–200 ft ___ > 200 ft
* if less than 100 ft describe the site conditions:

8) Wellhead construction:

X wellhead enclosed in a wellhouse

X controlled access (describe): FENCED

___ other uses for wellhouse (describe): NONE

___ no wellhead control

9) Surface seal:

___ 18 ft

___ < 18 ft (no Department of Ecology approval) (*'<' means less than*)

___ < 18 ft (Approved by Ecology, include documentation) (*'<' means less than*)

X > 18 ft (*'>' means greater than*)

___ depth of seal unknown

___ no surface seal

10) Annual rainfall (inches per year):

___ < 10 in/yr ___ 10–25 in/yr X > 25 in/yr

PART IV: Mapping Your Ground Water Resource

1) Annual volume of water pumped: 322,171,000 (gallons)

How was this determined?

X meter

___ estimated: ___ pumping rate (_____)

___ pump capacity (_____)

___ other: _____

2) "Calculated Fixed Radius" estimate of ground water movement:
(see Instruction Packet)

6 month ground water travel time : 1595 (ft)

1 year ground water travel time : 2250 (ft)

5 year ground water travel time: 5043 (ft)

10 year ground water travel time: 7132 (ft)

Information available on length of screened/open interval?

X YES ___ NO

Length of screened/open interval: _____(ft)

3) Is there a river, lake, pond, stream, or other obvious surface water body within the 6 month time of travel boundary? ___ YES X NO (mark and identify on map).

4) Is there a stormwater and/or wastewater facility, treatment lagoon, or holding pond located within the 6 month time of travel boundary? ___ YES X NO (mark and identify on map).

Comments: _____

_____

_____

_____

_____

PART V: Assessment of Water Quality

1) Regional sources of risk to ground water:

Please indicate if any of the following are present within a circular area around your water source having a radius up to and including the five year ground water travel time:

	6 month	1 year	5 year	unknown
likely pesticide application RESIDENTIAL	X	X	X	
stormwater injection wells				
other injection wells				
abandoned ground water well			X	
landfills, dumps, disposal areas				
known hazardous materials clean-up site				
water system(s) with known quality problems				
population density > 1 house/acre	X	X	X	
residences commonly have septic tanks				
Wastewater treatment lagoons				
sites used for land application of waste				

Mark and identify on map any of the risks listed above which are located within the 6 month time of travel boundary? (*Please include a map of the wellhead and time of travel areas with this form. Please locate and mark any of the following.*)

If other recorded or potential sources of ground water contamination exist within the ten year time of travel circular zone around your water supply, please describe:

DRY CLEANERS

SEVERAL HAZ MAT LOW POTENTIAL

2) Source specific water quality records:

Please indicate the occurrence of any test results since 1986 that meet the following conditions: (Unless listed on assessment, MCLs are listed in assistance package.)

A. Nitrate: (Nitrate MCL = 10 mg/l)	YES	NO
Results greater than MCL	___	x
< 2 mg/liter nitrate	x	___
2-5 mg/liter nitrate	___	x
> 5 mg/liter nitrate	___	x
___ Nitrate sampling records unavailable		

B. VOCs: (VOC detection level 0.5 ug/l or 0.0005 mg/l.)	YES	NO
Results greater than MCL or SAL	___	x
VOCs detected at least once	___	x
VOCs never detected	x	___
___ VOC sampling records unavailable		

C. EDB/DBCP:	YES	NO
(EDB MCL = 0.05 ug/l or 0.00005 mg/l. DBCP MCL = 0.2 ug/l or 0.0002 mg/l.)		
EDB/DBCP detected below MCL at least once	___	___
EDB/DBCP detected above MCL at least once	___	___
EDB/DBCP never detected	___	___
___ EDB/DBCP tests required but not yet completed		
x EDB/DBCP tests not required		

D. Other SOCs (Pesticides):	YES	NO
Other SOCs detected	___	___
(pesticides and other synthetic organic chemicals)		
___ Other SOC tests performed but none detected		
(list test methods in comments		
x Other SOC tests not performed		

If any SOCs in addition to EDB/DBCP were detected, please identify and date. If other SOC tests were performed, but no SOCs detected, list test methods here: _____

_____

_____

_____

E. Bacterial contamination:

	YES	NO
Any bacterial detection(s) in the past 3 years in samples taken from the source (not distribution sampling records).	___	x
Has source (in past 3 years) had a bacteriological contamination problem found in distribution samples that was attributed to the source.	___	x

___ Source sampling records for bacteria unavailable

Part VI: Geographic or Hydrologic Factors Contributing to a Non-Circular Zone of Contribution

The following questions will help identify those ground water systems which may not be accurately represented by the calculated fixed radius (CFR) method described in Part IV. For these sources, the CFR areas should be used as a preliminary delineation of the critical time of travel zones for that source. As a system develops its Wellhead Protection Plan for theses sources, a more detailed delineation method should be considered.

1) Is there evidence of obvious hydrologic boundaries within the 10 year time of travel zone of the CFR? (Does the largest circle extend over a stream, river, lake, up a steep hillside, and/or over a mountain or ridge?)

_x_ YES ___ NO

Describe with references to map produced in Part IV:

HIGHER ELEVATION WEST & EAST OF VALLEY HYDROLIC STUDY INDICATES FLOW SOUTH TO NORTH UP VALLEY OF GROUNDWATER.

2) Aquifer Material:

A) Does the drilling log, well log or other geologic/engineering reports identify that the well is located in an area where the underground conditions are identified as fractured rock and/or basalt terrain?

___ YES _x_ NO

B) Does the drilling log, well log or other geologic/engineering reports indicate that the well is located in an area where the underground conditions are primarily identified as coarse sand and gravel?

_x_ YES ___ NO

3) Is the source located in an aquifer with a high horizontal flow rate? (These can include sources located on flood plains of large rivers, artesian wells with high water pressure, and/or shallow flowing wells and springs.)

___ YES _X_ NO

4) Are there other high capacity wells (agricultural, municipal and/or industrial) located within the CFRs?

a) Presence of ground water extraction wells removing more than approximately 500 gal/min within...

	YES	NO	unknown
< 6 month travel time	___	X	___
6 month–1 year travel time	___	X	___
1–5 year travel time	X	___	___
5–10 year travel time	X	___	___

b) Presence of ground water recharge wells (dry wells) or heavy irrigation within...

	YES	NO	unknown	
< 1 year travel time	X	___	___	AT SITE
1–5 year travel time	___	X	___	
5–10 year travel time	___	X	___	

Please identify or describe additional hydrologic or geographic conditions that you believe may affect the shape of the zone of contribution for this source. Where possible, reference them to locations on the map produced in Part IV.

AQUIFER FLOW IS FROM SOUTH TO NORTH ACCORDING TO A GROUND WATER STUDY DONE BY POOL ENGINEERING, INC. IN SEPTEMBER 1982. HART CROUSER DID THE HYDROLOGY WORK FOR THIS STUDY.

Suggestions and Comments

Did you attend one of the susceptibility workshops? ___ YES _x_ NO

Did you find it useful? ___ YES ___ NO

Did you seek outside assistance to complete the assessment? ___ YES _x_ NO

This form and instruction packet are still in the process of development. Your comments, suggestions and questions will help us upgrade and improve this assessment form. If you found particular sections confusing or problematic please let us know. How could this susceptibility assessment be improved or made clearer? Did the instruction package help you find the information needed to complete the assessment? How much time did it take you to complete the form? Were you able to complete the assessment without additional/outside expertise? Do you feel the assessment was valuable as a learning experience? Any other comments or constructive criticisms you have would be appreciated.

Well 4

Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON Well #4

Application No. G1-23629

Permit No. G1-23628P

(1) OWNER: Name City of Auburn Address 25 West Main, Abubrn WA 98002

(2) LOCATION OF WELL: County King NE ¼ SW ¼ Sec. 30 T. 21 N., R. 5 W.

Bearing and distance from section or subdivision corner 762' West & 267' south of center section 30

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☒
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) #4
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☒ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 16 inches.
Drilled 394.5 ft. Depth of completed well 365 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 16" Diam. from ±2.5 ft. to 255 ft.
Threaded ☐ 12" Diam. from 255 ft. to 365 ft.
Welded ☒ ____" Diam. from ____ ft. to ____ ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations ____ in. by ____ in.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.

Screens: Yes ☒ No ☐
Manufacturer's Name Johnson
Type Stainless steel Pipe Size Model No. 304
Diam. 12" Slot size 80 from 285 ft. to 295 ft.
Diam. 12" Slot size 100 from 320 ft. to 360 ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ____ ft. to ____ ft.

Surface seal: Yes ☒ No ☐ To what depth? 20 ft.
Material used in seal cement grout
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name Test Pump
Type: Turbon H.P. 320

(8) WATER LEVELS: Land-surface elevation above mean sea level 112 ft.
Static level 39.1 ft. below top of well Date 11-29-82
Artesian pressure ____ lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water lowered below static level
Was a pump test made? Yes ☒ No ☐ If yes, by whom? Crowser
Yield: 1650 gal./min. with 35.87 ft. drawdown after 10 min.
" 1650 " 41.94 " 100 "
" 1650 " 49.82 " 1000 "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
1 min	52.11'	4 min	51.42'	14min	49.86'
2 min	43.32'				

Date of test 11-30-82
Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.
Artesian flow ____ g.p.m. Date
Temperature of water ____ Was a chemical analysis made? Yes ☒ No ☐

Note: This is first of two wells planned for

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation

MATERIAL	FROM	TO
Topsoil	0	11
Clay bound sand & gravel with cobbles	11	49
Tight brown sand, gravel little water	49	56
Sand - gravel (water)	56	91
Large gravel, fine sand	91	109
Grey silty - sandy clay	109	165
Sand - gravel, some wood little water	165	175
Green sandy - silty clay	175	182
Water bearing greenish brown clay bound sand & gravel some wood	182	188
sandy clay	188	200
Clay, pet, wood, sand & gravel	200	22
Sand & gravel, some wood	222	236
Sandy clay, small layer sand & gravel water bearing	236	251
Brown sand & gravel	251	278
Clay bound sand & gravel	278	279
Gravel, wood, layer of silty clay	279	307
Loose gravel with wood	307	309
Brown sand & gravel little layers of silt & wood	309	391
Clay bound sand & gravel	391	394

Work started 9-25 19 82 Completed 12-1- 19 82

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Armstrong Drilling Inc.
(Person, firm, or corporation) (Type or print)

Address 10715 - 66th Ave. E.

[Signed] John E. Armstrong (Well Driller)

License No. 0012 Date 12-22 19 82

Ground Water Contamination
Susceptibility Assessment Survey Form
Version 2.1

IMPORTANT! Please complete one form for each ground water source (well, wellfield, spring) used in your water system. Photocopy as necessary.

PART I: System Information

Well owner/manager : CITY OF AUBURN

Water system name : AUBURN WATER DIVISION

County: KING

Water system number: 03350V Source number: S06

Well depth: 325 (ft.) (*From WFI form*)

Source name: WELL #5

WA well identification tag number: ___ ___ ___-___ ___ ___

X well not tagged

Number of connections: 13,000 Population served: 40,000

Township: 21N Range: 05E

Section: 31 1/4 1/4 Section: SW/SE

Latitude/longitude (if available): N 47 15' 30.81" / W 122 12' 54.44"

How was lat./long. determined?

_____ global positioning device X survey _____ topographic map
____other: _____

* Please refer to Assistance Packet for details and explanations of all questions in Parts II through V.

PART II: Well Construction and Source Information

1) Date well originally constructed: 04 / 19 / 90 month/day/year

last reconstruction: ___ / ___ /___ month/day/year

_____ information unavailable

2) Well driller: RICHARDSONS DRILLING

___ well driller unknown

3) Type of well:

X Drilled: X rotary ___ bored ___ cable (percussion) ___ Dug

___ Other: ___ spring(s) ___ lateral collector (Ranney)

___ driven ___ jetted ___ other: _____

Additional comments: _____

4) Well report available? X YES (attach copy to form) ___ NO

If no well log is available, please attach any other records documenting well construction; e.g. boring logs, "as built" sheets, engineering reports, well reconstruction logs.

5) Average pumping rate: 1000 (gallons/min)

Source of information: WF1/DAILY LOGS/MONTHLY REPORTS

If not documented, how was pumping rate determined? _____

___ Pumping rate unknown

6) Is this source treated? NO

If so, what type of treatment:

___ disinfection ___ filtration ___ carbon filter ___ air stripper ___ other

Purpose of treatment (describe materials to be removed or controlled by treatment):

7) If source is chlorinated, is a chlorine residual maintained: ___ YES ___ NO NA

Residual level: _____ (*At the point closest to the source.*)

PART III: Hydrogeologic Information

1) Depth to top of open interval: [check one]

___ < 20 ft ___ 20–50 ft ___ 50–100 ft ___ 100–200 ft __x__ >200 ft

___ information unavailable (*'< ' means less than; '> ' means greater than*)

2) Depth to ground water (static water level):

___ < 20 ft ___ 20–50 ft ___ 50–100 ft __x__ >100 ft

___ flowing well/spring (artesian)

How was water level determined?

__x__ well log ___ other: _____

___ depth to ground water unknown

3) If source is a flowing well or spring, what is the confining pressure:

_____ psi (pounds per square inch)
or
_____ feet above wellhead

4) If source is a flowing well or spring, is there a surface impoundment, reservoir, or catchment associated with this source: ___ YES ___ NO

5) Wellhead elevation (height above mean sea level): 495.5 (ft)

How was elevation determined? __x__ topographic map ___ Drilling/Well Log ___ altimeter

___ other: _____

___ information unavailable

6) Confining layers: (This can be completed only for those sources with a drilling log, well log or geologic report describing subsurface conditions. Please refer to assistance package for example.)

