King County Auditor's Office

Kymber Waltmunson, King County Auditor



Transit Asset Management: Improvements Needed to Meet Workload

David Dean Sean DeBlieck Chantal Stevens Ben Thompson

December 8, 2015

Executive Summary

Transit must make changes to its asset management program in order to meet increasing maintenance workload. Transit has made progress in understanding needs and budgeting for them, yet recent projects have not been executed as planned. Unless Transit makes changes, it could face a large backlog of maintenance projects, which will eventually impact services.

King County Auditor's Office

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King County Auditor's Office

Kymber Waltmunson, King County Auditor



Transit Asset Management: Improvements Needed to Meet Workload

Report Highlights December 8, 2015

Why This Audit Is Important

Transit has over \$2 billion in buildings and facilities to support service delivery, including bus bases, park and rides, and vehicle maintenance and operations facilities. Transit manages their upkeep largely through the Transit Asset Management Program (TAMP). Transit has spent about \$12 million annually on the maintenance of its facilities, but estimates that expenditures will need to increase by 50%, to more than \$18 million annually for the next five years to keep its facilities in a state of good repair. If Transit is unable to keep its facilities in a state of good repair, it could create a large backlog of necessary maintenance work, leading to tens of millions of dollars in increased maintenance costs and eventually a negative impact on transit services.

What We Found

While Transit has been a leading agency in maintaining its facilities, it must make changes to address increasing maintenance workload, as well as improve transparency and accountability of the TAMP projects. Transit has effectively assessed building conditions and budgeted funds for maintenance activities; however, there are barriers in terms of project management, IT systems, reporting, and planning. Transit does not have a consistent record of completing planned asset maintenance work and will likely miss its 2015 target. In addition, Transit's practice of using one master project to plan and report on TAMP subprojects limits information available to decision-makers and could lead to excessive budgeting.

What We Recommend

We make recommendations to improve the execution and oversight of Transit's capital asset maintenance projects. We recommend that Transit develop a plan to improve project performance, transparent ways of structuring projects and subprojects, and a robust strategic plan for its maintenance needs.

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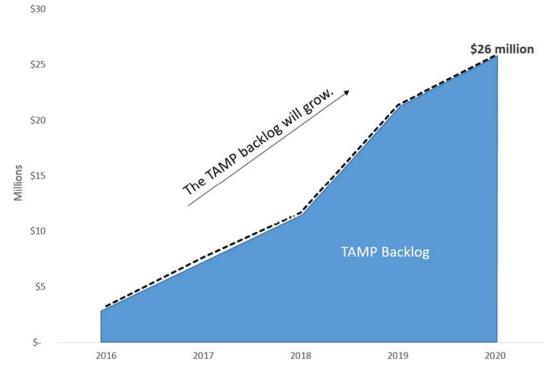
Section Summary

Unless Transit improves how it manages and delivers projects, it could have a backlog of tens of millions of dollars in maintenance projects.

Transit has identified a series of issues that are hampering its ability to complete planned and necessary maintenance projects and has started to address those issues, including the implementation of a new information technology (IT) system it hopes will address some of these issues. However, it is not yet comprehensively addressing barriers to project execution and is unclear whether its initial efforts will be complete in time to avert increases in cost and a large backlog.

Transit may soon face a large backlog of capital maintenance needs Unless Transit enhances its capacity to complete maintenance projects, increased need and recent expenditure history indicate the agency will soon face a maintenance backlog of tens of millions of dollars. In recent years, Transit spent an average of \$12 million on the maintenance of its facilities—facilities that are essential for transit service such as fueling stations, building systems, and large equipment for fleet maintenance. However, based on updated condition assessments, Transit will need to increase expenditures by 50% to more than \$18 million annually for the next five years, to keep its capital assets in a state of good repair. If it fails to do so, it may face a \$26 million backlog by the end of the decade as shown in Exhibit A.

Exhibit A: If Transit continues on this path, the backlog of identified maintenance needs will grow.



Source: Auditor's Office analysis based on Transit's planned and actual expenditures on Transit Asset Management Plan (TAMP), adjusted for inflation.

The backlog could lead to millions of dollars in increased maintenance costs and eventually have a negative impact on transit services.

