King County

Metropolitan King County Council

REGIONAL TRANSIT COMMITTEE

STAFF REPORT

AGENDA ITEM: 3 **DATE:** March 30, 2011

PROPOSED NO.: 2011-0114 **PREPARED BY:** Paul Carlson

SUBJECT:

An ordinance relating to public transportation; adopting the Strategic Plan for Public Transportation 2011-2021 and Metro Transit Service Guidelines.

SUMMARY:

Status of Legislation: Proposed Ordinance 2011-0114 was transmitted to the King County Council on February 28, 2011, as required by a budget proviso. On Monday, March 7, it was introduced and referred to the Regional Transit Committee ("RTC"). The proposed ordinance received a dual referral, first to the RTC and then to the Transportation, Economy and Environment Committee.

March 16 RTC Meeting Highlights: At the March 16 meeting, Victor Obeso of the Transit Division staff provided an overview of the Transit Strategic Plan and the Service Guidelines. Committee members identified a number of concerns about specific issues and these are summarized below. On behalf of their members on the RTC, the Suburban Cities Association and the City of Seattle have submitted a number of information requests and questions.

March 30 Workshop Focus: The meeting will use a workshop format to give Committee members a detailed understanding of the Service Guidelines through a dialogue with Transit Division staff. As a starting point, Transit Division staff will walk through the Service Guideline components and how they are used to build up the All Day Network and Peak Period Network. This presentation will address many of the issues and questions that Committee members have flagged for discussion. Members will also have the opportunity to discuss and identify issues and questions. As preparation for this workshop, Transit Division staff recommends reviewing the first 10 pages of the Service Guidelines (pages SG-1 through SG-10, especially SG-4 through 6 and SG 8 and 9).

April 7 Workshop Focus: The April 7 workshop will continue this in-depth review with a focus on discussion of scenarios for transit system reduction and increase based on the proposed policy and guidelines framework.

BACKGROUND

RTC action on Proposed Ordinance 2011-0114 by the June meeting would support King County Council action in July to allow for an approved Transit Strategic Plan to inform the 2012-2013 transit biennial budget that will be transmitted to the Council in September. Given this timeframe, Chair Dunn has proposed the workshop-style RTC meeting format to give RTC members an opportunity to evaluate the draft Strategic Plan and Service Guidelines.

SERVICE GUIDELINES DISCUSSION

The March 30 workshop will focus on developing an understanding of the Service Guidelines and how they are used. The discussion will be broken out into segments to allow RTC members the change to direct questions.

The Transit Division staff will walk through:

- Guidelines
- Factors and Methodology
- Scoring
- Over-served and Under-served corridors
- All Day Network scoring, including ¼ mile, senior/disabled, low-income/minority
- Use of thresholds
- Peak Overlay and How It Is Used

MARCH 16 QUESTIONS FROM RTC MEMBERS

As part of the discussion, Transit Division staff will be prepared to address questions that RTC members have "flagged" for attention. RTC staff developed the following list of issues and questions to summarize key topics raised by RTC members so far. Similar issues are grouped together. For example, there were several comments relating to the quarter mile walking distance used to measure corridor accessibility; these are grouped and included in a broader category of related issues.

The RTC Issue Matrix (March 23 Draft), attachment 1 to the staff report, is the initial version of a document that will be used to track information requests and responses. The version attached to this staff report includes the questions listed below. Questions submitted by the SCA and the City of Seattle have not yet been added to the matrix.

Productivity's Relationship to Geographic Value and Social Equity

Accepting that a primary focus of the Transit Strategic Plan is productivity, tempered by geographic value and social equity factors – there was a request for

a more detailed explanation of how the Service Guidelines integrate all three factors. A related question is how the concept of geographic value is measured and factored into the system design decisions.

Measures, Scoring and Land Use
RTC members asked for a more detailed explanation of the details and rationale for the thresholds and scoring used to set service levels for the All Day Corridors (the data presented in the table on page SG-4). Two specific questions:

- Does the analysis begin from the demographics or the routes?
- Are there any corridors not currently served by transit that should be considered for inclusion?

Transit Impacts of Suburban Land Use
A number of comments and questions were raised concerning suburban land use patterns and how they interact with the applied guidelines. Specific issues to explore include:

- The quarter-mile walking distance between transit stops, housing, and jobs – both analysis of its impact on the suburbs and data on housing and job access at greater distances.
- The way park-and-ride facilities are factored into the guidelines and whether they can be used as a proxy for housing units. Can park-and-ride stalls be counted as components of "household density" in the scoring of corridors for appropriate service levels?
- There was a specific comment about the difficulty of improving transit service speed, which is mentioned in several parts of the Transit Strategic Plan.

Activity Centers
More information on the selection of Activity Centers was requested, including why some locations were not chosen and how the map of activity centers will change over time.

Seattle Core Route Category
The Service Guidelines apply a higher productivity standard to routes that serve Seattle Core destinations (Central Business District or University District). This category includes corridors in all parts of the county so long as one part of the route is in the Seattle Core area. More information on this concept was requested, as well as the reason why it varies from Region Transit Task Force ("RTTF") recommendations.

Disadvantaged Transportation Needs
Several comments addressed the issue of service to transportation-disadvantaged people including senior citizens, persons with disabilities and students. These include:

- While the attention to low-income and minority populations is clear, what is done to address the needs of others such as the elderly, students, and persons with disabilities? [This is a request for data about these groups

and their needs, and also a question about how the Guidelines address these needs.]

- The question was raised of how the outcomes would change if just low-income and not minority populations were addressed in the Guidelines.

Peak Period Corridors

In response to concern about a corridor not included on the 113-corridor All Day Service Network, Transit Division staff noted that there are also 92 Peak Period Corridors. More information is needed to explain how these corridors are identified and how service is allocated to them.

Tax and Fare Revenue

Strategy 2.1.3 states: "There should be a relationship, but not an exact formula, between the tax revenue created in an area of King County and the distribution of public transportation products and services. Service design should also recognize all the revenues (taxes and fares) generated in the various areas of King County." RTC members asked for more information on the meaning of this statement and what aspects of the plan and service guidelines reflect it. Concern was expressed that transit service not be allocated to wealthier communities at the expense of poorer communities. A specific question was where in the Plan and Guidelines, other than through designating activity centers, the tax revenue relationship is implemented.

Appropriate to Market Services

RTC members commented on the concept of developing transit services that are "appropriate to markets," as described on page 15 of the March 16 powerpoint. This concept is primarily addressed in Strategy 2.1.1 on page 18 of the Transit Strategic Plan. Clarification of what this means was requested; one comment was that the RTTF mentioned this with the thought that different types of vehicles are appropriate for different service categories. Another comment sought clarification that appropriate measures would be provided if alternative services are developed.

2010 Census

As Transit Division staff has noted, the transmitted documents use data from the 2000 census for low-income and minority populations. The Transit Division expects that data from the 2010 Census will be available within a month.