__x__ evidence of a confining layer in well log

___ no evidence of a confining layer in well log

If there is evidence of a confining layer, is the depth to ground water more than 20 feet above the top of the open interval? __x__ YES ___ NO

___ information unavailable

7) Sanitary setback:

___ < 100 ft* _x_ 100–120 ft ___ 120–200 ft ___ > 200 ft
* if less than 100 ft describe the site conditions:

_____

_____

_____

_____

8) Wellhead construction:

_x_ wellhead enclosed in a wellhouse

_x_ controlled access (describe): FENCED

_____

___ other uses for wellhouse (describe): _____

_____

___ no wellhead control

9) Surface seal:

___ 18 ft

___ < 18 ft (no Department of Ecology approval) ('< ' *means less than*)

___ < 18 ft (Approved by Ecology, include documentation) ('< ' *means less than*)

_x_ > 18 ft ('> ' *means greater than*)

___ depth of seal unknown

___ no surface seal

10) Annual rainfall (inches per year):

___ < 10 in/yr ___ 10-25 in/yr _x_ > 25 in/yr

PART IV: Mapping Your Ground Water Resource

1) Annual volume of water pumped: 31,934,000 (gallons)

How was this determined?

X meter

___ estimated: ___ pumping rate (_____)

___ pump capacity (_____)

___ other: _____

2) "Calculated Fixed Radius" estimate of ground water movement:
(see Instruction Packet)

6 month ground water travel time : 1200 (ft)

1 year ground water travel time : 1698 (ft)

5 year ground water travel time: 3796 (ft)

10 year ground water travel time: 5368 (ft)

Information available on length of screened/open interval?

X YES ___ NO

Length of screened/open interval: 30 (ft)

3) Is there a river, lake, pond, stream, or other obvious surface water body within the 6 month time of travel boundary? ___ YES X NO (mark and identify on map).

4) Is there a stormwater and/or wastewater facility, treatment lagoon, or holding pond located within the 6 month time of travel boundary? ___ YES X NO (mark and identify on map).

Comments: _____

_____

_____

_____

_____

PART V: Assessment of Water Quality

1) Regional sources of risk to ground water:

Please indicate if any of the following are present within a circular area around your water source having a radius up to and including the five year ground water travel time:

	6 month	1 year	5 year	unknown
likely pesticide application RESIDENTIAL	X	X	X	
stormwater injection wells				
other injection wells				
abandoned ground water well				
landfills, dumps, disposal areas				
known hazardous materials clean-up site				
water system(s) with known quality problems				
population density > 1 house/acre	X	X	X	
residences commonly have septic tanks				
Wastewater treatment lagoons				
sites used for land application of waste				

Mark and identify on map any of the risks listed above which are located within the 6 month time of travel boundary? (*Please include a map of the wellhead and time of travel areas with this form. Please locate and mark any of the following.*)

If other recorded or potential sources of ground water contamination exist within the ten year time of travel circular zone around your water supply, please describe:

NONE

2) Source specific water quality records:

Please indicate the occurrence of any test results since 1986 that meet the following conditions: (Unless listed on assessment, MCLs are listed in assistance package.)

A. Nitrate: (Nitrate MCL = 10 mg/l)	YES	NO
Results greater than MCL	___	x
< 2 mg/liter nitrate	x	___
2-5 mg/liter nitrate	___	x
> 5 mg/liter nitrate	___	x
___ Nitrate sampling records unavailable		

B. VOCs: (VOC detection level 0.5 ug/l or 0.0005 mg/l.)	YES	NO
Results greater than MCL or SAL	___	x
VOCs detected at least once	___	x
VOCs never detected	x	___
___ VOC sampling records unavailable		

C. EDB/DBCP:	YES	NO
(EDB MCL = 0.05 ug/l or 0.00005 mg/l. DBCP MCL = 0.2 ug/l or 0.0002 mg/l.)		
EDB/DBCP detected below MCL at least once	___	___
EDB/DBCP detected above MCL at least once	___	___
EDB/DBCP never detected	___	___
___ EDB/DBCP tests required but not yet completed		
x EDB/DBCP tests not required		

D. Other SOCs (Pesticides):	YES	NO
Other SOCs detected (pesticides and other synthetic organic chemicals)	___	___
___ Other SOC tests performed but none detected (list test methods in comments		
x Other SOC tests not performed		

If any SOCs in addition to EDB/DBCP were detected, please identify and date. If other SOC tests were performed, but no SOCs detected, list test methods here: _____

_____

_____

_____

E. Bacterial contamination:

	YES	NO
Any bacterial detection(s) in the past 3 years in samples taken from the source (not distribution sampling records).	____	X
Has source (in past 3 years) had a bacteriological contamination problem found in distribution samples that was attributed to the source.	____	X

___ Source sampling records for bacteria unavailable

Part VI: Geographic or Hydrologic Factors Contributing to a Non-Circular Zone of Contribution

The following questions will help identify those ground water systems which may not be accurately represented by the calculated fixed radius (CFR) method described in Part IV. For these sources, the CFR areas should be used as a preliminary delineation of the critical time of travel zones for that source. As a system develops its Wellhead Protection Plan for theses sources, a more detailed delineation method should be considered.

1) Is there evidence of obvious hydrologic boundaries within the 10 year time of travel zone of the CFR? (Does the largest circle extend over a stream, river, lake, up a steep hillside, and/or over a mountain or ridge?)

X YES ___ NO

Describe with references to map produced in Part IV:

WELL LOCATED ON THE TOP PORTION OF A STEP HILLSIDE

2) Aquifer Material:

A) Does the drilling log, well log or other geologic/engineering reports identify that the well is located in an area where the underground conditions are identified as fractured rock and/or basalt terrain?

___ YES X NO

B) Does the drilling log, well log or other geologic/engineering reports indicate that the well is located in an area where the underground conditions are primarily identified as coarse sand and gravel?

X YES ___ NO

3) Is the source located in an aquifer with a high horizontal flow rate? (These can include sources located on flood plains of large rivers, artesian wells with high water pressure, and/or shallow flowing wells and springs.)

___ YES x NO

4) Are there other high capacity wells (agricultural, municipal and/or industrial) located within the CFRs?

a) Presence of ground water extraction wells removing more than approximately 500 gal/min within...

	YES	NO	unknown
< 6 month travel time	___	x	___
6 month–1 year travel time	___	x	___
1–5 year travel time	x	___	___
5–10 year travel time	x	___	___

b) Presence of ground water recharge wells (dry wells) or heavy irrigation within...

	YES	NO	unknown
< 1 year travel time	___	x	___
1–5 year travel time	___	x	___
5–10 year travel time	___	x	___

Please identify or describe additional hydrologic or geographic conditions that you believe may affect the shape of the zone of contribution for this source. Where possible, reference them to locations on the map produced in Part IV.

Suggestions and Comments

Did you attend one of the susceptibility workshops? ___ YES X NO

Did you find it useful? ___ YES ___ NO

Did you seek outside assistance to complete the assessment? ___ YES X NO

This form and instruction packet are still in the process of development. Your comments, suggestions and questions will help us upgrade and improve this assessment form. If you found particular sections confusing or problematic please let us know. How could this susceptibility assessment be improved or made clearer? Did the instruction package help you find the information needed to complete the assessment? How much time did it take you to complete the form? Were you able to complete the assessment without additional/outside expertise? Do you feel the assessment was valuable as a learning experience? Any other comments or constructive criticisms you have would be appreciated.

Well 5

MAY 15 1990

RICHARDSON WELL DRILLING CO.

DAILY DRILLING REPORT

Sec. ..... Twp. ..... Rge. ..... Date 11-2 thru 1979

Contract GRABTREE ..... Driller MEHR

Address .....

Total depth last report ..... Well No. ..... Size hole 12 " Test hole .....

List Below
FORMATION PENETRATED TODAY

0-4 Fill

4-2 6 Gravel & Bolders

26-76 Gravel, Clay & Bolders

76-110 Yellow Hardpan & Bolders

110-118 Gray Clay, Gravel & Seepage

118-133 Gray Sandy Clay & Gravel

133-145 Alittle Water, Gray Clay, Wood & Sand

145-187 Yellow Clay & Gravel

187-196 Gray Clay, Gravel & Bolders

196-213 Alittle Wa ter, Clay & Gravel

213-297 Yellow Clay, Gravel & Bolders

297-315 Gravel, Clay & Bolders

315-320 Water, Gravel & Clay

320-335 Water, Corse Sand & Corse Gravel

Total depth at end of day 335!

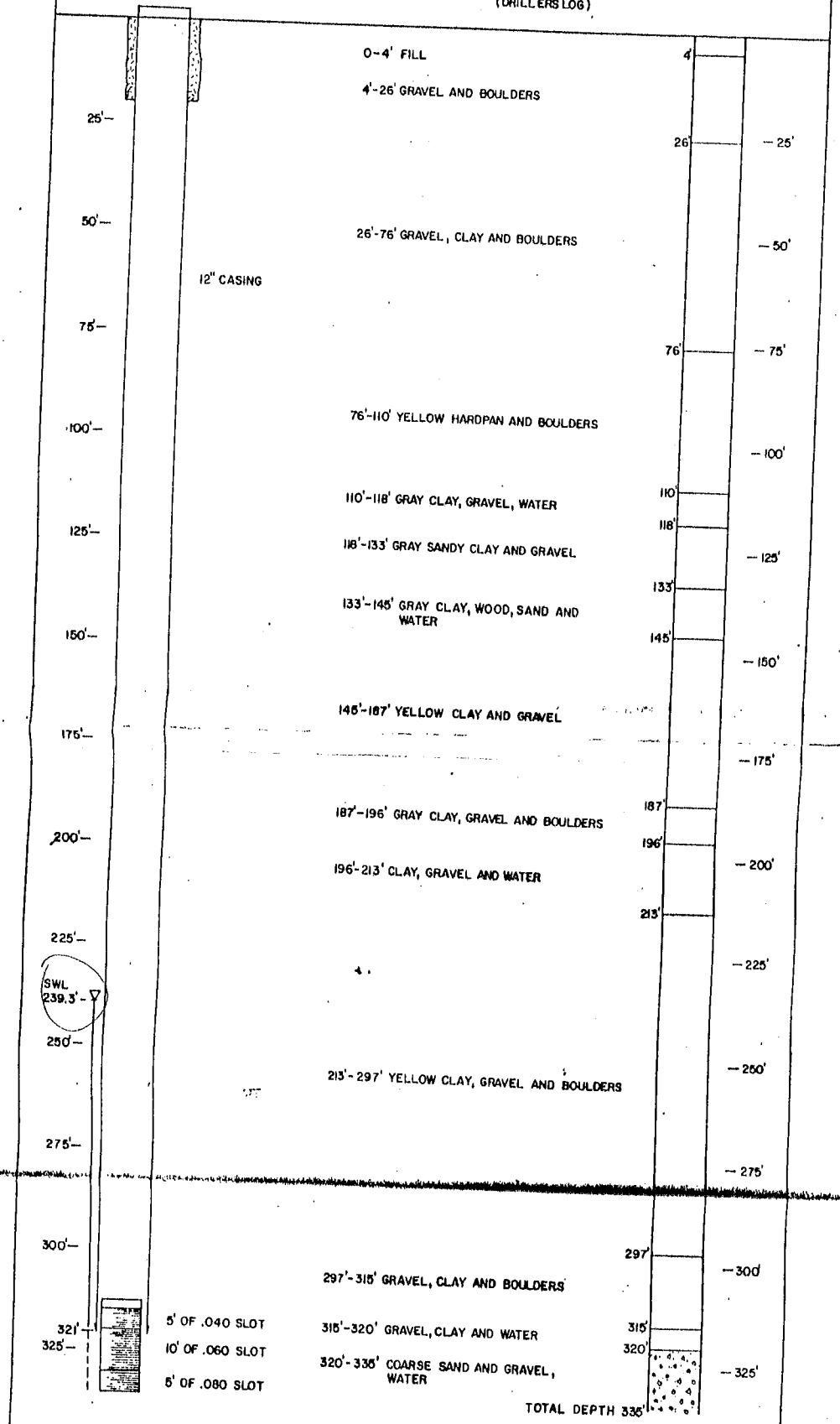
Remarks: Reduced to 10" casing at 321!. Drilled from 321! to 335! w w ith 10" casing. Set 20! of screen, 5! of 40 slot, 10! of 60 slot and 5! of 80 slot. Overall length of screen 22!. Exposed 15! of screen from 335! to 320!. Total 12" casing 321!2". Total 10" 320!7". Static at 250!. Air pumped 80-120 GPM. Total hour work-10.