Transit's new project management system can improve performance and transparency

An integrated project management system is necessary to improve project management. Transit is developing a \$2.6 million IT system that will be used to manage its Transit Asset Management Program (TAMP) and other capital projects. Transit identified the need for this type of system 10 years ago but was asked to postpone development to accommodate the creation of the county's new financial system. To manage projects in the interim, Transit has been using a provisional approach that does not provide the type of information necessary to effectively oversee, manage, and execute projects. The new system—the Capital Management and Reporting System (CMRS)—will provide tools for project managers and give a clearer picture of capital needs and project performance. However, the utility and functionality of CMRS will be limited if it is not fully integrated with Transit's asset management tracking program (EAM) and other financial systems. To address concerns that have been raised about the transparency of TAMP, CMRS information should also be accessible to outside parties.

Recommendation I

Transit should ensure that the Capital Management and Reporting System (CMRS) is fully integrated with financial and asset management systems and is ready to manage projects in the 2017-2018 biennium. Transit should further ensure that the CMRS effectively tracks performance of capital projects as well as offering reporting capability to outside users.

Transit's efforts may be insufficient to increase capacity to deliver projects

Other efforts to address barriers to project execution are not on track to improve project completion in this or the next biennium. Transit is not currently on track to finish its 2015 planned asset maintenance projects—the third time in the past four years that it will have failed to complete all of the projects it has planned and budgeted. At the project level, a recent county performance report for large capital projects shows delays in completion for three out of four asset maintenance projects that have started or completed construction. Additionally, even after reducing its expenditure target by millions of dollars (by shifting certain large projects to future years), at the end of August 2015 Transit had only spent one third of its new, updated TAMP budget.

¹ Based on Auditor's Office analysis of Transit expenditures as of August, 2015.

Transit has taken steps to improve its project delivery process. For example, Transit has updated its Project Management Manual to incorporate best practices recommended by the King County Capital Project Management Work Group. Transit also made improvements to its decision-making process by creating steps for supervisory review and establishing regular management and supervisor meetings to identify and resolve issues on specific projects. Those two improvements may have helped Design and Construction, the division responsible for most facilities and infrastructure capital project management, complete most of its planned work on TAMP in 2014.²

Other barriers to project delivery remain, including:

- Transit has a number of open project manager positions, but has not formally assessed the number of people and skill sets needed to accomplish planned TAMP work. Current project manager job classifications may not align with the needs of the agency. For instance, a current job description requires an engineering degree but does not require project management certification.
- Transit is trying to change the organizational culture to ensure implementation of new methods to document and report work.
- Project managers for TAMP projects can be and are assigned to other
 projects outside of the TAMP program. Transit told us that when major
 non-maintenance projects arise (such as new ORCA—One Regional
 Card for All—card reading system, expansion of RapidRide, and the
 Washington State Convention Center) TAMP project managers may be
 reassigned to this other work and thus postpone TAMP projects.

Transit has started to take action on some of those issues, and shifted certain projects to future years based on an updated condition needs assessment. However, given its performance, some projects that remain in the plan will not be completed on time for the next big influx of projects in 2017 (Exhibit B) adding to the backlog and generating additional costs to the county.

3

² Two Transit divisions are responsible for TAMP projects: Design and Construction and Power and Facilities.

Exhibit B: Transit's current plans will not address all TAMP issues for several years.

TAMP Issues and Efforts	Estimated Start	Estimated Completion
Improve project management practices with updated manual and training	2014	Ongoing
Track project performance ^a	2014	Ongoing
Fully functional IT project management system (CMRS)	2015	7/2017
Clarify roles and responsibilities by improving decision-making structure	2014	Done
Review and improve staffing levels and position qualifications of Design and Construction Division	2015	2016
Implement LEAN process improvement to project management at design and construction	2014	Ongoing
Address staff allocation and workload	2014	None

^a Effective tracking of performance will require completion of CMRS

Source: Auditor's Office analysis based on interviews with Transit.

Recommendation 2

Transit should develop and document a comprehensive strategy to resolve barriers to asset maintenance project delivery, including staffing levels, qualifications, organizational culture and structure, and develop a timeline and description of steps it will take to resolve those barriers. These steps should be done in time to support the implementation of the 2017-2018 budget.