ATTACHMENTS:

1. RTC Issue Matrix – March 23 Draft
2. Background Materials (Metro Transit handout)

ATTENDING:

Kevin Desmond, General Manager, Transit Division
Jim Jacobson, Deputy General Manager, Transit Division
Victor Obeso, Manager, Service Development, Transit Division

Attachment 1

RTC ISSUE MATRIX – March 23 Draft

Strategic Plan Issue	Raised By	Response	Response Date
Productivity-Geographic Value-Social Equity Relationship Revenue (Strategy 2.1.3)	Mayor Hill, Councilmember Butler		
Tax and Fare Revenue (Strategy 2.1.3)	Councilmembers Patterson, Rasmussen, Phillips, Allen, Mayor Gerken		
Services "Appropriate to Market" (Strategy 2.1.1)	Mayor McGilton, Councilmembers Rasmussen, Butler		
Disadvantaged Transportation Needs (Strategy 2.1.2)	Councilmember Patterson		
Service Guidelines Issue	**Raised By**	**Response**	
Productivity-Geographic Value-Social Equity Relationship Revenue (Strategy 2.1.3)	Mayor Hill, Councilmember Patterson		
Measures, Scoring and Land Use a. Does analysis begin from demography or from routes? b. Are there any corridors not currently served by transit that should be included?	Councilmembers Burbidge, Eggen, Patterson, Phillips		
How Suburban Land	Mayor McGilton,		

Use Affects Transit a. ¼ mile walking distance b. Park-and-ride facilities c. Transit speed improvement challenge	Councilmembers Burbidge, Allen		
Activity Centers a. Criteria for choosing b. How will the list change over time?			
Seattle Core Route Category	Councilmember Rasmussen		
Disadvantaged Transportation Needs (Strategy 2.1.2) a. Data about elderly, persons with disabilities, students b. Effect of focusing on low-income population exclusively	Councilmember Patterson		
Peak Period Corridors	Mayor Gerken, Chair Dunn		

Attachment 2

BACKGROUND MATERIALS

The following materials are included as background material for the March 30 meeting and for inclusion in your Notebooks.

Overview of Metro's Service Guidelines

Service guidelines help Metro make sure that its decision-making is objective, transparent, and aligned with regional goals for the public transportation system. They address productivity, social equity and geographic value, and help Metro respond to changing financial conditions, while integrating its services with the regional transportation system.

The following areas of focus are included in the guidelines:

- **Page SG-2 – SG-7: All-Day and Peak Network** – Metro has created a three step process that determines the service levels needed throughout King County to emphasize productivity, ensure social equity, and provide geographic value:
  - Step 1: Set service levels based on land use, social equity and geographic value.
  - Step 2: Adjust service levels based on loads, use, and span of service.
  - Step 3: Identify peak overlay.

  This part of the guidelines also provides specifics on how to evaluate new service and the characteristics of each service family.

- **Page SG-8 – SG-10: Performance Management** – Guidelines in this section are used to improve the efficiency and effectiveness of the transit system. They establish standards for productivity, passenger loads, and schedule reliability.

- **Page SG-10: Service Restructures** – Guidelines in this section are used to define the circumstances that will prompt Metro to restructure multiple routes along a corridor or within an area.

- **Page SG-11 – SG-13: Route Design** – Guidelines in this section are used to develop transit routes and the overall transit network. These guidelines include route characteristics such as route spacing and directness, as well as standards for capital facilities such as bus shelters and route terminals.

- **Page SG-14 – SG-16: Use and Implementation** – This section describes how Metro will use its guidelines, how service hours will be prioritized when adding or reducing service, and how performance of individual bus routes and the Metro system as a whole will be reported.

Service Guideline Definitions:

- **Activity Centers:** Activity centers are broadly defined beyond designated regional growth and manufacturing/industrial centers, to include "moderate concentrations of commercial development and housing that function as a focal point for the local community." This definition comes from the Countywide Planning Policies, Section III.E. Metro expanded on this definition to include major medical centers, higher education institutions, and transit hubs because these are areas of high importance to the transit system and people who use transit.
- **Average Fare:** Total fixed route fares divided by total fixed route boardings
- **Boardings/Platform Hour:** The number of people who board a transit vehicle relative to the total number of hours that a vehicle operates (from leaving the base until it returns). Measures how well a service is used relative to investment.
- **Cost Recovery:** Rides per platform hour multiplied by the average fare divided by the average hourly fixed route cost.
- **Headway adherence:** is defined as headways within two minutes of published headways when service is every 1-7 minutes, or within three minutes of published headways when scheduled headways are 8-15 minutes.
- **Households per corridor mile:** The number of households within ¼ mile walk access to bus stops along a corridor. Accounts for corridor length to equalize the measure between corridors of varying distances. This is a measure of potential ridership.
- **Jobs per corridor mile:** The number of jobs within ¼ mile walk access to bus stops along a corridor. Accounts for corridor length to equalize the measure between corridors of varying distances. This is a measure of potential ridership.
- **Low-income corridor:** Corridors where more than 70.4% of boardings occur in low-income census tracts. 70.4% is the county wide percentage of boardings occurring in low-income tracts.
- **Low-income Census Tracts:** Tracts where more than 8.3% of the population are low-income are considered low-income Census tracts. 8.3% is the percentage of low-income persons in King County.
- **Low-income status:** Defined as below the national poverty level according to 2000 Census data. For example a single person under age 65 is defined as in poverty at less than $8,959/year, while a three person household with two parents and one child is defined as in poverty at $13,861.
- **Minority corridor:** Corridor where more than 60.5% of boardings occur in minority census tracts. 60.5% is the county wide percentage of boardings occurring in minority tracts.
- **Minority Census Tracts:** Tracts where 26.6% or more of the population are minority. 26.6% is the percentage of minority persons within King County.
- **Minority Status:** Any ethnic group not White, Non-Hispanic.
- **On-time performance:** On-time is defined as departure between one minute early and five minutes late at a scheduled time point.
- **Passenger loads:** The number of riders divided by the number of seats available. Measures how full a bus is. Load factor is generally measured at the maximum point, so that it is a measure of the load at the point where the bus is most full along a route.
- **Passenger Mile/Platform Mile:** Total miles riders travel on a route relative to the total miles that a vehicle operates (from leaving the base until it returns). Measures whether a route is full.
- **Primary connection:** The fastest, highest-ridership connection between regional growth and manufacturing/industrial centers or activity centers.
- **Regional Growth Centers and Manufacturing and Industrial Centers:** Residential and employment centers designated in the PSRC *Vision 2040 Plan* that are expected to take a large portion of the regions residential and employment growth.
- **Seattle core:** areas include the regional growth centers in downtown Seattle, First Hill/Capitol Hill, South Lake Union, Uptown, and the University District.

Measures Descriptions and Guidelines Data Sources

Measure	Area of Guidelines	Description	Source	Data Availability
Households per corridor mile *Productivity*	All day and Peak Network, Step 1	The number of households within a quarter mile walk distance to bus stops along a corridor, divided by the corridor length. Corridor length equalizes the measure between corridors of varying distances. This is a measure of potential ridership.	Fall 2010 King County Assessor Parcel level data	Weekly
Jobs per corridor mile *Productivity*	All day and Peak Network, Step 1	The number of jobs within a quarter mile walk distance to bus stops along a corridor divided by the corridor length. Corridor length equalizes the measure between corridors of varying distances. This is a measure of potential ridership.	Spring 2009 Puget Sound Regional Council, Site-specific data	Annually
Minority population *Social Equity*	All day and Peak Network, Step 1	Yes/No -- measure of whether a corridor serves a higher proportion of boardings in minority Census tracts than the overall Metro system. Based on 2000 Census and Fall 2009 service data, corridors with more than 60.5% of their boarding in Minority Census Tracts, the system-wide proportion, receive a "Yes". Based on 2000 Census and Fall 2009 service data, Minority Census Tract definition: where 26.6% or more of the population are minority (all groups except White, Non-Hispanic.)	Census Census Tract data	To be updated using 2010 Census data by 4/7/11, then every ten years
Low-Income population *Social Equity*	All day and Peak Network, Step 1	Yes/No -- measure of whether a corridor serves a higher proportion of boardings in low-income Census tracts than the overall Metro system. Based on 2000 Census and Fall 2009 service data, corridors with more than 70.4% of their boarding in Minority Census Tracts, the system-wide proportion, receive a "Yes". Based on 2000 Census and Fall 2009 service data, Minority Census Tract definition: tracts where 8.3% or more of the population are low-income	Census 2000 Census Tract data	Annually[1]