This Report Must Be Made Out IN FULL Each Day

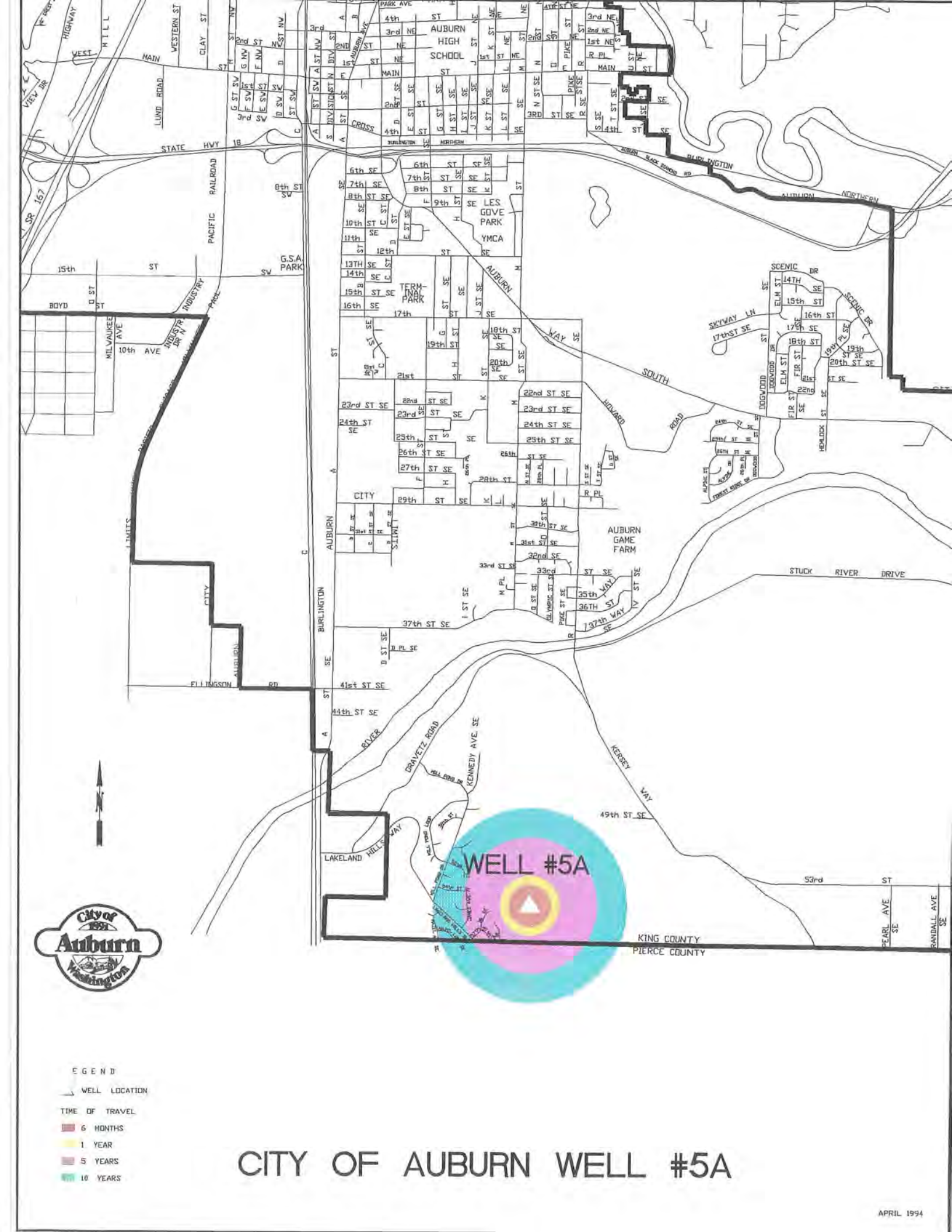
wells

CRABTREE WELL

FIGURE 1



ROBINSON AND NOBLE INC. GROUND WATER GEOLOGISTS TACOMA, WASHINGTON	FOR: CRABTREE WELL	LOGGED BY: DAVID W. ABBOTT
JOB NO. E 80-5 DATE FEB 8, 1980	DRILLED AND DESIGNED BY: RICHARDSON WELL DRILLING INC., TACOMA, WASHINGTON NOVEMBER, 1979	DRAWN BY: DOYAL FOSTER
		T20N-R5E SEC. 6



CITY OF AUBURN WELL #5A

APRIL 1994

Ground Water Contamination
Susceptibility Assessment Survey Form
Version 2.1

IMPORTANT! **Please complete one form for each ground water source (well, wellfield, spring) used in your water system. Photocopy as necessary.**

PART I: System Information

Well owner/manager : City of Auburn

Water system name : Auburn Water Division

County: King

Water system number: 03350V Source number: _____

Well depth: 570 (ft.) (*From WFI form*)

Source name: Well 5A

WA well identification tag number: ___-___-___

__X__ well not tagged

Number of connections: 13,000 Population served: 40,000

Township: 21N Range: 05E

Section: 34 1/4 1/4 Section: SE/SE

Latitude/longitude (if available): N 47 15' 35.07" / W 122 12' 36.76"

How was lat./long. determined?

_____ global positioning device __X__ survey _____ topographic map
____other: _____

* Please refer to Assistance Packet for details and explanations of all questions in Parts II through V.

PART II: Well Construction and Source Information

1) Date well originally constructed: 3 / 1 /90 month/day/year

last reconstruction: ___ / ___ /___ month/day/year

_____ information unavailable

2) Well driller: OELKE Drilling Inc./ Burt Well Drilling

___ well driller unknown

3) Type of well:

___Drilled: _X_ rotary ___ bored ___ cable (percussion) ___ Dug

___ Other: ___ spring(s) ___ lateral collector (Ranney)

___ driven ___ jetted ___ other: _____

Additional comments: _____

4) Well report available? _X_ YES (attach copy to form) ___ NO

If no well log is available, please attach any other records documenting well construction; e.g. boring logs, "as built" sheets, engineering reports, well reconstruction logs.

5) Average pumping rate: 250 (gallons/min)

Source of information: Daily logs/Monthly reports

If not documented, how was pumping rate determined? _____

___ Pumping rate unknown

6) Is this source treated? No

If so, what type of treatment:

___ disinfection ___ filtration ___ carbon filter ___ air stripper ___ other

Purpose of treatment (describe materials to be removed or controlled by treatment):

7) If source is chlorinated, is a chlorine residual maintained: ___ YES ___ NO

Residual level: _____ *(At the point closest to the source.)*

PART III: Hydrogeologic Information

1) Depth to top of open interval: [check one]

___ < 20 ft ___ 20–50 ft ___ 50–100 ft ___ 100–200 ft _X_ > 200 ft

___ information unavailable ('< ' *means less than;* '> ' *means greater than*)

2) Depth to ground water (static water level):

___ < 20 ft ___ 20–50 ft ___ 50–100 ft _X_ > 100 ft

___ flowing well/spring (artesian)

How was water level determined?

_X_ well log ___ other: _____

___ depth to ground water unknown

3) If source is a flowing well or spring, what is the confining pressure:

_____ psi (pounds per square inch)
or
_____ feet above wellhead

4) If source is a flowing well or spring, is there a surface impoundment, reservoir, or catchment associated with this source: ___ YES ___ NO

5) Wellhead elevation (height above mean sea level): 570 (ft)

How was elevation determined? _X_ topographic map ___ Drilling/Well Log ___ altimeter

___ other: _____

___ information unavailable

6) Confining layers: (This can be completed only for those sources with a drilling log, well log or geologic report describing subsurface conditions. Please refer to assistance package for example.)

_X_ evidence of a confining layer in well log

___ no evidence of a confining layer in well log

If there is evidence of a confining layer, is the depth to ground water more than 20 feet above the top of the open interval? _X_ YES ___ NO

___ information unavailable

7) Sanitary setback:

___ < 100 ft* _X_ 100–120 ft ___ 120–200 ft ___ > 200 ft
* if less than 100 ft describe the site conditions:

_____

_____

_____

_____

8) Wellhead construction:

_X_ wellhead enclosed in a wellhouse

_X_ controlled access (describe): Fenced

_____

___ other uses for wellhouse (describe): _____

_____

___ no wellhead control

9) Surface seal:

___ 18 ft

___ < 18 ft (no Department of Ecology approval) ('< ' *means less than*)

___ < 18 ft (Approved by Ecology, include documentation) ('< ' *means less than*)

_X_ > 18 ft ('> ' *means greater than*)

___ depth of seal unknown

___ no surface seal

10) Annual rainfall (inches per year):

___ < 10 in/yr ___ 10–25 in/yr _X_ > 25 in/yr

PART IV: Mapping Your Ground Water Resource

1) Annual volume of water pumped: _____ (gallons) New Well
Y.T.D.: 7,942,000
Est. annual: 30 MG

How was this determined?

_X_ meter

___ estimated: ___ pumping rate (_____)

___ pump capacity (_____)

___ other: _____

2) "Calculated Fixed Radius" estimate of ground water movement:
(see Instruction Packet)

6 month ground water travel time : 460 (ft)

1 year ground water travel time : 651 (ft)

5 year ground water travel time: 1456 (ft)

10 year ground water travel time: 2059 (ft)

Information available on length of screened/open interval?

_X_ YES ___ NO

Length of screened/open interval: 60 (ft)

3) Is there a river, lake, pond, stream, or other obvious surface water body within the 6 month time of travel boundary? ___ YES _X_ NO (mark and identify on map).

4) Is there a stormwater and/or wastewater facility, treatment lagoon, or holding pond located within the 6 month time of travel boundary? ___ YES _X_ NO (mark and identify on map).

Comments: _____

PART V: Assessment of Water Quality

1) Regional sources of risk to ground water:

Please indicate if any of the following are present within a circular area around your water source having a radius up to and including the five year ground water travel time:

	6 month	1 year	5 year	unknown
likely pesticide application residential	X	X	X	
stormwater injection wells				
other injection wells				
abandoned ground water well				
landfills, dumps, disposal areas				
known hazardous materials clean-up site				
water system(s) with known quality problems				
population density > 1 house/acre	X	X	X	
residences commonly have septic tanks				
Wastewater treatment lagoons				
sites used for land application of waste				

Mark and identify on map any of the risks listed above which are located within the 6 month time of travel boundary? (*Please include a map of the wellhead and time of travel areas with this form. Please locate and mark any of the following.*)

If other recorded or potential sources of ground water contamination exist within the ten year time of travel circular zone around your water supply, please describe:

None

2) Source specific water quality records:

Please indicate the occurrence of any test results since 1986 that meet the following conditions: (Unless listed on assessment, MCLs are listed in assistance package.)

A. Nitrate: (Nitrate MCL = 10 mg/l)	YES	NO
Results greater than MCL	___	X
< 2 mg/liter nitrate	X	___
2-5 mg/liter nitrate	___	X
> 5 mg/liter nitrate	___	X
___ Nitrate sampling records unavailable		

B. VOCs: (VOC detection level 0.5 ug/l or 0.0005 mg/l.)	YES	NO
Results greater than MCL or SAL	___	X
VOCs detected at least once	___	X
VOCs never detected	X	___
___ VOC sampling records unavailable		

C. EDB/DBCP:	YES	NO
(EDB MCL = 0.05 ug/l or 0.00005 mg/l. DBCP MCL = 0.2 ug/l or 0.0002 mg/l.)		
EDB/DBCP detected below MCL at least once	___	___
EDB/DBCP detected above MCL at least once	___	___
EDB/DBCP never detected	___	___

___ EDB/DBCP tests required but not yet completed

X EDB/DBCP tests not required

D. Other SOCs (Pesticides):	YES	NO
Other SOCs detected	___	___
(pesticides and other synthetic organic chemicals)		

___ Other SOC tests performed but none detected

(list test methods in comments

X Other SOC tests not performed

If any SOCs in addition to EDB/DBCP were detected, please identify and date. If other SOC tests were performed, but no SOCs detected, list test methods here: _____

E. Bacterial contamination: YES NO

Any bacterial detection(s) in the past 3 years in samples taken from the source (not distribution sampling records). ___ X

Has source (in past 3 years) had a bacteriological contamination problem found in distribution samples that was attributed to the source. ___ X

___ Source sampling records for bacteria unavailable

Part VI: Geographic or Hydrologic Factors Contributing to a Non-Circular Zone of Contribution

The following questions will help identify those ground water systems which may not be accurately represented by the calculated fixed radius (CFR) method described in Part IV. For these sources, the CFR areas should be used as a preliminary delineation of the critical time of travel zones for that source. As a system develops its Wellhead Protection Plan for theses sources, a more detailed delineation method should be considered.

1) Is there evidence of obvious hydrologic boundaries within the 10 year time of travel zone of the CFR? (Does the largest circle extend over a stream, river, lake, up a steep hillside, and/or over a mountain or ridge?)

_X_ YES ___ NO

Describe with references to map produced in Part IV:

_____

_____

2) Aquifer Material:

A) Does the drilling log, well log or other geologic/engineering reports identify that the well is located in an area where the underground conditions are identified as fractured rock and/or basalt terrain?

___ YES _X_ NO

B) Does the drilling log, well log or other geologic/engineering reports indicate that the well is located in an area where the underground conditions are primarily identified as coarse sand and gravel?

_X_ YES ___ NO

3) Is the source located in an aquifer with a high horizontal flow rate? (These can include sources located on flood plains of large rivers, artesian wells with high water pressure, and/or shallow flowing wells and springs.)

___ YES ___ X NO

4) Are there other high capacity wells (agricultural, municipal and/or industrial) located within the CFRs?

a) Presence of ground water extraction wells removing more than approximately 500 gal/min within...

	YES	NO	unknown
< 6 month travel time	___	X	___
6 month–1 year travel time	___	X	___
1–5 year travel time	X	___	___
5–10 year travel time	X	___	___

b) Presence of ground water recharge wells (dry wells) or heavy irrigation within...

	YES	NO	unknown
< 1 year travel time	___	X	___
1–5 year travel time	___	X	___
5–10 year travel time	___	X	___

Please identify or describe additional hydrologic or geographic conditions that you believe may affect the shape of the zone of contribution for this source. Where possible, reference them to locations on the map produced in Part IV.

Suggestions and Comments

Did you attend one of the susceptibility workshops? ___ YES _X_ NO

Did you find it useful? ___ YES ___ NO

Did you seek outside assistance to complete the assessment? ___ YES _X_ NO

This form and instruction packet are still in the process of development. Your comments, suggestions and questions will help us upgrade and improve this assessment form. If you found particular sections confusing or problematic please let us know. How could this susceptibility assessment be improved or made clearer? Did the instruction package help you find the information needed to complete the assessment? How much time did it take you to complete the form? Were you able to complete the assessment without additional/outside expertise? Do you feel the assessment was valuable as a learning experience? Any other comments or constructive criticisms you have would be appreciated.

Start Card #

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

~~Application No.~~ [redacted]
~~Permit No.~~

OWNER: Name P. Hendley & Assoc.'s Address 521 S. Wash. St. Kent, Wa. 98032

(2) LOCATION OF WELL: County King NW¼ SE¼ SE¼ Sec. 31 T. 21 N., R. 5E W.M.

Bearing and distance from section or subdivision corner Lakeland Hills Well No. 2

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☒ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 12 inches.
Drilled 434 ft. Depth of completed well 434 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 12" Diam. from 0 ft. to 434 ft.
Threaded ☐ ." Diam. from ft. to ft.
Welded ☐ ." Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 22 ft.
Material used in seal ~~Bentonite~~
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level.... ft.
Static level ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
Brown Soil & Gravel	0	3
Grey Till	3	22
Grey Cemented Sand & Gravel	22	123
Grey Till	123	206
Dark Brn. Peat, Clay & wood	206	212
Brown Till	212	236
" " Trace of Water	236	236
Gray Till - Little Water	236	253
" " " "	253	262
Gray clay & gravel, Some Peat	262	279
Brown Silty Sand, Some gravel	279	295
Grayish Brown Till	295	312
Gray Till	312	321
Gray Till, little water	321	334
Gray gravel, clay binder	334	345
Gray Till	345	379
Brn. Cemented Sand & Gravel	379	426
Water, Sand & gravel	425	426
Brn. Cemented Sand & Gravel Till	426	434

RECEIVED
JAN 2 8 1990
DEPARTMENT OF ECOLOGY
NORTHWEST REGION

* Hole deepened to be by Rotary Mud

Work started 10-5, 19 89 Completed 12-12, 19 89

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Burt Well Drilling, Inc.
(Person, firm, or corporation) (Type or print)

Address 19782 N.E. Lincoln Rd. Poulsbo, Wa. 98370

[Signed] George D. Burt
(Well Driller)

License No. 0048 Date Dec., 19 89

(USE ADDITIONAL SHEETS IF NECESSARY)

WELL 2R

21/5/31R

WATER WELL REPORT
STATE OF WASHINGTON

Start Card No. [redacted]
Water Right Permit No.