^bOriginally scheduled to be complete at the end of 2016

2. Project Classification and Oversight

Section Summary

Classifying TAMP projects into a single master project makes it difficult to determine if priorities are being funded and whether projects are being completed as planned. Transit's aggregation of most maintenance projects into a single master project,³ while in compliance with current county rules, limits the ability for decision-makers to make informed decisions about the allocation and expenditure of public resources. However, Transit has an opportunity to work with the county to address this issue as it prepares for the next biennium.

Master projects
make oversight
more challenging
and give the
agency
considerable
flexibility in how
the money is used

Most of Transit's asset maintenance projects are grouped into one master project, making it difficult to assess the performance of the program or individual projects. The county's Capital Improvement Program (CIP)⁴ includes details about two major types of capital projects: stand-alone projects and master projects, which are made up of multiple subprojects. In the CIP, Transit groups most of its asset maintenance projects into the TAMP master project, though in some cases similar maintenance projects are reported as stand-alone projects. Exhibit C shows how project categorization is important, because it impacts the agency's ability to use funds, the type of information that is reported, and the level of oversight that the project can receive.

Exhibit C: The CIP can be used to assess stand-alone project performance but not master projects.

Because there are specific dates tied to this project, decisionmakers can use these numbers to determine if the work is being done as planned. For example, if there are no expenditures on For the stand-alone project, it is this project in 2015-2016, it could raise questions about clear what Transit plans to spend performance and priorities. the money on, where, and when. Project Number Project Name FY17-18 FY19-20 \$1,470,247 1117191 Ryerson Base Lift Replacement \$69,312 \$1,539,559 \$0 Standalone 1119594 Transit Asset Maintenance \$23,188,049 \$44,867,345 \$48,802,362 \$116,857,756 **Project with Subprojects** This is the TAMP Since the composition of subprojects may change, these master project. Transit plans to spend the money on planned expenditure numbers cannot be used as the basis a group of smaller projects. Over to determine if the work is being done as planned or if the time, these subprojects may change, money is being spent on county priorities.

Source: Auditor's Office analysis based on information in King County 2015-2016 CIP.

and money may shift between projects or to new projects.

³ The TAMP appropriation resides at the master project level. Individual project efforts—subprojects—are tracked by Transit separately within the appropriation. Transit does not record costs in the master project number. Projects over \$1 million are reported in the PIC system. Transit provides cash flow details (by project) to PSB as part of budget development.

⁴ The CIP is a multi-year county plan which identifies and prioritizes expected needs, establishes project scope and cost, details estimated funding, and projects future operating and maintenance costs.

2. Project Classification and Oversight

Master projects increase flexibility for the agency but limit oversight.

When master projects are used, an agency can use its discretion to move funds among subprojects as needs arise. For example, if a water main unexpectedly breaks at Ryerson Base, Transit could pay for the repair using funds it set aside for another purpose, such as paving at Atlantic Base. However, it also means decision-makers have less control over how the money is being used and less visibility over whether priorities are being met by the agency. Using the previous example, if the Atlantic Base paving improvements were a policy priority for decision-makers when the appropriation was made, there is no assurance that this work will actually be done.

Performance information for many TAMP projects is limited

Entities outside of Transit cannot assess performance on individual TAMP projects, except for those estimated to cost more than one million dollars. A common method to assess project performance is to compare budgets to actual expenditures. Transit records expenditure information of all TAMP subprojects in the county's financial system, but does not include subproject budgets. Transit provides budget and expenditure data on some TAMP projects—those estimated to be \$1 million or more and baselined—through the county's Capital Project Information Center (PIC). However, because the PIC reports are limited to large, baselined projects, information is only provided on six of the 34 TAMP projects currently underway in 2015. As a result, entities outside of Transit do not have the estimated total cost of most TAMP projects or the context to gauge how far along most TAMP projects are. Without this critical budget information, the ability of decision-makers to ensure that public resources are being used efficiently and effectively is limited.

County policies do not prevent TAMP from excessive budget allocations

The county has policies to prevent excessive budget allocations and backlog, but these cannot be applied to master projects like TAMP. The county addresses the risk of excessive budgeting by making periodic adjustments to the budget. These adjustments help ensure that project dollars are not accumulating and thus unavailable for other uses. Adjustment to project dollars can be initiated by the agency, or disappropriated when:

- 1) there are no expenditures on a project in 36 months
- 2) actual expenditures are below what was established in the budget.