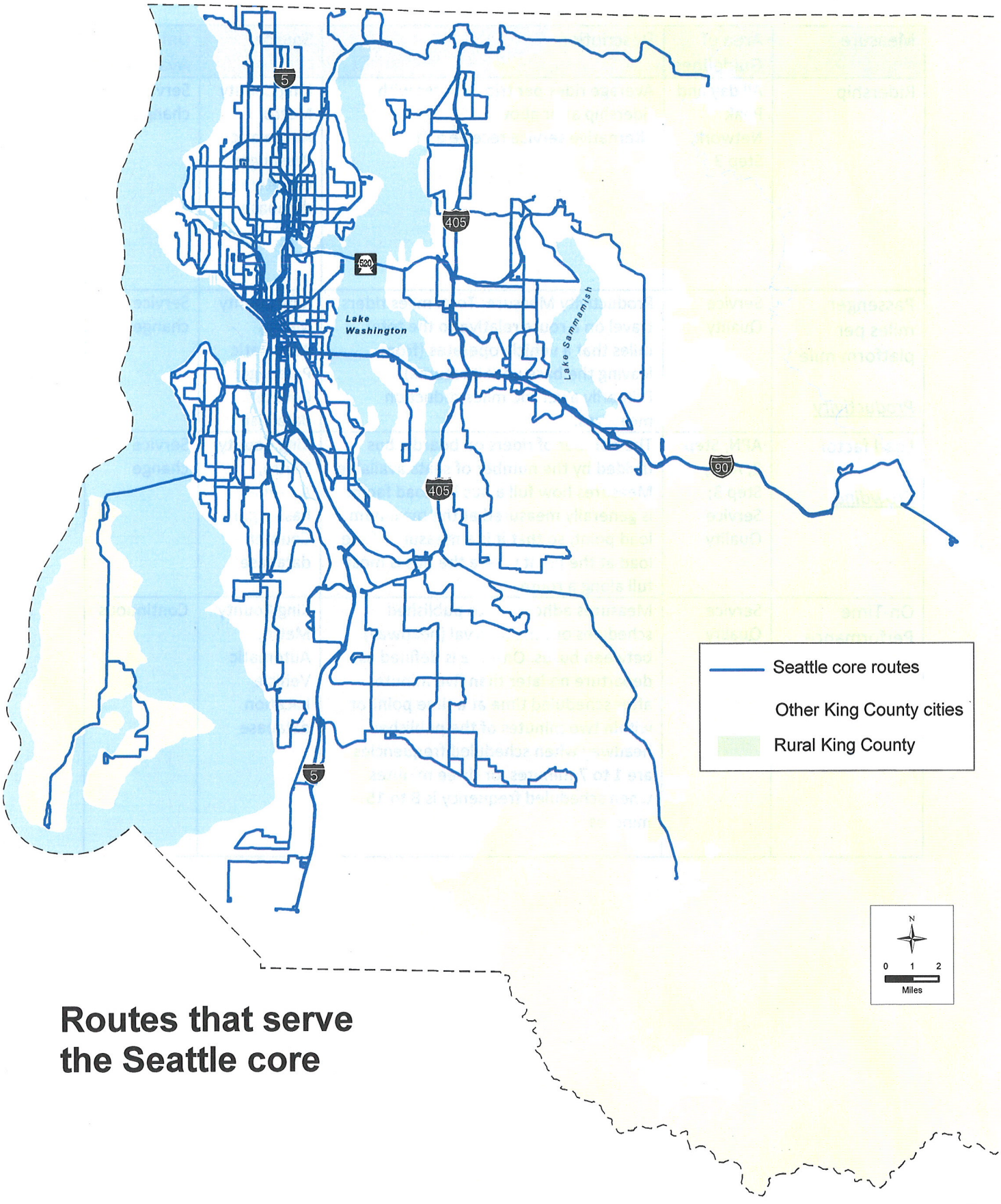
[1] Census 2000 data were used for the low-income analysis. However, because income data are no longer collected as part of the decennial Census, subsequent analyses will be based on American Community Survey 5-year estimates, which are updated annually.

Measures Descriptions and Guidelines Data Sources

Measure	Area of Guidelines	Description	Source	Data Availability
Primary connection between regional growth and manufacturing/ industrial centers *Geographic Value*	All day and Peak Network, Step 1	Yes/No -- measure of whether a corridor is the fastest, highest-ridership connection between designated Regional and manufacturing/industrial centers. Even though some corridors connect more than two Regional and manufacturing/industrial centers, points are awarded for single connection only.	Puget Sound Regional Council, *Vision 2040*	PSRC is in the process of updating its procedures for the designation of new regional centers
Primary connection between activity centers *Geographic Value*	All day and Peak Network, Step 1	Yes/No -- measure of whether a corridor is the fastest, highest-ridership connection between two activity centers. Activity centers are broadly defined using the Countywide Planning Policies (CCP) definition, (Section III.E.) "a moderate concentrations of commercial development and housing that function as a focal point for the local community," plus major medical centers, higher education institutions, and transit hubs. The definition was expanded beyond CPP definition to include other focal points of high importance to the transit system and people who use transit.	Countywide Planning Policies and internal	Expected CPP update: Summer 2011
Rides per platform hour *Productivity*	All day and Peak Network, Step 2	The number of people who board a transit vehicle relative to the total number of hours that a vehicle operates (from leaving the base until it returns). Measures how well a service is used relative to investment.	King County Metro, Automatic Passenger Counter database	Service change
Travel Time	All day and Peak Network, Step 3	Travel time relative to alternative all-day service. Routes that are at least 20% faster than alternative service receive a "Yes".	Timetables	Service change

Measures Descriptions and Guidelines Data Sources

Measure	Area of Guidelines	Description	Source	Data Availability
Ridership	All day and Peak Network, Step 3	Average rides per trip. Routes with ridership at or above 90% relative to alternative service receive a "Yes".	King County Metro, Automatic Passenger Counter database	Service change
Passenger miles per platform mile *Productivity*	Service Quality	Productivity Measure: Total miles riders travel on a route relative to the total miles that a vehicle operates (from leaving the base until it returns). Primarily a vehicle miles reduction measures.	King County Metro, Automatic Passenger Counter database	Service change
Load factor *Crowding*	APN, Step 2; APN, Step 3; Service Quality	The number of riders on board a bus divided by the number of seats available. Measures how full a bus is. Load factor is generally measured at the maximum load point, so that it is a measure of the load at the point where the bus is most full along a route.	King County Metro, Automatic Passenger Counter database	Service change
On-Time Performance *Reliability*	Service Quality	Measures adherence to published schedules or time interval (headway) between buses. On-time is defined as departure no later than five minutes after scheduled time at a time point or within two minutes of the published headway when scheduled frequencies are 1 to 7 minutes, or three minutes when scheduled frequency is 8 to 15 minutes.	King County Metro, Automatic Vehicle Location database	Continuous