(1) OWNER: Name HENDLEY P., & ASSOCIATES Address 521 SO. WASHINGTON AVE. KENT, WA 98032-

(2) LOCATION OF WELL: County KING - SE 1/4 SE 1/4 Sec 31 T 21 N., R 05E WM
(2a) STREET ADDRESS OF WELL (or nearest address) LAKELAND HILLS WELL #2

(3) PROPOSED USE: MUNICIPAL

(4) TYPE OF WORK: Owner's Number of well (If more than one) 1
DEEPENED Method: ROTARY

(5) DIMENSIONS: Diameter of well 10 inches
Drilled 138 ft. Depth of completed well 570 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 10 " Dia. from 432 ft. to 570 ft.
WELDED " Dia. from ft. to ft.
" Dia. from ft. to ft.

Perforations: YES
Type of perforator used AIR OPERATED
SIZE of perforations 1/8 in. by 1 in.
1440 perforations from 510 ft. to 570 ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: NO
Manufacturer's Name
Type Model No.
Dian. slot size from ft. to ft.
Dian. slot size from ft. to ft.

Gravel packed: NO Size of gravel
Gravel placed from ft. to ft.

Surface seal: NO To what depth? ft.
Material used in seal
Did any strata contain unusable water? NO
Type of water? Depth of strata ft.
Method of sealing strata off N/A

(7) PUMP: Manufacturer's Name N/A
Type N/A H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ... ft.
Static level ft. below top of well Date 04/19/90
Artesian Pressure lbs. per square inch Date
Artesian water controlled by N/A

(9) WELL TESTS: Drawdown is amount water level is lowered below static level.
Was a pump test made? NO If yes, by whom?
Yield: gal./min with ft. drawdown after hrs.

Recovery data
Time Water Level Time Water Level Time Water Level

Date of test / /
Bailer test gal/min. ft. drawdown after hrs.
Air test 100+ gal/min. w/ stem set at 570 ft. for 1 hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? NO

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change in formation.

MATERIAL	FROM	TO
SILTY GRAVEL COARSE SAND	432	440
COARSE SAND GRAVEL	440	470
LARGE WATER BEARING GRAVEL	470	520
FRACTURED ROCK	520	555
FRACTURED ROCK	520	540
GRAVEL	540	560
HARD ROCK	560	570

RECEIVED
JAN 25 1993
DEPT. OF ECOLOGY

Work started 03/01/90 Completed 04/19/90

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

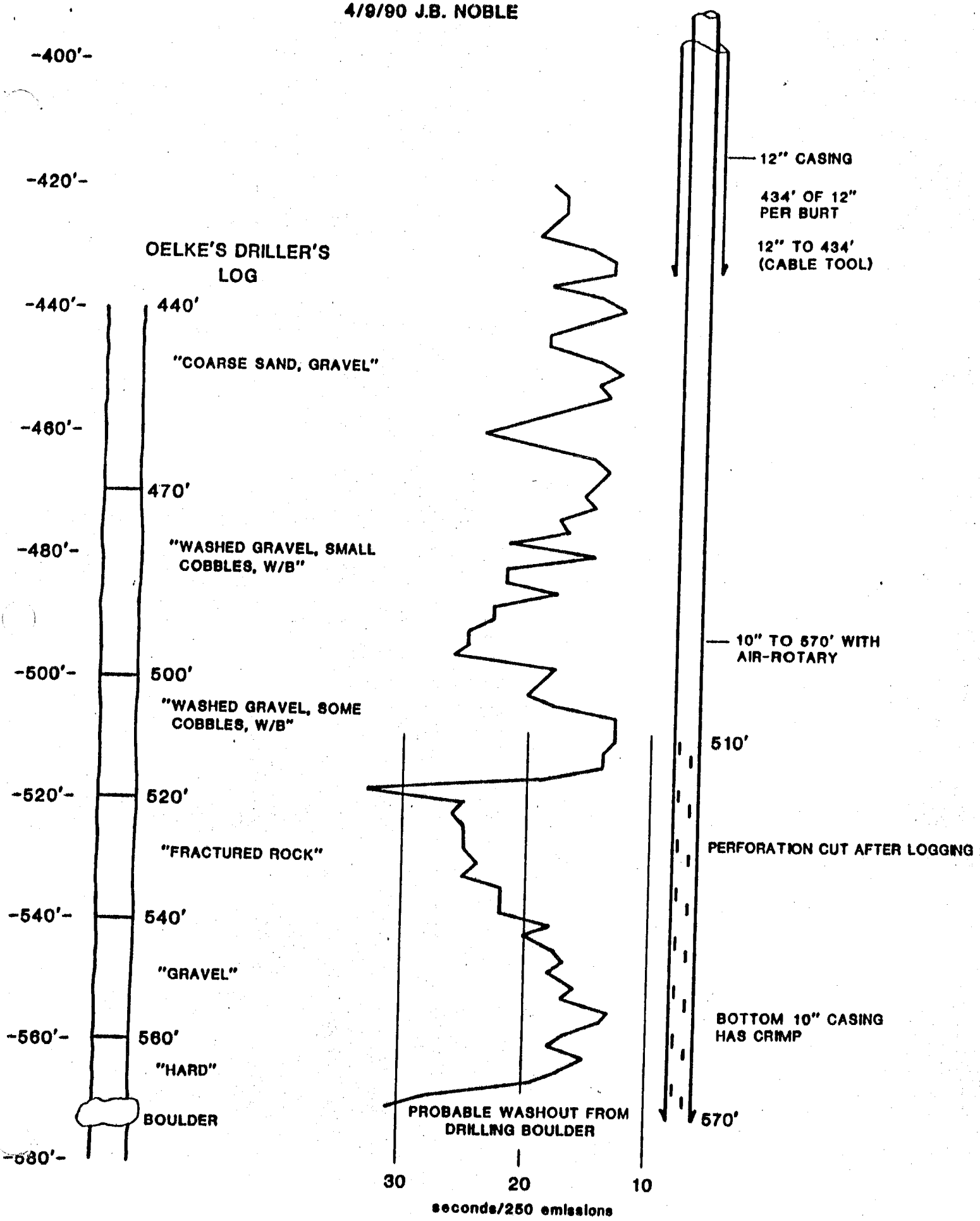
NAME OLSEN DRILLING, INC.
(Person, firm, or corporation) (Type or print)

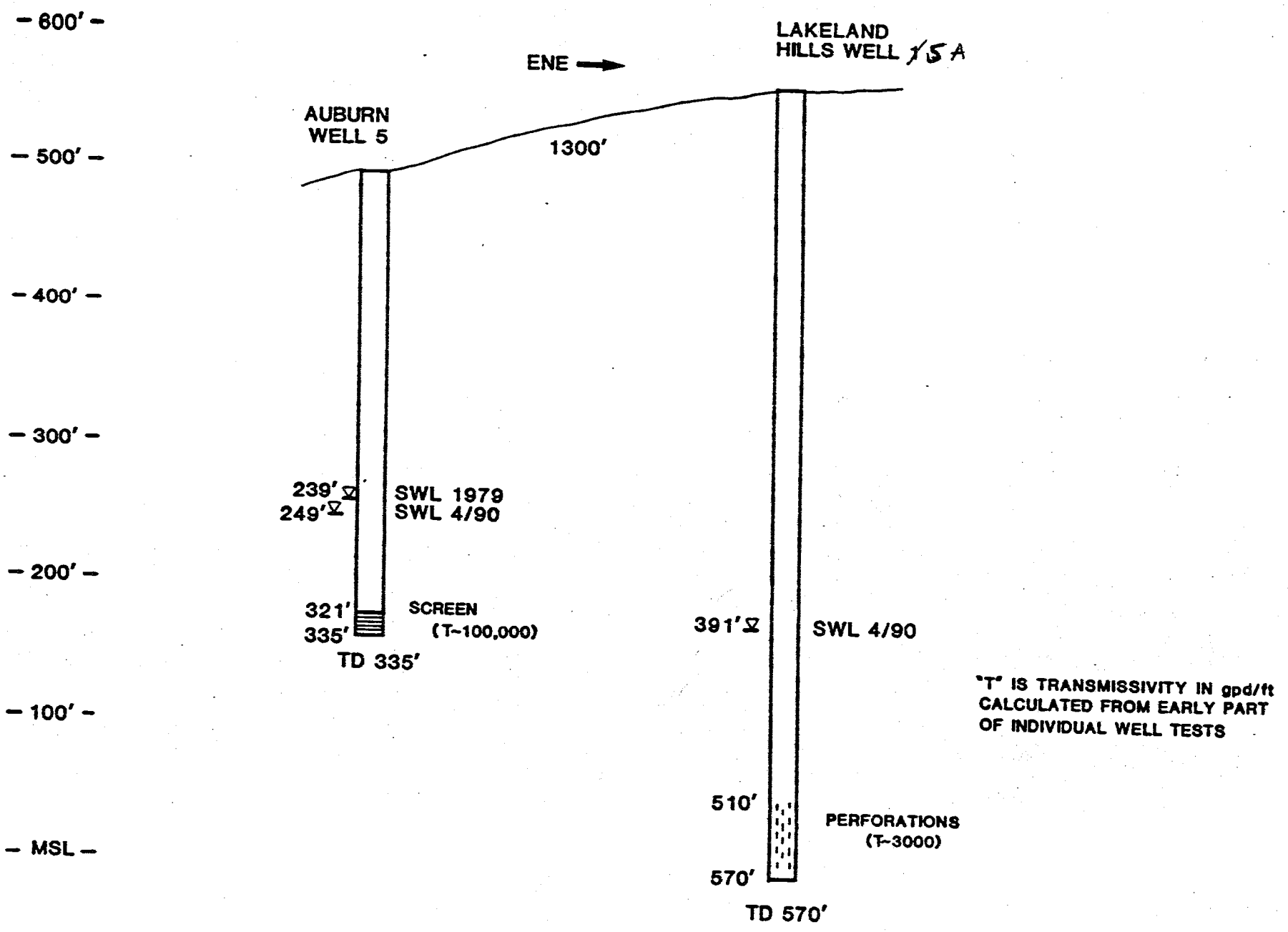
ADDRESS 4312 166 AV E SUMNER, WA

[SIGNED] [signature] License No. 0379

Contractor's Registration No. OLSENDI 1360C Date 01/18/93

4/9/90 J.B. NOBLE





SCHEMATIC RELATION OF WELLS

Ground Water Contamination
Susceptibility Assessment Survey Form
Version 2.2

IMPORTANT! Please complete one form for each water source (Well, Wellfield, Spring) used in your water system. Photocopy as necessary.

PART I: System Information

Well owner/Manager: City of Auburn / Ken Haines

Water system name: City of Auburn

County: King

Water system number: 03350V Source number: Well No. 6

Well depth: 298 (ft.) (From WFI form)

Source name: Well No. 6

WA well identification tag number: AEJ-473 well not tagged

Number of connections: see Auburn Comp Plan

Population served: see Auburn Comp Plan

Township: 21 North Range: 5 East

Section: 18 ¼ ¼ Section: NW¼ NE¼

Latitude/longitude (if available): 117373.63 (n), 1657227.67 (e) state plane coordinates

How was lat/long determined?

____global positioning device __x__survey _____ topographic map
____other:

PART II Well Construction and Source Information

1) Date well originally constructed: 2-19-99 month/day/year

last reconstruction: _____ month/day/year

_____ information unavailable

2) Well driller: Holt Drilling

_____well driller unknown

3) Type of well:

Drilled: __rotary _____bored __x_cable (percussion) _____dug

Other: ___springs_____lateral collector (Ranney)

___driven _____jetted _____other:

Additional comments:

4) Well report available? X YES (attach copy to form) NO

If no well log is available, please attach any other records documenting well construction; e.g. boring logs, "as-built" sheets, engineering reports, well construction logs.

5) Average pumping rate: 3500 (gallons/minute)

Source of information: Pumping test. This is a new well and at the time of completion of this Form, the well had not been put into regular service.
If not documented, how was pumping rate determined? Orifice Method

6) Is this source treated? Will be. Future plans include treatment

If so, what type of treatment:

_x_ disinfection __filtration __carbon filter _x_air stripper__other

Purpose of treatment (describe materials to be removed or controlled by treatment):
Primary purpose is to degas CO_2 and raise pH to above 7.5 to help meet lead and copper rule.

7) If the source is chlorinated, is a chlorine residual maintained: X YES __ NO
When brought on line, the water will be chlorinated.
Residual level: Will be at least 0.5 mg/L (At point closest to source.)

PART III Hydrogeologic Information

1) Depth to top of open interval: [check one]

___<20 ft __20 –50 ft __50 –100 ft ___100 – 200 ft _x_ >200 ft

___information unavailable ('<' means less than; '>' means greater than

2) Depth of ground water (static water level):

___<20 ft __20 –50 ft __50 –100 ft ___>100 ft

___flowing well/spring (artesian)

How was the water level determined?

___well log _x_ other: Electric well sounder

___depth to ground water unknown

3) If source is a flowing well or spring, what is the confining pressure?

_____ psi (pounds per square inch)
or
_____feet above wellhead

4) If the source is a flowing well or spring, is there a surface impoundment, reservoir, or catchment associate with this source? _YES __NO

5) Wellhead elevation (height above mean sea level): 70.24 (ft)

How was the elevation determined? __Topographic map__drilling/well log
____altimeter _x_ other: survey
____information unavailable

6) Confining layers: (This can be completed only for those sources with a drilling log, well log, or geologic report describing subsurface conditions. Please refer to assistance package for example.)

_x_ Evidence of a confining layer in well log

____ No evidence of a confining layer in well log

If there is evidence of a confining layer, is the depth to ground water more than 20 feet above the **bottom** of the **lowest confining layer**? _x_YES __NO
_____Information unavailable

7) Sanitary setback

_x_ <100 ft ___100 – 120 ft ___120 – 200 ft ___> 200 ft

*if less than 100 ft describe the site conditions Well is located approximately 50 feet north of the City's property line. The adjacent property to the south is a large grass field. Setback waiver letter from WDOH 11/6/98 from Bob James (WDOH) to Les Brattain (Auburn).

8) Wellhead construction:

_x_ Wellhead enclosed in wellhouse

_x_ Controlled access (describe): Wellhouse is planned and in design. It will include locked entrance and will be electronically monitored with intrusion alarm.

_x_ Other uses for wellhouse (describe): New wellhouse is planned to house both Well 6 and Well 2.

___ no wellhead control

9) Surface seal:

___ 18 ft
___ <18 ft (no Department of Ecology approval)
___ <18 ft (Approved by Department of Ecology, include documentation)
_x_ > 18 ft - *Surface seal placed 100 feet below ground surface*
___ depth of seal unknown
___ no surface seal

10) Annual rainfall (inches per year):

___ < 10 in/yr ___ 10 – 25 in/yr _x_ >25 in/yr

PART IV Mapping Your Ground Water Resource

1) Annual volume of water pumped: Well 6 will be used supplementally to existing City wells and water rights. Projected maximum volume for Well 6 is 1,277,500,000 gallons (pumping at an average rate of 3.5 MGD, 365 days per year. Actual rate likely to be less.
How was this determined? Supplemental water right (QA) of 3.5 MGD

__Meter
__estimated: pumping rate (_____)
pump capacity (_____)
__ other:

2) "Calculated Fixed Radius" estimate of ground water movement:
(see instruction packet) The City is currently completing a comprehensive numerical model of the aquifer system tapped by Well 6. A capture zone analysis specific to Well 6 awaits completion of that model. For the interim, a previous analytical element model and hydrogeologic mapping applied to a capture zone analysis of the nearby Well 2 is used to answer the questions below. This is appropriate because of the close proximity of Wells 2 and 6 and the fact that Well 6 will be supplemental to existing City wells including Well 2. The two wells tap the same portion of the aquifer.

Information available on length of screened/open interval?

_x_ YES ___NO

Length of screened/open interval: __45__(ft)

3) Is there a river, lake, pond, stream, or other obvious surface water body within the 6 month time of travel boundary? __YES _x_NO (mark and identify on map).

4) Is there a stormwater and or wastewater facility, treatment lagoon, or holding pond located within the 6 month time of travel boundary? _YES _x_NO (mark and identify on map).

Comments: None

PART V Assessment of Water Quality

1) Regional sources of risk to ground water:

Please indicate if any of the following are present within a ~~circular~~ capture zone area around your water source having a radius up to and including the five year ground water travel time. Answers to this question are based on the capture zone analysis completed for the adjacent Well 2.

	6 month	1 year	5 year	unknown
likely pesticide application				x
stormwater injection wells				
other injection wells				
abandoned ground water well	x			
landfills, dumps, disposal areas				
known hazardous materials clean-up site				
water systems(s) with known quality problems				
population density > 1 house/acre	x			
residences commonly have septic tanks				
Wastewater treatment lagoons				
Sites used for land application of waste				

Mark and identify on map any of the risks listed above, which are located within the 6 month time of travel boundary? (Please include a map of the wellhead and time of travel areas with this form. Please locate and mark any of the following.)

A test well drilled in preparation for Well 2 construction exists approximately 20 feet from Well 6. This well has been abandoned but no records exist regarding the method of abandonment.

If other recorded or potential sources of ground water contamination exist within the ten year time of travel circular zone around your water supply, please describe:

Twelve potential contaminant sources are mapped within the 10-year capture zone of Well 2 (herein substituting for Well 6). These sites were located using a regulatory database search by Vista Information Solutions, Inc. These potential sources include mostly underground storage tanks.

2) Source specific water quality records:

Please indicate the occurrence of any test results since 1986 that meet the following conditions: (Unless listed on assessment, MCLs are listed in assistance package.)

	YES
A. **Nitrate:** (Nitrate MCL = 10 mg/l)	
Results greater than MCL	
< 2 mg/liter nitrate	X
2-5 mg/liter nitrate	
> 5 mg/liter nitrate	
Nitrate sampling records unavailable	
B. **VOCs:** (VOC detection level 0.5 ug/l or 0.0005 mg/l.)	YES
Results greater than MCL or SAL	
VOCs detected at least once	X
VOCs never detected	
VOCs sampling records unavailable	
C. **EDB/DBCP:**	YES
(EDB MCL = 0.05 ug/l or 0.00005 mg/l. DBCP MCL = 0.2 ug/l or 0.0002 mg/l.)	
EDB/DBCP detected below MCL at least once	
EDB/DBCP detected above MCL at least once	
EDB/DBCP never detected	
EDB/DBCP test required but not yet completed	
EDB/DBCP tests not required	X
D. Other SOCs (pesticides):	YES
Other SOCs detected	
(pesticides and other synthetic organic chemicals)	
Other SOC tests performed but none detected	X
(list test methods in comments)	
Other SOC test not performed	

If any SOCs in addition to EDB/DBCP were detected, please identify and date. If other SOC tests were performed, but no SOCs detected, list test methods here:

No SOC's were detected under the following EPA test methods: 515.1; 525.2; and 531.1

E. Bacterial contamination: YES

Any bacterial detection(s) in the past 3 years in samples taken from the source (not distribution sampling records.)

Has source (in past 3 years) had a bacteriological contamination problem found in distribution samples that was attributed to the source.

Source sampling records for bacteria unavailable

Part VI: Geographic or Hydrologic Factors Contributing to a Non-Circular Zone of Contribution

The following questions will help identify those ground water systems which may not be accurately represented by the calculated fixed radius (CFR) method described in Part IV. For these sources, the CFR areas should be used as a preliminary delineation of the critical time of travel zones for that source. As a system develops its Wellhead Protection Plan for these sources, a more detailed delineation method should be considered.

The City is undertaking a comprehensive numerical model that will be used to map capture zone for Well 6.

1) Is there evidence of obvious hydrology boundaries within the 10 year time of travel zone of the CFR? (Does the largest circle extend over a stream, river, lake, up a steep hillside, and/or over a mountain or ridge?)

__X__ YES _____NO

2) Aquifer Material:

A) Does the drilling log, well log or other geologic/engineering reports identify that the well is located in an area where the underground conditions are identified as fractured rock and/or basalt terrain?

YES __X__NO

B) Does the drilling log, well log or other geologic/engineering reports indicate that the well is located in an area where the underground conditions are primarily identified as coarse sand and gravel?

__X__YES _____NO

3) Is the source located in an aquifer with a high horizontal flow rate? (These can include sources located on flood plains of large rivers, artesian wells with high water pressure, and/or shallow flowing wells and springs.)

__x__ YES _____NO

4) Are there other high capacity wells (agricultural, municipal and/or industrial) located within the CFRs? Yes, a total of 5 municipal water supply wells tap the same aquifer within the Auburn City limits.

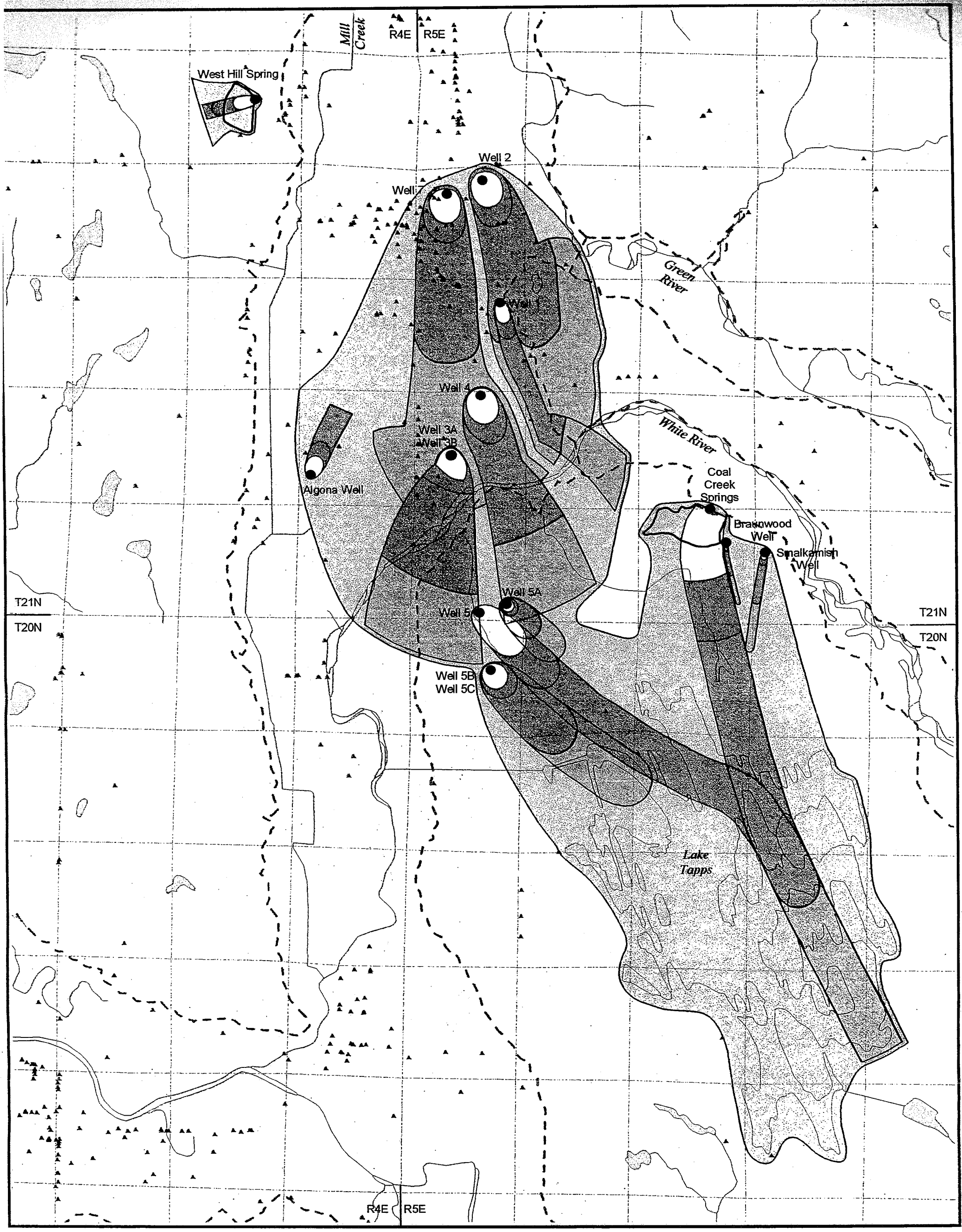
a) Presence of ground water extraction wells removing more than approximately 500 gal/min within...

	YES	NO	UNKNOWN
< 6 month travel time	x		
6 month – 1 year travel time			
1 – 5 year travel time	x		
5 –10 year travel time	x		

b) Presence of ground water recharge wells (dry wells) or heavy irrigation within…

	YES	NO	UNKNOWN
< 1 year travel time			
1 – 5 year travel time			
5 – 10 year travel time		x	

Please identify or describe additional hydrologic or geographic conditions that you believe may affect the shape of the zone of contribution for this source. Where possible, reference them to locations on the map produced in Part IV. Groundwater flow mapping indicates northerly flow of groundwater so the capture zone extends in a generally southerly direction from the well.



- Water Supply Source
- Potential Contamination Sites

Well Capture Zones

- 0.5 - Year
- 1 - Year
- 5 - Year
- 10 - Year
- Water Resource Protection Area

- Approximate Watershed Control Area

- Rivers and Lakes
- Topographic Boundary - Valley Walls
- Sections

0.5 0 0.5 Miles

10/12/97

FIGURE 1
PHASE 2C PRELIMINARY WATER RESOURCE PROTECTION AREAS FOR CITY OF AUBURN SUPPLY SOURCES

AUBURN WATER RESOURCE PROTECTION

Pacific Groundwater Group

8.0 Department of Health Wellhead Protection Information

The Washington State Department of Health (WDOH) requires information on susceptibility and capture zones for new supply wells. This information is presented below.

8.1 Well 5B Susceptibility

Based on geologic and well-construction factors, the susceptibility of Well 5B to contamination from potential surface sources is considered low. WDOH considers a number of factors to assess susceptibility:

- Depth to top of the screened interval
- Depth to water
- Occurrence and thickness of confining layers
- Surface seal
- Sanitary setback
- Well capture zone
- Proximity to potential sources of contamination

This information is typically requested by WDOH in the Susceptibility Checklist portion of its Wellhead Protection Program Guidance Document. This checklist (Version 2.2 from April 1995) has been completed for Well 5B and is included in **Appendix C**.

8.2 Capture Zone

Time-of-travel capture zones were calculated for Well 5B as part of the City's Resource Protection Program. These were generated using a two-dimensional analytical model. The results of the analysis were included in a document submitted to WDOH (PGG, 1997). New and more accurate capture zones for all City of Auburn wells are currently being recalculated using a three-dimensional, numerical groundwater flow model. Well 5B will be included in the updated analysis and a new report will be submitted to WDOH. A copy of the capture zone figure from the 1997 report is included in **Appendix C.**

Ground Water Contamination
Susceptibility Assessment Survey Form
Version 2.2

IMPORTANT! Please complete one form for each water source (Well, Wellfield, Spring) used in your water system. Photocopy as necessary.

PART I: System Information

Well owner/Manager: City of Auburn / Ken Haines

Water system name: City of Auburn

County: King

Water system number: 03350V Source number: Well No. 7

Well depth: 300.5 (ft.) (From WFI form)

Source name: Well No. 7

WA well identification tag number: ABE-845

_____well not tagged

Number of connections: see Auburn Comp Plan. Population served: see Auburn Comp Plan.