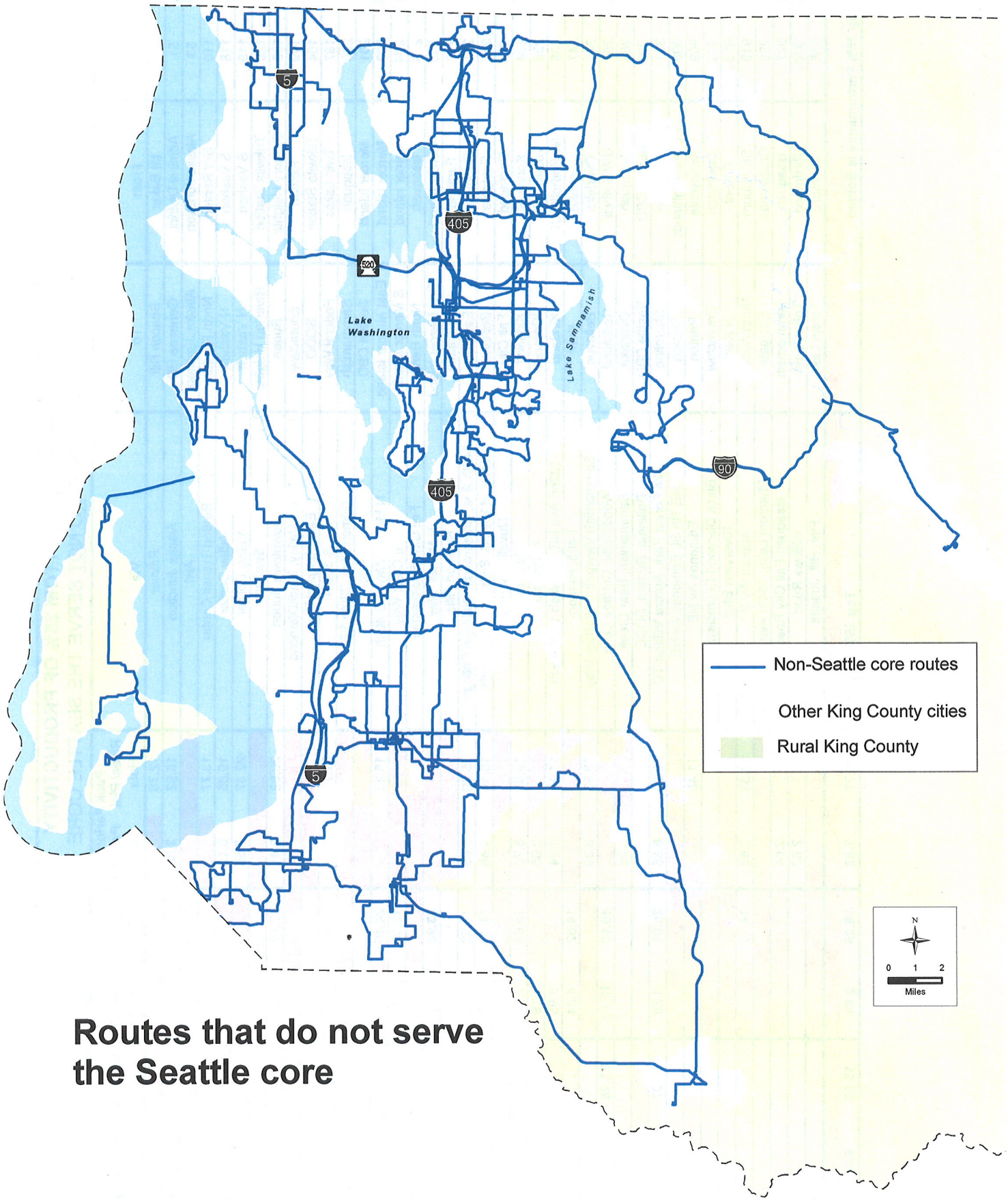
Routes that serve the Seattle core

ROUTES IN THE BOTTOM 25% OF PRODUCTIVITY
ROUTES THAT SERVE THE SEATTLE CORE

Route	From	To	Via	Peak Period Rides/ Plat Hour	Peak Period Pass Mi/ Plat Mi	Off Peak Rides/ Plat Hour	Off Peak Pass Mi/ Plat Mi	Night Rides/ Plat Hour	Night Pass Mi/ Plat Mi
1	Queen Anne	Seattle CBD	10th Ave W, Seattle Center	**67.28**	**15.13**	**61.52**	15.58	12.15	1.65
2N	Queen Anne	Seattle CBD	Queen Anne Ave N, 6th Ave W	**42.41**	8.36	**66.29**	13.99	**41.69**	8.11
2S	Madrona Park	Seattle CBD	E Union	**55.68**	9.95	**54.24**	11.62	26.22	6.00
8	Rainier Beach	Seattle Center	MLK Jr Wy, E John St, Denny Way	**43.76**	9.74	43.24	14.24	20.02	5.47
12	Capitol Hill	Seattle CBD	Madison St	**49.66**	10.34	**48.15**	11.69	18.38	4.51
14N	Capital Hill	Seattle CBD	Summit/Bellevue; Pike/Pine	**44.69**	11.03	40.85	11.29	19.22	5.61
14S	Mt Baker	Seattle CBD	31st Ave S, S Jackson St	38.71	9.18	45.53	12.92	22.26	5.46
17	Ballard	Seattle CBD	W Nickerson, Westlake Av N, 9th Ave	34.50	10.99	32.03	10.35	13.86	5.42
21	High Point	Seattle CBD	35th Ave SW	33.83	12.76	28.76	11.62	15.25	5.96
22	White Center	Seattle CBD	California Ave SW, 1st Ave S	27.01	8.41	22.18	9.53		
23	White Center	Seattle CBD	Highland Park, 4th Ave S	32.09	14.07	26.76	13.13	11.79	5.24
24	White Center	Seattle CBD	California Ave SW; 1st Ave S	**41.52**	11.41	31.36	9.29	13.50	4.22
25	Laurelhurst	Seattle CBD	U District	18.06	5.23	14.65	5.70		
27	Colman Park	Seattle CBD	Leschi, Yesler	35.07	7.76	30.55	7.86	16.48	4.02
28	Fremont	Broadview	8th Av NW, 3rd Av NW	**42.37**	11.94	45.49	14.58	20.30	5.10
30	Sand Point	U. District	NE 55th St	34.57	10.35	25.20	8.15	19.21	5.89
31	U District	Magnolia	N 40th, Nickerson	34.93	8.45	25.78	8.73		
33	Discovery Park	Seattle CBD	Gilman Ave W, 22nd Ave W, Thorndyke Av W	36.30	10.66	24.94	7.31	11.46	3.00
34	Rainier Beach	Seattle CBD	Rainier Ave	24.09	7.14				
35	Harbor Island	Seattle CBD	4th Ave S	14.37	4.86				
37	West Seattle	Seattle CBD	Alki	15.98	7.18	7.11	3.24		
39	Othello Station	Columbia City	Seward Park	24.99	7.87	22.35	8.19	7.76	2.81
42	Columbia Citty	Pioneer Square	Mt Baker	13.54	2.66	16.73	3.60	**29.37**	**9.24**
45	Queen Anne	U District	Wallingford	18.41	5.87				
46	Ballard	U District	Leary Way, N 40th	20.30	4.39	12.50	2.39		
48N	Loyal Heights	U District	NW 85th, 15th Ave NE	**45.26**	8.86	46.98	10.98	26.19	6.27
55	West Seattle (Admiral)	Seattle CBD	California Ave SW, Alaskan Way Viaduct	**43.09**	**18.99**	31.10	14.52	16.16	1.84
56	Alki	Seattle CBD	Admiral Way	36.90	13.01	29.71	11.14	14.32	5.76
60	Capitol Hill	White Center	South Park, Georgetown, First Hill	38.80	11.62	37.78	11.81	17.78	5.25
66	Northgate	Seattle CBD	Roosevelt, Eastlake	34.57	**15.02**	26.33	13.29	16.33	7.76
70	U. District	Seattle CBD	Eastlake, Fairview	31.88	10.92	26.97	11.30	14.17	3.75
79	Lake City	Seattle CBD	Maple Leaf, U District	12.93	4.92				
99	Seattle Waterfront	International District	Alaskan Way	21.43	6.62	16.62	4.86		
114	Renton	Seattle CBD	Newcastle, I-90	15.86	9.67				
116	Vashon	Seattle CBD	West Seattle	17.17	9.02				
123	Gregory Heights	Seattle CBD	Burien, SODO	16.12	10.46				
131	Des Moines	Seattle CBD	Normandy Park, Burien, Georgetown	26.85	10.11	28.18	12.41	14.01	5.83
132	Des Moines	Seattle CBD	Normandy Park, Burien, South Park	25.95	9.85	29.56	12.71	13.89	6.83
134	Burien	Seattle CBD	South Park, Georgetown	18.78	8.65				
150	Kent	Seattle CBD	Tukwila	28.97	**19.89**	27.64	**21.87**	21.37	**18.06**
Bottom 25% Performance is Shaded			Bottom 25% Thresholds	17.95	8.88	28.96	11.62	16.20	5.50
Top 25% Performance is Bolded			**Top 25% Thresholds**	**41.34**	**14.25**	**48.01**	**17.03**	**27.11**	**9.03**