Township: 21 North Range: 5 East

Section: 18 ¼ ¼ Section: NW¼ NW¼

Latitude/longitude (if available): 116,799 (n), 1,655,553 (e) state plane coordinates

How was lat/long determined?
____global positioning device __x__survey _____ topographic map
____other:

PART II Well Construction and Source Information

1) Date well originally constructed: 2-10-97 month/day/year

last reconstruction: _____ month/day/year

_____ information unavailable

2) Well driller: Charon Drilling

_____well driller unknown

3) Type of well:

Drilled: __rotary _____bored __x_cable (percussion) _____dug

Other: __springs_____lateral collector (Ranney)

__driven _____jetted _____other:

Additional comments: None

4) Well report available? x YES (attach copy to form) __NO

If no well log is available, please attach any other records documenting well construction; e.g. boring logs, "as-built" sheets, engineering reports, well construction logs.

5) Average pumping rate: 3,500 (gallons/minute)

Source of information: Pumping test. This is a new well with a variable speed pump with a maximum pumping rate of 3,500 gpm. It is supplemental to existing Auburn wells and water rights. As such, its use and average pumping rate will be 3,500 or less (usually less.)
If not documented, how was pumping rate determined? Orifice Method

6) Is this source treated? Yes, future plans include treatment

If so, what type of treatment:

__x__ disinfection __filtration __carbon filter __x__air stripper__other

Purpose of treatment (describe materials to be removed or controlled by treatment):
Primary purpose is to degas CO_2 and raise pH to above 7.5 to help meet lead and copper rule.

7) If the source is chlorinated, is a chlorine residual maintained: x YES___NO
When brought on line, the water will be chlorinated.
Residual level: Will be at least 0.5 mg/L (At point closest to source.)

PART III Hydrogeologic Information

1) Depth to top of open interval: [check one]

___<20 ft __20 –50 ft __50 –100 ft ___100 – 200 ft _x_ >200 ft

___information unavailable ('<' means less than; '>' means greater than

2) Depth of ground water (static water level):

_x_ <20 ft __20 –50 ft __50 –100 ft ___>100 ft

___flowing well/spring (artesian)

How was the water level determined?

____well log _x_other: Electric well sounder

___depth to ground water unknown

3) If source is a flowing well or spring, what is the confining pressure?

_____ psi (pounds per square inch)
or
_____feet above wellhead

4) If the source is a flowing well or spring, is there a surface impoundment, reservoir, or catchment associate with this source? _YES __NO

5) Wellhead elevation (height above mean sea level): 73 (ft)

How was the elevation determined? __Topographic map__drilling/well log
____altimeter _x_other: survey
____information unavailable

6) Confining layers: (This can be completed only for those sources with a drilling log, well log, or geologic report describing subsurface conditions. Please refer to assistance package for example.)

_x_ Evidence of a confining layer in well log

____ No evidence of a confining layer in well log

If If there is evidence of a confining layer, is the depth to ground water more than 20 feet above the **bottom** of the **lowest confining layer**? _x_YES __NO
_____Information unavailable

7) Sanitary setback

_x_ <100 ft ___100 – 120 ft ___120 – 200 ft ___> 200 ft

*if less than 100 ft describe the site conditions Well is located approximately 50 feet north of a City sanitary sewer. A setback waiver was given to the City in a letter from WDOH addressed to Nass Diallo.

8) Wellhead construction:

_x_ Wellhead enclosed in wellhouse

_x_ Controlled access (describe): Wellhouse is planned and in design. It will include locked entrance and will be electronically monitored with intrusion alarm.

___ Other uses for wellhouse (describe):

___ no wellhead control

9) Surface seal:

___18 ft
___<18 ft (no Department of Ecology approval)
___<18 ft (Approved by Department of Ecology, include documentation)
_x_ > 18 ft - *Surface seal placed 162 feet below ground surface*
___depth of seal unknown
___ no surface seal

10) Annual rainfall (inches per year):

___< 10 in/yr____10 – 25 in/yr _x_ >25 in/yr

PART IV Mapping Your Ground Water Resource

1) Annual volume of water pumped: Projected plans are to use Well 7 as a backup well for an interlocal agreement (IA2) that also includes Wells 2 and 6. Well 7 will be pumped at variable rates to meet peaking demands above an average of 8.5 MGD for the Agreement. Because there is no history of pumpage according to the Agreement, no estimate of annual flows from Well 7 can be made at this time.

___Meter

___estimated: pumping rate (_____)
pump capacity (_____)

___ other:

2) "Calculated Fixed Radius" estimate of ground water movement:
(see instruction packet) An analytical element model and hydrogeologic mapping were used to complete a preliminary capture zone analysis for Well 7. The results of this model/mapping were used to answer the questions below. The map was included in a WHP submittal prepared by Pacific Groundwater Group for the City of Auburn and addressed to Chris Thorn. Mr. Thorn forwarded the submittal to WDOH.

Information available on length of screened/open interval?

_x_ YES ___NO

Length of screened/open interval: __61__(ft)

3) Is there a river, lake, pond, stream, or other obvious surface water body within the 6 month time of travel boundary? YES __x__NO (mark and identify on map)

4) Is there a stormwater and or wastewater facility, treatment lagoon. Of holding pond located within the 6 month time of travel boundary? YES __x__NO (mark and identify on map)

Comments: None

PART V Assessment of Water Quality

1) Regional sources of risk to ground water:

Please indicate if any of the following are present within a ~~circular~~ capture zone area around your water source having a radius up to and including the five-year ground water travel time. Answers to this question are based on the capture zone analysis completed for Well 7.

	6 month	1 year	5 year	unknown
likely pesticide application				x
stormwater injection wells				
other injection wells				
abandoned ground water well				
landfills, dumps, disposal areas				
known hazardous materials clean-up site	x			
water systems(s) with known quality problems				
population density > 1 house/acre	x			
residences commonly have septic tanks				
Wastewater treatment lagoons				
Sites used for land application of waste				

Mark and identify on map any of the risks listed above, which are located within the 6 month time of travel boundary? (Please include a map of the wellhead and time of travel areas with this form. Please locate and mark any of the following.)

The CENEX fuel spill site is located south of SR-18 and just west of Auburn Way.

If other recorded or potential sources of ground water contamination exist within the ten-year time of travel circular zone around your water supply, please describe:

Thirty-seven potential contaminant sources are mapped within the 10-year capture zone of Well 7. These sources were located using a regulatory database search by Vista Information Solutions, Inc. The potential sources include mostly underground storage tanks.

2) Source specific water quality records:

Please indicate the occurrence of any test results since 1986 that meet the following conditions: (Unless listed on assessment, MCLs are listed in assistance package.)

	YES
A. **Nitrate:** (Nitrate MCL = 10 mg/l)	
Results greater than MCL	
< 2 mg/liter nitrate	X
2-5 mg/liter nitrate	
> 5 mg/liter nitrate	
Nitrate sampling records unavailable	
B. **VOCs:** (VOC detection level 0.5 ug/l or 0.0005 mg/l.)	YES
Results greater than MCL or SAL	
VOCs detected at least once	
VOCs never detected	X
VOCs sampling records unavailable	
C. **EDB/DBCP:**	YES
(EDB MCL = 0.05 ug/l or 0.00005 mg/l. DBCP MCL = 0.2 ug/l or 0.0002 mg/l.)	
EDB/DBCP detected below MCL at least once	
EDB/DBCP detected above MCL at least once	
EDB/DBCP never detected	
EDB/DBCP test required but not yet completed	
EDB/DBCP tests not required	X
D. Other SOCs (pesticides):	YES
Other SOCs detected	
(pesticides and other synthetic organic chemicals)	
Other SOC tests performed but none detected	X
(list test methods in comments)	
Other SOC test not performed	

If any SOCs in addition to EDB/DBCP were detected, please identify and date. If other SOC tests were performed, but no SOCs detected, list test methods here:

No SOC's were detected under the following EPA test methods: 515.1; 525.2; and 531.1

E. Bacterial contamination: YES

Any bacterial detection(s) in the past 3 years in samples taken from the source (not distribution sampling records.)

Has source (in past 3 years) had a bacteriological contamination problem found in distribution samples that was attributed to the source.

Source sampling records for bacteria unavailable

Part VI: Geographic or Hydrologic Factors Contributing to a Non-Circular Zone of Contribution

The following questions will help identify those ground water systems which may not be accurately represented by the calculated fixed radius (CFR) method described in Part IV. For these sources, the CFR areas should be used as a preliminary delineation of the critical time of travel zones for that source. As a system develops its Wellhead Protection Plan for these sources, a more detailed delineation method should be considered.

The City is undertaking a comprehensive numerical model that will be used to refine the capture zone for Well 7.

1) Is there evidence of obvious hydrology boundaries within the 10 year time of travel zone of the CFR? (Does the largest circle extend over a stream, river, lake, up a steep hillside, and/or over a mountain or ridge?)

_X_ YES _____ NO

2) Aquifer Material:

A) Does the drilling log, well log or other geologic/engineering reports identify that the well is located in an area where the underground conditions are identified as fractured rock and/or basalt terrain?

_____ YES _X_ NO

B) Does the drilling log, well log or other geologic/engineering reports indicate that the well is located in an area where the underground conditions are primarily identified as coarse sand and gravel?

_X_ YES _____ NO

3) Is the source located in an aquifer with a high horizontal flow rate? (These can include sources located on flood plains of large rivers, artesian wells with high water pressure, and/or shallow flowing wells and springs.)

_X_ YES ___NO

4) Are there other high capacity wells (agricultural, municipal and/or industrial) located within the CFRs? Yes, a total of 5 municipal water supply wells are part of the Auburn well field. Each well taps the same aquifer.

a) Presence of ground water extraction wells removing more than approximately 500 gal/min within…

	YES	NO	UNKNOWN
< 6 month travel time			
6 month – 1 year travel time			
1 – 5 year travel time			
5 –10 year travel time	x		

b) Presence of ground water recharge wells (dry wells) or heavy irrigation within…

	YES	NO	UNKNOWN
< 1 year travel time			
1 – 5 year travel time			
5 – 10 year travel time	x		

Please identify or describe additional hydrologic or geographic conditions that you believe may affect the shape of the zone of contribution for this source. Where possible, reference them to locations on the map produced in Part IV.

Groundwater flow mapping indicates northerly flow of groundwater so the capture zone extends in a generally southerly direction from the well.

Asset Natural Hazard Susceptibility Table	
Facility Name	Natural Hazard
Distribution System	Earthquake, Flood
Reservoirs	
Reservoir 1	Earthquake
Reservoir 2	Earthquake
Reservoir 4A	Earthquake
Reservoir 4B	Earthquake
Reservoir 5	Earthquake
Reservoir 6	Earthquake
Reservoir 8A	Earthquake
Reservoir 8B	Earthquake
Pump Stations	
Intertie Pump Station (Wholesale)	Earthquake
Lea Hill Booster Pump Station (BPS)	Earthquake
Lea Hill Pump Station	Earthquake, Flood
Green River Pump Station	Earthquake, Flood
Game Farm Park Pump Station	Earthquake
Lakeland Hills BPS	Earthquake
Terrace View BPS	Earthquake
Fulmer Field Treatment Facility (pumps)	Earthquake
Howard Road Treatment Facility (pumps)	Earthquake
Academy Pump Station 3	Earthquake
Academy East BPS	Earthquake
Treatment Facilities	
Coal Creek Springs	Earthquake
West Hill Springs	Earthquake
Fulmer Field Treatment Facility	Earthquake
Howard Road Treatment Facility	Earthquake
Terrace View BPS	Earthquake
Well 1	Earthquake
Well 4	Earthquake
Well 5A	Earthquake
Sources	
Well 1	Earthquake, Flood, Volcano/Lahar
Well 2	Earthquake, Flood
Well 3A	Earthquake, Flood
Well 3B	Earthquake, Flood
Well 4	Earthquake, Flood, Volcano/Lahar
Well 5	Earthquake
Well 5A	Earthquake
Well 5B	Earthquake
Well 6	Earthquake, Flood
Well 7	Earthquake, Flood
Coal Creek Springs	Earthquake, Wildfire, Flood, Ice Storm, Landslide, Volcano/Lahar
West Hill Springs	Earthquake, Wildfire, Ice Storm, Landslide

* Natural hazards and risks are taken from the City's 2020 Vulnerability Assessments and the City's 2020 Risk and Resiliency Assessment (RRA).

Worksheet 4-1—ERU Capacity Summary

6/1/2021

Specific Single-Family Residential Connection Criteria (*Measured or estimated demands.*)

Average Day Demand (ADD): 182 gpd/ERU.

Maximum Day Demand (MDD) 322 gpd/ERU.

Water System Connections Correlated to ERUs			
Service Classification	**Total MDD for the classification, gpd**	**Total # Connections in the classification**	**ERUs**
Residential			
Single-family	3,911,748	12,153	12,153
Multifamily	2,999,923	1,131	9,320
Nonresidential			
Industrial	1,020,374	1	3,170
Commercial	2,564,334	1,342	7,967
Governmental	23,903	35	74
Agricultural	(Irrigation) 1,081,022	648	3,359
Recreational	(Schools) 222,136	59	690
Other (specify)	(Wholesale) 692,157	5	2,150
DSL	616,203	N/A	1,914
Other (identify)	(Non-Billed) 26,831	N/A	83
Total existing ERUs (Residential + Nonresidential + DSL + Other) =40,881			

Service Capacity as ERUs and Gallons Per Day		
Water System Component (Facility)	**ERU Capacity for EachComponent**	**GPD Capacity for EachComponent**
Source(s)	63,904	20,569,200
Treatment	74,333	23,926,000
Equalizing Storage	-	-
Standby Storage	44,125	10,590,000
Transmission	-	-
Water Rights (Qa and Qi)	71,744 for Qi 102,938 for Qa	23,092,800 for Qi 18,749,377 for Qa
Other (specify)	-	-
Water System Service Capacity (ERUs) = 44,125 *(Based on the limiting water system component shown above.)*		

***Note: F**or the purposes of capacity analyses and water system plans, this form needs to be accompanied by the calculations that were used to come up with the ERU capacity figures.*

Notes

- *Capacity determinations are only for existing facilities that are operational for the water system.*
- *Not shown above are distribution system limitations (Section 4.5.4) on ERUs because these are location-specific within the distribution system. These limits are not expected to limit the ERU capacity of the entire water system.*

Attachment A: Documenting Capacity Evaluation (Example)

This example shows how to document the results of a water system's service capacity evaluation. See Section 3.12 for examples that show how to derive these values.