ROUTES IN THE BOTTOM 25% OF PRODUCTIVITY
ROUTES THAT SERVE THE SEATTLE CORE

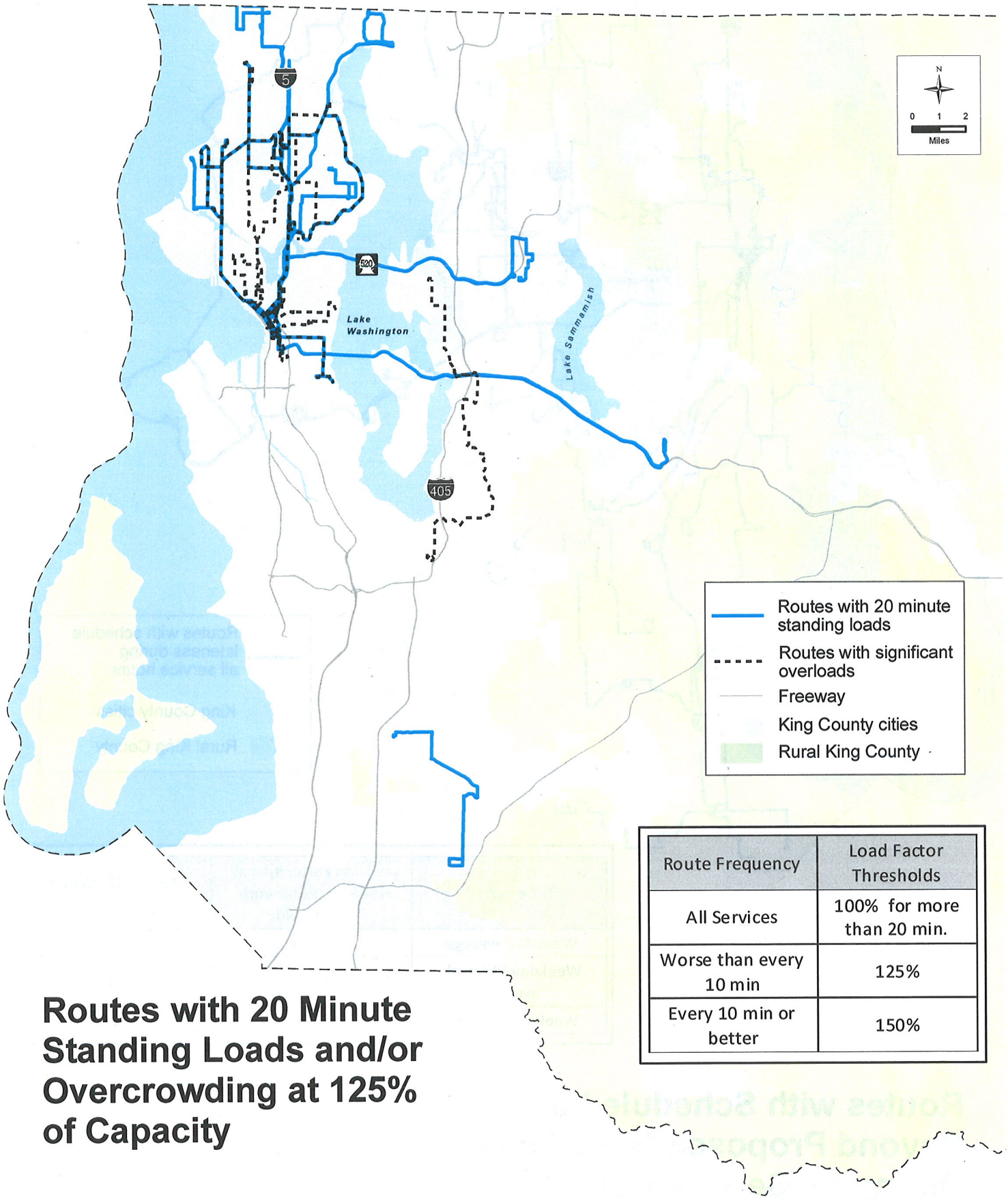
Route	From	To	Via	Peak Period Rides/ Plat Hour	Peak Period Pass Mi/ Plat Mi	Off Peak Rides/ Plat Hour	Off Peak Pass Mi/ Plat Mi	Night Rides/ Plat Hour	Night Pass Mi/ Plat Mi
152	Auburn	Seattle CBD	I-5	11.81	7.29				
157	Kent East Hill	Seattle CBD	I-5	9.37	5.85				
159	Kent Timberlane	Seattle CBD	Kent East Hill, I-5	16.51	9.55				
161	Kent- Lake Meridian	Seattle CBD	Tukwila, I-5	13.18	6.68				
162	Kent	Seattle CBD	Kent Sounder Station, I-5	15.33	8.56				
175	Federal Way	Seattle CBD	Midway, I-5	11.08	7.19				
179	Federal Way	Seattle CBD	Twin Lakes, I-5	13.33	10.14				
190	Redondo Heights	Seatttle CBD	Star Lake, I-5	14.32	9.45				
192	Star Lake	Seattle CBD	Kent, I-5	11.72	6.25				
196	S Federal Way	Seattle CBD	I-5	11.40	7.32				
202	Mercer Island	Seattle CBD	I-90	10.21	3.33				
205	S Mercer Island	U District	I--90, First Hill	17.91	5.58				
210	Issaquah	Seattle CBD	Eastage, Mercer Island	10.33	4.53				
211	Bellevue	First Hill	I-90, Pioneer Square	10.72	3.68				
214	Issaquah	Seattle CBD	Eastgate	15.70	7.75				
215	North Bend	Seattle CBD	Snoqualmie, Issaquah, Eastgate	15.14	8.93				
216	Bear Creek	Seattle CBD	Sammamish, Eastgate, Mercer Island	15.07	11.30				
217	Seattle CBD	Issaquah	Eastgate	17.56	10.47				
250	Redmond	Seattle CBD	Overlake	11.28	5.64				
255	Totem Lake	Seattle CBD	Juanita, Kirkland, SR-520	29.48	**16.92**	22.36	15.96	15.58	**10.82**
256	Overlake	Seattle CBD	South Kirkland, SR-520	16.19	7.35				
257	Brickyard	Seattle CBD	Kingsgate, SR-520	17.10	10.52				
260	Juanita	Seattle CBD	NE 116th, I-405, SR-520	14.47	9.37				
261	Overlake	Seattle CBD	Bellevue, SR-520	16.53	6.66				
265	Redmond	Seattle CBD	Houghton, I-405, SR-520	12.26	6.71				
266	Redmond	Seattle CBD	148th Ave NE, SR-520	12.54	6.58				
268	Redmond	Seattle CBD	Bear Creek, SR-520	17.61	10.60				
271	U. District	Issaquah	SR-520, Bellevue, Eastgate	23.69	9.69	25.61	12.14	14.96	7.15
272	Eastgate	U District	148th Ave NE, NE 8th, SR-520	18.87	8.33				
277	Juanita	U District	Kirkland, Montlake Blvd	13.73	5.85				
311	Duvall	Seattle CBD	Woodinville, I-405. SR-520	15.56	11.78				
Bottom 25% Performance is Shaded			Bottom 25% Thresholds	17.95	8.88	28.96	11.62	16.20	5.50
Top 25% Performance is Bolded			**Top 25% Thresholds**	**41.34**	**14.25**	**48.01**	**17.03**	**27.11**	**9.03**



Routes that do not serve the Seattle core

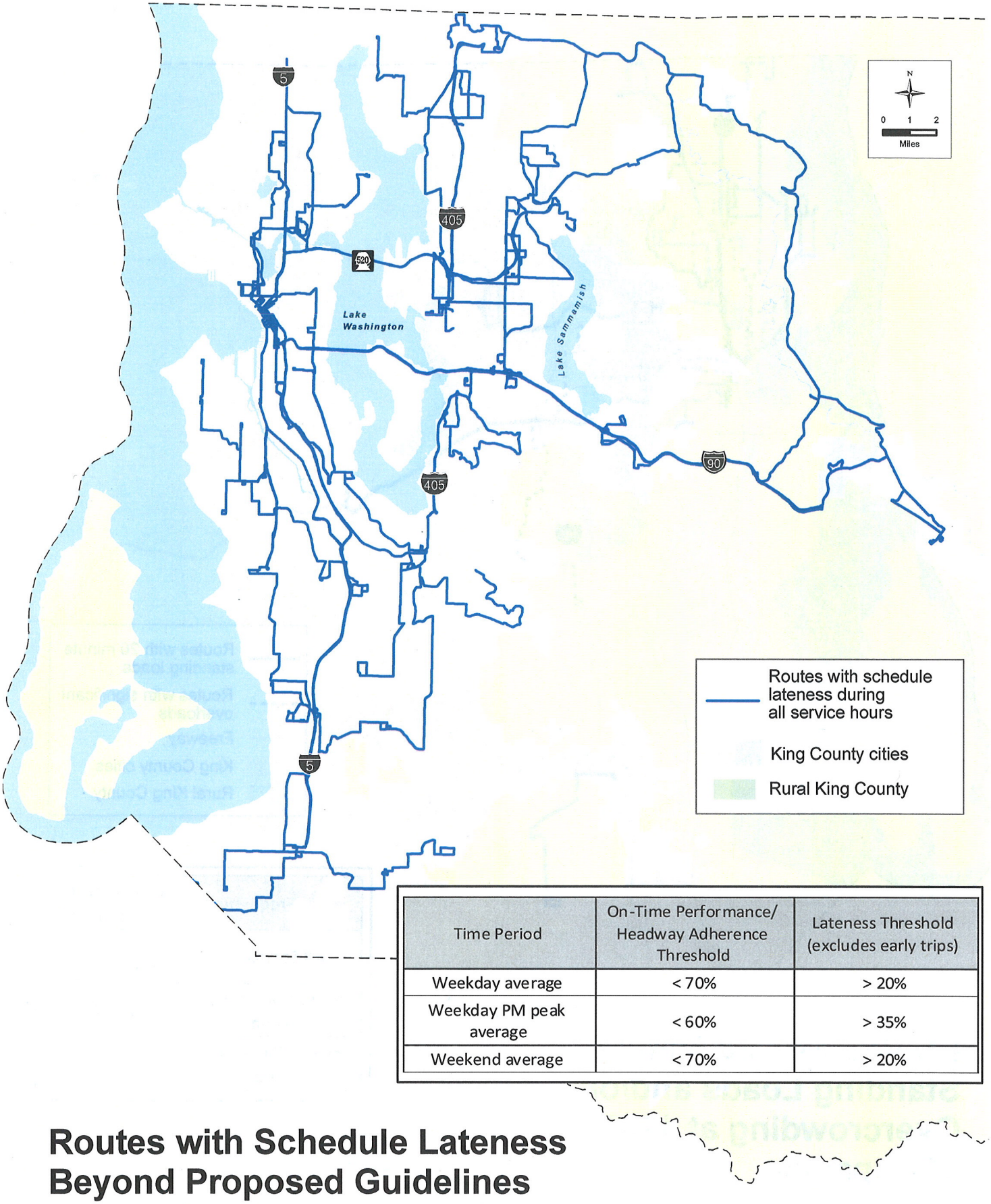
ROUTES IN THE BOTTOM 25% OF PRODUCTIVITY
ROUTES THAT DO NOT SERVE THE SEATTLE CORE

Route	From	To	Via	Peak Period Rides/ Plat Hour	Peak Period Pass Mi/ Plat Mi	Off Peak Rides/ Plat Hour	Off Peak Pass Mi/ Plat Mi	Night Rides/ Plat Hour	Night Pass Mi/ Plat Mi
38	Mt Baker	Beacon Hill	Rainier	12.78	0.75	17.36	2.00		
51	Admiral District	Genesee Hill	Alaska Junction	18.92	2.68	13.89	2.25		
53	Alaska Junction	Alaska Junction	Alki	10.18	2.39	11.56	3.45		
110	SW Renton	North Renton	Renton Transit Center	13.77	1.32				
118	S Vashon	N Vashon	Valley Center	19.05	6.19	6.36	1.75		
119	S Vashon	N Vashon	Valley Center	22.37	7.55	7.64	1.65		
129	Tukwila Station	Riverton Heights	SeaTac	5.54	0.72				
139	Gregory Heights	Burien	Downtown Burien	20.62	3.41	17.47	3.35	7.25	1.16
149	Renton	Enumclaw	Maple Valley, BlackDiamond	4.13	1.37	8.87	2.60		
154	Tukwila Station	SODO	East Marginal Way	9.49	2.51				
187	Twin Lakes	Federal Way	S 320th	**31.75**	5.84	**33.42**	6.45	16.50	3.04
200	Issaquah	Sammamish	Gilman Blvd, 220th SE	7.44	1.64	8.11	3.19		
201	Mercer Island	Seattle CBD	I-90	4.95	0.49				
203	Mercer Island	East Mercer Island	N Mercer Way, SE 40 th	15.25	1.88	24.15	2.42		
204	Mercer Island	S Mercer Island	Island Crest Way			12.96	3.12		
209	Issaquah	North Bend	Fall City, Snoqualmie	5.09	2.39	8.12	4.67		
213	Mercer Island	East Mercer Island	N Mercer Way			**33.90**	3.23		
219	Factoria	Newcastle	Newport Hills	7.75	1.32				
221	Redmond	Eastgate	148th Ave, Crossroads, Bellevue College	15.39	5.05	13.52	4.75	9.01	2.76
222	Eastgate	Bellevue	Newport Wy , S. Bellevue, Beaux Arts	19.44	4.88	14.19	4.26	7.16	2.29
224	Redmond	Fall City	Duvall, Carnation	4.12	1.53	4.45	2.32		
234	Kenmore	Kirkland	Juanita	14.91	5.70	15.66	7.23	8.89	3.84
236	Totem Lake	Kirkland	Kingsgate	8.91	2.65	8.20	3.19	3.43	1.24
238	UW Bothell/CCC	Kirkland	132nd Ave NE, Lk Wash Voch Tech	11.41	3.24	10.53	3.95	4.25	1.46
247	Overlake	Kent	I-405, Renton	7.03	2.14	14.62	4.84	8.93	2.72
249	Overlake	Bellevue	Sammamish Viewpoint, Northup Way	13.53	3.39	5.17	2.08		
251	UW Bothell	Redmond	Woodinville, Cottage Lake	6.27	2.54	**40.18**	**12.12**	**33.25**	**8.22**
269	Issaquah	Overlake	Sammamish, Bear Creek	7.77	3.28				
280	Seattle CBD	Seattle CBD	Bellevue, Renton, SODO					11.31	**6.51**
331	Kenmore	Shoreline	Lake Forest Park, Aurora Village TC	20.20	6.85	25.01	8.38	11.37	3.44
908	Renton Highlands	Renton	NE 7th St, Edmonds Av NE	9.81	2.60	7.83	2.21		
909	Kennydale	Renton	Edmonds Av NE	11.48	2.29	9.91	2.07		
912	Covington	Enumclaw	Black Diamond-Enumclaw Rd			2.30	0.52		
913	S Kent	N Kent	Riverview Blvd	3.12	0.76	3.18	0.79		
919	SE Auburn	North Auburn	Auburn Wy S	14.33	2.63	14.15	2.79		
926	Crossroads	Eastgate	Phantom Lake, 164th Ave NE	9.21	2.35	8.10	2.24		
927	Issaquah	Sammamsih	Issaquah-Fall City Road	6.61	2.64	5.58	2.13		
930	Redmond	Totem Lake	Willows Road	9.67	2.92				
935	Kenmore	Totem Lake	Finn Hill, Juanita	5.78	1.70	4.20	1.29		
Bottom 25% Performance is Shaded			Bottom 25% Thresholds	11.11	2.62	11.30	3.00	11.37	3.75
Top 25% Performance is Bolded			**Top 25% Thresholds**	**25.77**	**7.63**	**28.25**	**9.84**	**19.08**	**6.26**