Average Day Demand ERUADD 425 gpd/ERU
Maximum Day Demand ERUMDD 725 gpd/ERU

Water System Connections Correlated to ERUs			
Service Classification	**Total for the classification, gpd**	**Total # Connections in the classification**	**ERUs**
Residential			
Single-family	101,000 (MDD)	139	139
Multifamily	5,000 (MDD)	10	7
Nonresidential			
Industrial	150,000 (MDD)		207
Commercial	20,000 (MDD)	3	28
Governmental	10,000 (MDD)	1	14
Agricultural	N/A	N/A	
Recreational	5,000 (MDD)	2	7
Other (specify)	N/A		
DSL	35,000 gpd	N/A	48
Totals	326,000 gpd	156 connections	450 ERUs

Service Capacity as ERUs and Gallons Per Day		
Water System Component (Facility)	**ERU Capacity for Each Component**	**Gallons/GPD Capacity for Each Component**
Source(s)	496	360,000 gpd
Treatment	No treatment provided	No treatment provided
Equalizing Storage	501	53,000 gallons
Standby Storage	600 Local standard = 300 gal/ERU	180,000 gallons
Transmission	>600	Determined ample
Water Rights (Qa and Qi)	705 for Qa 496 for Qi	330 ac-ft. per year (0.3 MGD) 250 gpm (0.36 MGD)
Water System Service Capacity (ERUs) = 496 *(Based on the limiting water system component shown above.)*		

In this example, the water system demonstrates an excess capacity of 46 ERUs (496 - 450 = 46). We assume each future connection will use water consistent with an ERU. The example assumes that the addition of new connections will not result in an increase in the system's current DSL (i.e., build-out rather than expansion of the distribution system).

consor

City of Auburn Water System Plan
Capital Improvement Projects Schedule

Type	Start Year	End Year	Duration	Name	CIP or CFP ID	Capacity/Non-capacity	Total Project Cost	2024	10-year									20-year								
								2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Active Projects (In Design or Construction)																										
Distribution	2024	2024	1	104th Park Development (104th to 102nd Water Main Loop)	CP1619	Non-CAP	$ 350,000	$ 350,000																		
Distribution	2024	2024	1	104th Avenue SE PRV Replacement	CP2301	Non-CAP	$ 390,475	$ 390,475																		
Distribution	2024	2025	2	C St SW Preservation	CP2123	Non-CAP	$ 1,802,075	$ 901,038	$ 901,038																	
Distribution	2024	2024	1	Coal Creek Springs Transmission Main Replacement	CP1603	Non-CAP	$ 4,450,422	$ 4,450,422																		
Distribution	2024	2024	1	D St SE and 23rd Street SE Storm Improvements	CP2125	Non-CAP	$ 2,285,677	$ 2,285,677																		
Supply	2024	2024	1	Well 4 Facility Improvements	CP2021	Non-CAP	$ 884,822	$ 884,822																		
Supply	2024	2025	2	Well 4 Electrical Improvements	CP2403	Non-CAP	$ 1,050,000	$ 200,000	$ 850,000																	
Distribution	2024	2025	2	112th Pl SE Water Main Replacement	CP2410	Non-CAP	$ 2,100,000	$ 255,000	$ 1,845,000																	
Distribution	2025	2025	1	Auburn Way South - Hemlock St SE to Poplar St SE	CP1622	Non-CAP	$ 2,398,000		$ 2,398,000																	
Distribution	2024	2024	1	Garden Avenue Realignment	CP2022	Non-CAP	$ 699,797	$ 699,797																		
Distribution	2024	2026	3	M Street NE Widening	CP2210	Non-CAP	$ 357,000	$ 37,000		$ 320,000																
Distribution	2025	2026	2	R Street SE Widening	CP2116	Non-CAP	$ 1,762,488		$ 100,000	$ 1,662,488																
Distribution	2024	2025	2	R St SE and 21st St SE Roundabout	CP2308	Non-CAP	$ 544,897	$ 61,897	$ 483,000																	
Distribution	2024	2024	1	R St SE Preservation - 33rd St SE to 37th St SE	CP2315	Non-CAP	$ 301,850	$ 301,850																		
Distribution	2024	2027	4	Lea Hill Road/104th Ave SE Roundabout	CP2319	Non-CAP	$ 850,000	$ 100,000		$ 150,000	$ 600,000															
Supply	2024	2024	1	Fulmer Treatment Facility VFD Replacements	CP2405	Non-CAP	$ 175,000	$ 175,000																		
Storage	2024	2024	1	Reservoirs 4 and 8 Seismic Rehabilitation	CP2219	Non-CAP	$ 1,433,871	$ 1,433,871																		
Distribution	2024	2025	2	12th St SE and Auburn Way South Water R&R	CP2404	Non-CAP	$ 636,000	$ 318,000	$ 318,000																	
Distribution	2024	2025	2	2025 Local Street Preservation	CP2412	Non-CAP	$ 725,000	$ 65,000	$ 660,000																	
Distribution	2024	2026	3	2026 Local Street Preservation		Non-CAP	$ 1,073,000	$ 50,000	$ 150,000	$ 873,000																
Supply	2024	2024	1	Coal Creek Springs Flowmeter Replacement	CP2329	Non-CAP	$ 375,017	$ 375,017																		
General	2024	2024	1	Comprehensive Water System Plan Update - 2024	CP2134	Non-CAP	$ 250,000	$ 250,000																		
Supply	2024	2024	1	Coal Creek Springs Rehabilitation - Phase 1	CP2209	Non-CAP	$ 75,614	$ 75,614																		
Storage	2024	2025	2	Reservoir 2 Valves	CP2413	Non-CAP	$ 2,268,750	$ 68,750	$ 2,200,000																	
Supply	2024	2024	1	Algona Well 1 Study - Phase 1		Non-CAP	$ 50,000	$ 50,000																		
Storage	2024	2024	1	Valley Service Area Reservoir No. 3 Siting Analysis		Non-CAP	$ 50,000	$ 50,000																		
Pump Station	2024	2024	1	Braunwood Pump Station Assessment		Non-CAP	$ 40,000	$ 40,000																		
Supply																										
Supply	2024	2029	6	Cascade Water Alliance Water Purchase	S-01	CAP	$ 5,608,860	$ 934,810	$ 934,810	$ 934,810	$ 934,810	$ 934,810	$ 934,810													
Supply	2024	2044	21	Water Resources Protection Program	S-02	Non-CAP	$ 1,287,700	$ 87,700	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000
Supply	2025	2044	7	Rehabilitate & Clean Wells 2 and 6 (3-year Cycle)	S-03	Non-CAP	$ 1,750,000		$ 250,000			$ 250,000			$ 250,000			$ 250,000			$ 250,000			$ 250,000		
Supply	2026	2027	2	Well Inspection and Redevelopment Program	S-04	Non-CAP	$ 420,000			$ 210,000	$ 210,000															
Supply	2026	2027	2	On-Site Chlorine Generation Systems (OSEC) at Wells 1 and 4	S-05	Non-CAP	$ 275,000			$ 100,000	$ 175,000															
Supply	2026	2027	2	Fulmer CCTF Replace On-Site Chlorine Generation System (OSEC)	S-06	Non-CAP	$ 500,000			$ 150,000	$ 350,000															
Supply	2026	2028	3	Well 5/5A Upgrades	S-07	CAP	$ 2,715,000			$ 950,000	$ 265,000	$ 1,500,000														
Supply	2027	2030	4	Coal Creek Springs Rehabilitation - Phase 2	S-08	CAP	$ 5,337,000				$ 500,000	$ 1,000,000	$ 2,000,000	$ 1,837,000												
Supply	2030	2031	2	Coal Creek Springs Chlorination Building Replacement	S-09	Non-CAP	$ 2,081,000							$ 520,250	$ 1,560,750											
Supply	2030	2032	3	Well 7 Treatment Phase 1	S-10	CAP	$ 10,097,000							$ 1,500,000	$ 2,597,000	$ 6,000,000										
Supply	2030	2031	2	Well 2 Replacement	S-11	CAP	$ 1,960,000							$ 400,000	$ 1,560,000											
Supply	2032	2033	2	Howard Road CCTF Expansion	S-12	CAP	$ 1,450,000									$ 450,000	$ 1,000,000									
Supply	2032	2033	2	Well 7 Back-Up Power	S-13	CAP	$ 2,075,000									$ 414,961	$ 1,660,039									
Supply	2033	2035	3	Well 7 Treatment Phase 2	S-14	CAP	$ 8,054,000										$ 1,654,000	$ 3,800,000	$ 2,600,000							
Supply	2036	2038	3	Wells 3A/3B Treatment	S-15	CAP	$ 13,945,000													$ 2,789,000	$ 4,978,000	$ 6,178,000				
Supply	2039	2039	1	Algona Well 1 Study - Phase 2	S-16	Non-CAP	$ 250,000																$ 250,000			
Storage																										
Storage	2024	2044	21	Reservoir Repair and Replacements	R-01	Non-CAP	$ 1,392,000	$ 192,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000
Storage	2025	2044	20	Reservoir Painting (10-year Cycle)	R-02	Non-CAP	$ 3,500,000		$ 250,000	$ 1,500,000									$ 250,000	$ 1,500,000						
Storage	2027	2027	1	Academy PRV Project	R-03	CAP	$ 470,000				$ 470,000															
Storage	2027	2027	1	Reservoir Capital Improvements	R-04	Non-CAP	$ 470,000				$ 470,000															
Storage	2039	2040	2	Braunwood Reservoir Improvements	R-05	Non-CAP	$ 250,000																$ 70,000	$ 180,000		
Storage	2041	2044	4	Valley Service Area Reservoir No. 3	R-06	CAP	$ 11,745,000																		$ 250,000	$ 1,250,000	$ 3,000,000	$ 7,245,000
Pump Stations																										
Pump Station	2024	2026	3	Intertie Pump Station/Lea Hill BPS Improvements	PS-01	CAP	$ 2,325,000	$ 75,000	$ 250,000	$ 2,000,000																
Pump Station	2027	2029	3	Lea Hill Pump Station Replacement	PS-02	Non-CAP	$ 6,365,000				$ 765,000	$ 3,000,000	$ 2,600,000													
Pump Station	2034	2035	2	Braunwood Pump Station Mechanical Upgrades	PS-03	Non-CAP	$ 250,000											$ 70,000	$ 180,000							
Pump Station	2034	2035	2	Game Farm Park Pump Station Mechanical Upgrades	PS-04	Non-CAP	$ 250,000											$ 70,000	$ 180,000							
Distribution																										
Distribution	2025	2044	20	Annual Distribution System Improvements Program	D-01	CAP			$ 400,000	$ 2,500,000	$ 2,500,000	$ 2,500,000	$ 2,500,000	$ 2,500,000	$ 2,500,000	$ 2,500,000	$ 2,500,000	$ 3,572,636	$ 3,572,636	$ 3,572,636	$ 3,572,636	$ 3,572,636	$ 3,572,636	$ 3,572,636	$ 3,572,636	$ 3,572,636	$ 3,572,636
Distribution	2025	2044	20	Street Utility Improvements	D-02	Non-CAP	$ 24,618,000		$ 601,000	$ 617,000	$ 1,300,000	$ 1,300,000	$ 1,300,000	$ 1,300,000	$ 1,300,000	$ 1,300,000	$ 1,300,000	$ 1,300,000	$ 1,300,000	$ 1,300,000	$ 1,300,000	$ 1,300,000	$ 1,300,000	$ 1,300,000	$ 1,300,000	$ 1,300,000	$ 1,300,000
Distribution	2025	2044	20	Water Repair & Replacements	D-03	Non-CAP	$ 11,950,000		$ 150,000	$ 450,000	$ 600,000	$ 600,000	$ 600,000	$ 600,000	$ 600,000	$ 600,000	$ 600,000	$ 650,000	$ 650,000	$ 650,000	$ 650,000	$ 650,000	$ 650,000	$ 650,000	$ 650,000	$ 650,000	$ 650,000
Distribution	2024	2044	21	Water Trench Patches Program	D-04	Non-CAP	$ 3,360,000	$ 160,000	$ 160,000	$ 160,000	$ 160,000	$ 160,000	$ 160,000	$ 160,000	$ 160,000	$ 160,000	$ 160,000	$ 160,000	$ 160,000	$ 160,000	$ 160,000	$ 160,000	$ 160,000	$ 160,000	$ 160,000	$ 160,000	$ 160,000
Distribution	2024	2027	4	West Hill Springs Transmission Main Replacement	D-05	Non-CAP	$ 1,401,000	$ 50,000		$ 200,000	$ 1,151,000															
Distribution	2027	2027	1	Lea Hill 648 Zoning Adjustment	D-06	CAP	$ 104,000				$ 104,000															
General																										
General	2033	2034	2	Water System Plan Update - 2034	G-01	Non-CAP	$ 750,000										$ 375,000	$ 375,000								
General	2043	2044	2	Water System Plan Update - 2044	G-01	Non-CAP	$ 750,000																		$ 375,000	$ 375,000
						Total Project Cost (March 2024 USD)	$ 155,135,315	$ 15,368,740	$ 13,020,848	$ 12,897,298	$ 10,674,810	$ 11,364,810	$ 10,214,810	$ 8,937,250	$ 10,647,750	$ 11,544,961	$ 9,369,039	$ 10,367,636	$ 9,012,636	$ 10,091,636	$ 11,030,636	$ 11,980,636	$ 6,122,636	$ 6,232,636	$ 6,052,636	$ 7,052,636	$ 9,427,636	$ 13,422,636
Annual Inflation/Escalation Value								8%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
Multiplier								1.08	1.13	1.19	1.25	1.31	1.38	1.45	1.52	1.60	1.68	1.76	1.85	1.94	2.04	2.14	2.25	2.36	2.48	2.60	2.73	2.87
						Cost in Future USD with Inflation/Escalation	$ 378,352,008	$ 15,488,700	$ 13,438,366	$ 15,356,813	$ 13,346,021	$ 14,919,117	$ 14,079,931	$ 12,934,911	$ 16,181,050	$ 18,421,739	$ 15,697,211	$ 18,238,810	$ 16,647,840	$ 19,572,979	$ 22,463,903	$ 25,618,508	$ 13,746,803	$ 14,693,469	$ 14,982,574	$ 18,330,851	$ 25,729,021	$ 38,463,390
						NOTE: Active project costs in 2024 and 2025 are not inflated and escalated																						
						Grant Funding, 2024 USD		$ 2,717,531																				
						City Water Funding, 2024 USD		$ 12,651,209	$ 13,020,848	$ 12,897,298	$ 10,674,810	$ 11,364,810	$ 10,214,810	$ 8,937,250	$ 10,647,750	$ 11,544,961	$ 9,369,039	$ 10,367,636	$ 9,012,636	$ 10,091,636	$ 11,030,636	$ 11,980,636	$ 6,122,636	$ 6,232,636	$ 6,052,636	$ 7,052,636	$ 9,427,636	$ 13,422,636