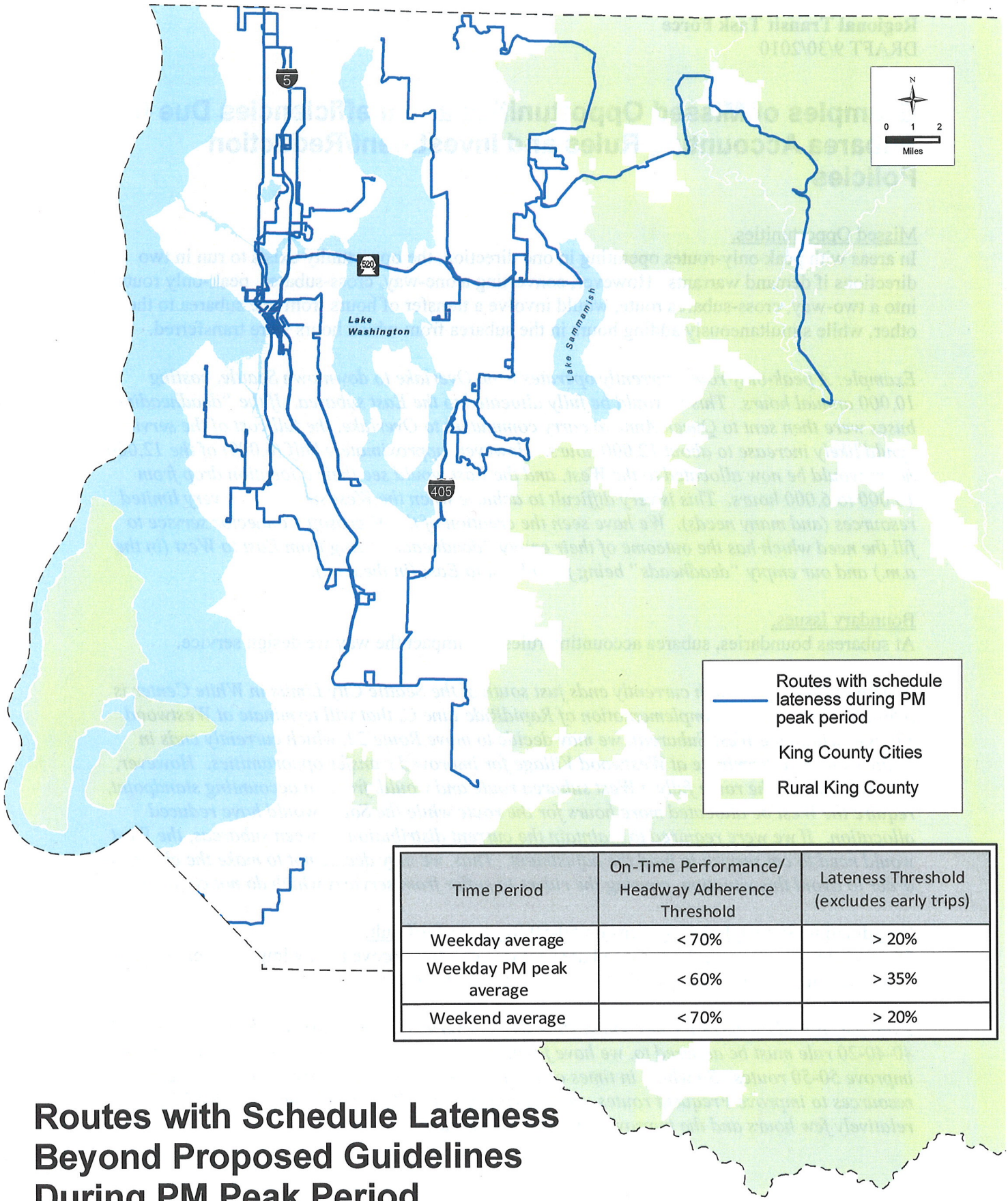
Route Frequency	Load Factor Thresholds
All Services	100% for more than 20 min.
Worse than every 10 min	125%
Every 10 min or better	150%

Routes with 20 Minute Standing Loads and/or Overcrowding at 125% of Capacity



Time Period	On-Time Performance/ Headway Adherence Threshold	Lateness Threshold (excludes early trips)
Weekday average	< 70%	> 20%
Weekday PM peak average	< 60%	> 35%
Weekend average	< 70%	> 20%

Routes with Schedule Lateness Beyond Proposed Guidelines During All Service Hours



Time Period	On-Time Performance/ Headway Adherence Threshold	Lateness Threshold (excludes early trips)
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Weekday PM peak average	< 60%	> 35%
Weekend average	< 70%	> 20%

Routes with Schedule Lateness Beyond Proposed Guidelines During PM Peak Period

Examples of Missed Opportunities and Inefficiencies Due to Subarea Accounting Rules and Investment/Reduction Policies

Missed Opportunities.
In areas with peak only-routes operating in one direction, the opportunity exists to run in two directions if demand warrants. However, converting a one-way, cross-subarea, peak-only route into a two-way, cross-subarea route, would involve a transfer of hours from one subarea to the other, while simultaneously adding hours in the subarea from which hours were transferred.

Example: A peak-only route currently operates from Overlake to downtown Seattle, costing 10,000 annual hours. This is would be fully allocated to the East subarea. If the "deadheading" buses were then sent to Queen Anne to carry commuters to Overlake, the full cost of the service would likely increase to about 12,000 hours. However, approximately half (6,000) of the 12,000 hours would be now allocated to the West, and the East would see their allocation drop from 10,000 to 6,000 hours. This is very difficult to achieve when the West subarea has very limited resources (and many needs). We have seen the creation of the Microsoft Connector service to fill the need which has the outcome of their empty "deadheads" being from East to West (in the a.m.) and our empty "deadheads" being from West to East (in the a.m.).

Boundary Issues.
At subareas boundaries, subarea accounting rules can impact the way we design service.

Example: Route 22, which currently ends just south of the Seattle City Limits in White Center is a 50-50 route. With the implementation of RapidRide Line C, that will terminate at Westwood Village (within the West Subarea), we may decide to move Route 22, which currently ends in White Center, to terminate at Westwood Village for improved transfer opportunities. However, this would make the route fully a West subarea route and would, from an accounting standpoint, require the West be allocated more hours for the route while the South would have reduced allocation. If we were required to maintain the current distribution between subareas, the West would need to cut service to fund the adjustment. Thus, we may decide not to make the change in order to avoid this situation, causing the riders to suffer from services which do not connect.