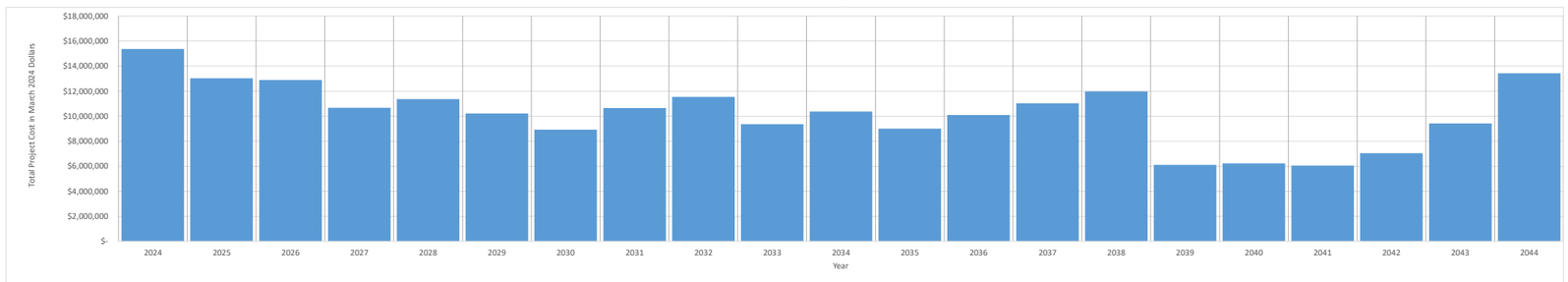
*Project cost for developer funded projects is provided to show an estimated valuation of assets only. The City is not expected to fund the project, therefore, Developer funded projects are not included in the CIP.

Consor's construction cost ("estimate") is in dollars valued as of the date of this estimate. This estimate is an opinion of probable cost based on information available at the time of its development in March 2024. Final costs will depend on

• Actual field conditions • Actual material and labor costs • Market conditions for construction • Regulatory factors • Final project scope
• Method of implementation • Schedule (time to completion, time of commencement, speed of execution, and • Other variables

This estimate is based on our perception, which is based on experience and research, yet nevertheless, an assessment, of current conditions at the project location. This estimate reflects our professional opinion of current costs and is subject to change as the project design evolves. Consor has no control over, nor can it forecast variences in the cost of labor, materials, equipment; nor services provided by others, contractor's means and methods of executing the work, or of determining prices, of the impact of competitive bidding or market conditions, practices, or bidding strategies. Consor neither warrants nor guarentees that proposals, bids, or actual construction costs will reflect the costs presented, which are for illustrative purposes only.

Category	2024	10-Year Period Cost Summary	20-Year Period Cost Summary
Supply	$1,634,839	$38,638,000	$18,150,000
Storage	$242,000	$3,290,000	$14,345,000
Pump Stations	$115,000	$8,755,000	$360,000
Distribution	$210,000	$44,096,000	$56,860,000
General		$750,000	$750,000
Total	$2,201,839	$95,529,000	$90,465,000



consor

City of Auburn Water System Plan

Distribution System Capacity Projects - Detailed Cost Breakdown

Annual Distribution System Improvements Program (Projects required to eliminate MDD+FF deficiencies)

CIP ID	Service Area	Summary of Failure	Overall Rank	Location Detail	Classification	Length (LF)	New Size (inch)	Unit Cost	Cost	Total Cost	Contingency	Sales Tax	Subtotal	Engineering and Permitting	City Management/Survey/Legal/Admin	CM/Inspection	Rounded Project Total	Low End	High End
											30%	10.20%		15%	15%	15%		-50%	75%
P-FF-VLY-8	Valley	Existing Scenario - Hydrants less than 500 gpm	1	See CIP Map in Chapter 3.	Pipe Replacement	3,200	16	$630	$2,016,000	$2,016,000	$604,800	$267,322	$2,888,122	$433,300	$433,300	$433,300	$4,189,000	$2,094,500	$7,330,750
P-FF-LH-3	Lea Hill	Existing Scenario - Hydrants less than 1,000 gpm	2	See CIP Map in Chapter 3.	Pipe Replacement	690	12	$520	$358,800	$358,800	$107,700	$47,583	$514,083	$77,200	$77,200	$77,200	$746,000	$373,000	$1,305,500
P-FF-LH-7	Lea Hill	Existing Scenario - Hydrants less than 1,000 gpm. Move hydrant connection to higher zone.	3	See CIP Map in Chapter 3.	Pipe Replacement	180	8	$490	$88,200	$88,200	$26,500	$11,699	$126,399	$19,000	$19,000	$19,000	$184,000	$92,000	$322,000
P-FF-LH-5	Lea Hill	Existing Scenario - Hydrants less than 1,000 gpm	4	See CIP Map in Chapter 3.	Pipe Replacement	1,080	12	$520	$561,600	$1,298,700	$389,700	$172,217	$1,860,617	$279,100	$279,100	$279,100	$2,698,000	$1,349,000	$4,721,500
					Pipe Replacement	1,170	16	$630	$737,100										
P-FF-VLY-15	Valley	Existing Scenario - Hydrants less than 1,000 gpm	5	See CIP Map in Chapter 3.	Pipe Replacement	1,320	12	$520	$686,400	$686,400	$206,000	$91,025	$983,425	$147,600	$147,600	$147,600	$1,427,000	$713,500	$2,497,250
P-FF-VLY-6	Valley	Existing Scenario - Hydrants less than 1,000 gpm	6	See CIP Map in Chapter 3.	Pipe Replacement	3,590	8	$490	$1,759,100	$1,759,100	$527,800	$233,264	$2,520,164	$378,100	$378,100	$378,100	$3,655,000	$1,827,500	$6,396,250
P-FF-VLY-7	Valley	Existing Scenario - multiple hydrants less than 1500 gpm plus	7	See CIP Map in Chapter 3.	Pipe Replacement	7,940	8	$490	$3,890,600	$6,168,200	$1,850,500	$817,907	$8,836,607	$1,325,500	$1,325,500	$1,325,500	$12,814,000	$6,407,000	$22,424,500
					Pipe Replacement	4,380	12	$520	$2,277,600										
P-FF-VLY-13	Valley	Existing Scenario - Hydrants less than 1,000 gpm	8	See CIP Map in Chapter 3.	Pipe Replacement	1,290	12	$520	$670,800	$670,800	$201,300	$88,954	$961,054	$144,200	$144,200	$144,200	$1,394,000	$697,000	$2,439,500
P-FF-VLY-12	Valley	Existing Scenario - Hydrants less than 1,000 gpm	9	See CIP Map in Chapter 3.	Pipe Replacement	1,440	8	$490	$705,600	$991,600	$297,500	$131,488	$1,420,588	$213,100	$213,100	$213,100	$2,060,000	$1,030,000	$3,605,000
					Pipe Replacement	550	12	$520	$286,000										
P-FF-LH-1	Lea Hill	Existing Scenario - Hydrants less than 1,500 gpm	10	See CIP Map in Chapter 3.	Pipe Replacement	4540	8	$490	$2,224,600	$2,224,600	$667,400	$294,984	$3,186,984	$478,100	$478,100	$478,100	$4,622,000	$2,311,000	$8,088,500
P-FF-LH-2	Lea Hill	Existing Scenario - Hydrants less than 1,500 gpm	11	See CIP Map in Chapter 3.	Pipe Replacement	1300	8	$490	$637,000	$637,000	$191,100	$84,466	$912,566	$136,900	$136,900	$136,900	$1,324,000	$662,000	$2,317,000
P-FF-LH-6	Lea Hill	Existing Scenario - Hydrants less than 1,500 gpm	12	See CIP Map in Chapter 3.	Pipe Replacement	2,470	12	$520	$1,284,400	$1,284,400	$385,400	$170,320	$1,840,120	$276,100	$276,100	$276,100	$2,669,000	$1,334,500	$4,670,750
P-FF-ACA-2	Academy	Existing Scenario - Hydrants less than 1,500 gpm after Oak Vista is installed	13	See CIP Map in Chapter 3.	Pipe Replacement	590	8	$490	$289,100	$289,100	$86,800	$38,342	$414,242	$62,200	$62,200	$62,200	$601,000	$300,500	$1,051,750
P-FF-ACA-1	Academy	Existing Scenario - Hydrants less than 1,500 gpm after Oak Vista is installed	14	See CIP Map in Chapter 3.	Pipe Replacement	500	12	$520	$260,000	$260,000	$78,000	$34,476	$372,476	$55,900	$55,900	$55,900	$541,000	$270,500	$946,750
P-FF-LH-4	Lea Hill	Existing Scenario - Hydrants less than 1,500 gpm	15	See CIP Map in Chapter 3.	Pipe Replacement	340	8	$490	$166,600	$166,600	$50,000	$22,093	$238,693	$35,900	$35,900	$35,900	$347,000	$173,500	$607,250
P-FF-VLY-9	Valley	Existing Scenario - multiple hydrants less than 1,500 gpm plus Cast Iron unknow age, and replacement of 4-inch and 6-inch	16	See CIP Map in Chapter 3.	Pipe Replacement	190	8	$490	$93,100	$3,090,900	$927,300	$409,856	$4,428,056	$664,300	$664,300	$664,300	$6,421,000	$3,210,500	$11,236,750
					Pipe Replacement	5,765	12	$520	$2,997,800										
P-FF-VLY-14	Valley	Existing Scenario - Hydrants less than 2,500 gpm	17	See CIP Map in Chapter 3.	Pipe Replacement	510	12	$520	$265,200	$265,200	$79,600	$35,170	$379,970	$57,000	$57,000	$57,000	$551,000	$275,500	$964,250
P-FF-VLY-2	Valley	Existing Scenario - Hydrants less than 2,500 gpm	18	See CIP Map in Chapter 3.	Pipe Replacement	910	12	$520	$473,200	$473,200	$142,000	$62,750	$677,950	$101,700	$101,700	$101,700	$984,000	$492,000	$1,722,000
P-FF-VLY-17	Valley	Existing Scenario - Hydrants less than 2,500 gpm	19	See CIP Map in Chapter 3.	Pipe Replacement	170	8	$490	$83,300	$743,700	$223,200	$98,624	$1,065,524	$159,900	$159,900	$159,900	$1,546,000	$773,000	$2,705,500
					Pipe Replacement	1,270	12	$520	$660,400										
P-FF-VLY-4	Valley	Existing Scenario - Hydrants less than 2,500 gpm	20	See CIP Map in Chapter 3.	Pipe Replacement	2,610	12	$520	$1,357,200	$1,357,200	$407,200	$179,969	$1,944,369	$291,700	$291,700	$291,700	$2,820,000	$1,410,000	$4,935,000
P-FF-VLY-10	Valley	Existing Scenario - 4-inch Cast Iron near 1,500 gpm dead end	21	See CIP Map in Chapter 3.	Pipe Replacement	320	12	$520	$166,400	$166,400	$50,000	$22,073	$238,473	$35,800	$35,800	$35,800	$346,000	$173,000	$605,500
P-FF-VLY-3	Valley	Existing Scenario - Hydrant less than 1,500 gpm available. Complete P-FF-VLY-8 for initial improvement.	22	See CIP Map in Chapter 3.	Pipe Replacement	1,010	12	$520	$525,200	$941,000	$282,300	$124,777	$1,348,077	$202,300	$202,300	$202,300	$1,955,000	$977,500	$3,421,250
					Pipe Replacement	660	16	$630	$415,800										
P-FF-VLY-1	Valley	Existing Scenario - Hydrants less than 2,500 gpm	23	See CIP Map in Chapter 3.	Pipe Replacement	960	12	$520	$499,200	$499,200	$149,800	$66,198	$715,198	$107,300	$107,300	$107,300	$1,038,000	$519,000	$1,816,500
P-FF-VLY-11	Valley	Existing Scenario - 6-inch Cast Iron near <2,500 gpm	24	See CIP Map in Chapter 3.	Pipe Replacement	1,630	12	$520	$847,600	$847,600	$254,300	$112,394	$1,214,294	$182,200	$182,200	$182,200	$1,761,000	$880,500	$3,081,750
P-FF-VLY-16	Valley	Existing Scenario - Hydrants less than 2,500 gpm	25	See CIP Map in Chapter 3.	Pipe Replacement	390	12	$520	$202,800	$202,800	$60,900	$26,897	$290,597	$43,600	$43,600	$43,600	$422,000	$211,000	$738,500
P-FF-VLY-5	Valley	Existing Scenario - Hydrants less than 2,500 gpm	26	See CIP Map in Chapter 3.	Pipe Replacement	750	12	$520	$390,000	$390,000	$117,000	$51,714	$558,714	$83,900	$83,900	$83,900	$811,000	$405,500	$1,419,250
P-FF-ACA-3	Academy	20-year scenario - Hydrants less than 2,500 gpm	27	See CIP Map in Chapter 3.	Pipe Replacement	380	12	$520	$197,600	$197,600	$59,300	$26,204	$283,104	$42,500	$42,500	$42,500	$411,000	$205,500	$719,250
P-FF-ACA-4	Academy	20-year scenario - Hydrants less than 2,500 gpm	28	See CIP Map in Chapter 3.	Pipe Replacement	1040	16	$630	$655,200	$655,200	$196,600	$86,884	$938,684	$140,900	$140,900	$140,900	$1,362,000	$681,000	$2,383,500
					Total	**55,135**											**$59,699,000**		