Coordinating Service Improvements on 50-50 Routes is Difficult.
50-50 routes which serve the West Subarea are difficult to improve as any improvement requires half of the improvement cost to be allocated to the West Subarea.

Example: Based on current rules which state that at every 200,000 hours of added investment the 40-40-20 rule must be adhered to, we have found that the West is quickly left with few hours to improve 50-50 routes. So while, in times of service growth, the East and South may have the resources to improve Frequent routes, such as routes 101, 120, 150, 255 and 271, the West has relatively few hours and the improvements are not pursued.

Reducing 50-50 Routes would be a key element to the West Subarea under Current Reduction Policies.

The current policy states that 62% of any service reduction must come from West service, so almost all routes which are funded (even partially) by the West will be need to be reduced under a major cut situation. Therefore, there will be significant pressure to cut 50-50 routes that are productive from a system standpoint, in order to meet the required West target of cut.

Example: Route 101 is an important and high ridership connection between Renton and Seattle. While Route 101 is among the most productive routes when compared with other South King County routes, it is only an average route when compared with other West King County routes. Therefore, if reductions are made based on productivity within a subarea, Route 101 would be a higher priority to reduce in the West subarea than in the South subarea.

Shortening a 50-50 Route can Cause One Subarea to Make a Substantial Investment for No Improvement in Service.

When a 50-50 route is shortened within one subarea only, the savings is allocated back to both subareas. The gap created by this change is often needed to be filled in (and allocated to) only one subarea. Therefore, that one subarea is allocated the cost of investment for no improvement in service.

Example: Route 271 currently travels from Issaquah to the U. District. Observed ridership patterns indicate that the most efficient service design would be to only operate Route 271 between Bellevue and the U. District, while a new route would replace the portion between Issaquah and Bellevue. By shortening Route 271, both the West and East would be allocated 50% of the savings (e.g. 10,000 hours each). However, this new route between Bellevue and Issaquah would be allocated fully to the East subarea. If the new route costs more than the savings from Route 271 (which is likely), the East would be allocated more for a level of service that was the same (or possibly even less).

Problems with 50-50 route with peak-only variants.

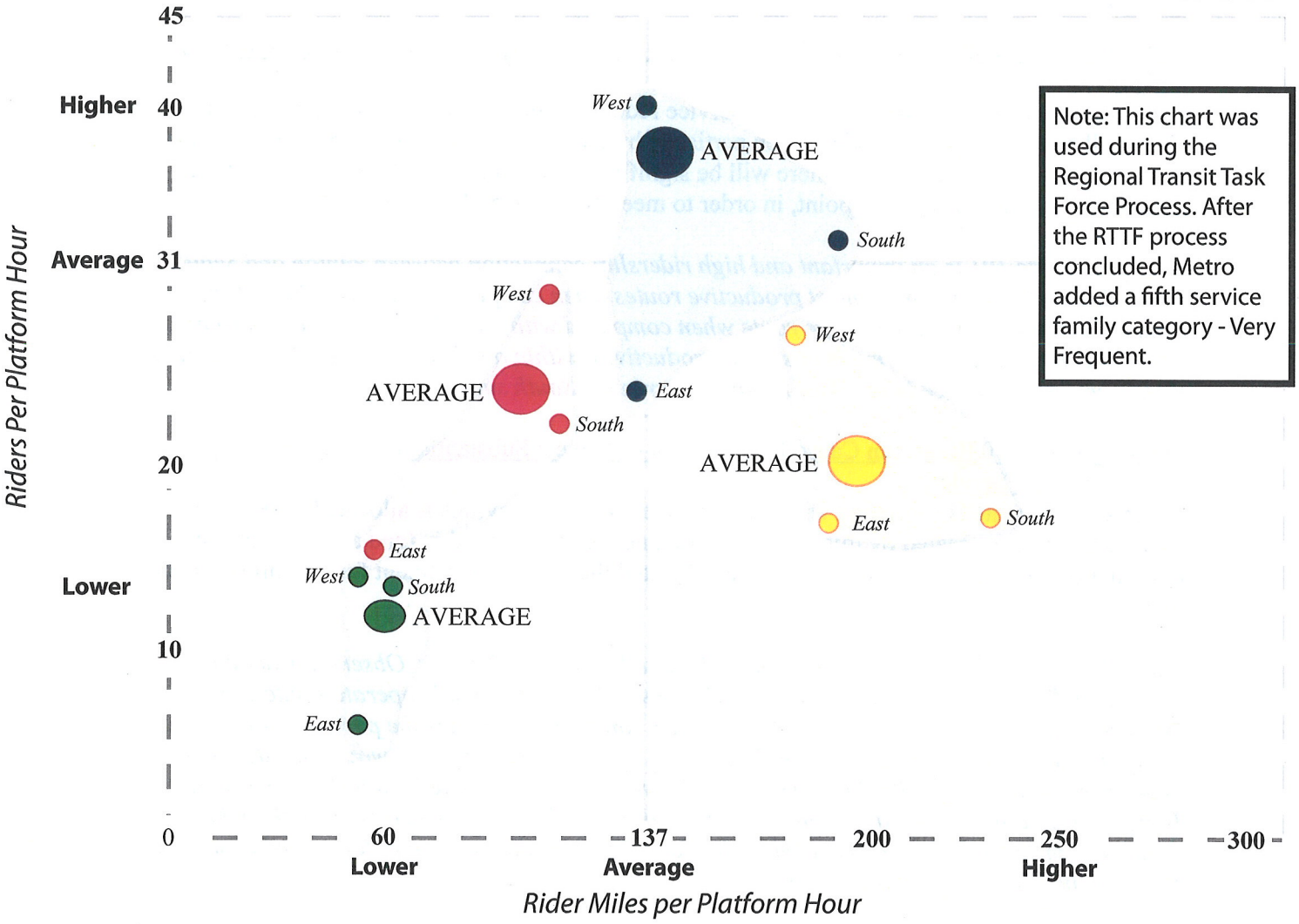
If a 50-50 route has peak-only variants, the variants are assigned to a single subarea since they are peak only. If staff wishes to convert trips between a peak-only variant and an all-day variant, this impacts the hours distribution in two subareas as opposed to only one.

Example: Route 255's all-day variant travels between Kingsgate and downtown Seattle and is 50-50. In addition, there are peak-only "turnback" trips westbound in the morning from Kirkland to downtown and returning eastbound in the afternoon. These peak-only trips are charged to the East subarea. Riders have requested that these "turnback" trips be extended to begin/end at Kingsgate. But doing that would result in additional hours allocated to the West subarea resulting from the extended trips in Kirkland (conversion from East only hours to East-West 50-50 hours).

Metro Fixed Route Service Families and Productivity Measures

By Area of King County

7/1/10



Note: This chart was used during the Regional Transit Task Force Process. After the RTTF process concluded, Metro added a fifth service family category - Very Frequent.

2009 Families of Fixed Route Services

Frequent Arterial

30 minute headways or better, 16-18 hours a day
Connect centers
56 routes
73.8 million rides
37.4 riders per platform hour
144 rider miles per platform hour

Peak Commuter

Operates only in peak weekday travel periods
Connect regional employment centers
99 routes
10.5 million rides
20.8 riders per platform hour
198 rider miles per platform hour

Local

Operate no better than every 30 minutes
Connect to other services and neighborhood centers
60 routes
30 million rides
25.1 riders per platform hour
97 rider miles per platform hour

Hourly

Operate no better than every 60 minutes
Provides basic transit access and coverage in low density areas
25 routes
1.2 million rides
12 riders per platform hour
60 rider miles per platform hour