2. Project Classification and Oversight

Since the projects do not have a budget in the financial system, there is no basis to determine what funds, if any, were underspent and eligible for disappropriation. Once the money is in the master project, it can continue to carry over into future years, building up a backlog of unspent funds or being used for purposes that were not originally intended by policy-makers during budget appropriation.

Transit can begin addressing TAMP oversight issues before the next biennium

Transit has the opportunity to work with Performance, Strategy and Budget (PSB) to address issues before the 2017-2018 budget cycle. PSB is currently working with agencies to develop guidance that may address the use of master projects and subprojects and plans to issue this guidance in early 2016. Through its 'CIP-5' initiative, PSB hopes to achieve more consistency among county agencies in how they develop their sections of the CIP. For example, in contrast to Transit, the Wastewater Treatment Division organizes its facility maintenance projects into multiple master projects, organized by system type. Issues that could begin to be addressed in this forum include methods to 1) include subproject budget information in the financial system, and 2) identify ways to mitigate excessive budgeting. Transit is part of the CIP-5 initiative. However, if Transit continues to use the large TAMP master projects in the next biennium, it may delay oversight of these projects for at least four more years, making it difficult to have assurance that Transit maintenance dollars are spent in alignment with policy priorities.

Recommendation 3

Transit should use the opportunity presented by Performance, Strategy and Budget's CIP-5 initiative to develop and document:

- a) an updated master-subproject structure for 2017-2018 maintenance projects
- b) clear criteria for subprojects included in master projects
- c) methods to reduce the risk of excessive budgeting.

3. Planning and Results

Section Summary

The absence of a comprehensive asset management plan makes it difficult for management to determine whether the maintenance program is producing desired results. While Transit's plan meets state and federal minimum requirements, it lacks basic elements of strategic planning and performance management. To meet an expected level of services, the program should clearly state what it is trying to achieve.

TAMP lacks some basic elements

Because it has the framework for a robust plan and a strong relationship with American Public Transportation Association (APTA), Transit is well-positioned to enhance its asset management planning by including elements called for by leading Transit organizations. Transit's asset management plan has been certified by Washington State's Department of Transportation (WSDOT) since 2005, and Transit officials have worked with APTA to develop asset management guidance for other transit agencies seeking to comply with federal guidelines, such as those outlined in the 2012 Moving Ahead for Progress in the 21st Century Act (MAP-21).

However, Transit's plan lacks important elements recommended by leading transit organizations. APTA recommends that asset management plans include goals, objectives, timelines, and an overarching strategy, and the Transit Cooperative Research Program (TCRP) calls for performance measures that can illustrate the effectiveness of Transit's asset maintenance activities.⁵

Exhibit D: Transit's current plan is missing critical elements.

Elements of Asset Management Plan	Included in Transit's Asset Management Plan
Performance Metrics	No
Timelines	No
Goals and Objectives	Yes
Condition Assessment	Yes
Asset Inventory	Yes
Mission Statement	Yes

Source: Auditor's Office analysis based on best practice literature published by APTA and TCRP.

⁵ TCRP recommends that agencies have, at a minimum, certain core performance measures in their asset management plans. Two that are relevant for TAMP are (1) backlog of investment needs and (2) average asset age. Another relevant performance measure it recommends is the percent of assets in good, fair, and poor condition. See TCRP Report 172, Guidance for Developing a Transit Asset Management Plan, 2014.

3. Planning and Results

We have raised concerns about Transit's asset management plan in previous audits, most notably in 2005 and 2009 when we made recommendations for Transit to improve its plan. Our recommendation and subsequent status updates are detailed in Appendix 1. While Transit has instituted a condition assessment process, it could strengthen its asset management framework, improve stakeholder communication, and potentially increase productivity and reduce costs by addressing the missing elements in its plan. Identifying key measures to track and monitor performance should optimize service delivery and minimize costs over asset life. One tool to evaluate the status of the current effort is to use the Federal Transit Administration's Transit Asset Management Maturity Agency Self-Assessment.

Recommendation 4

As we recommended in 2005 and again in 2009, Transit should complete a robust asset management plan that outlines the agency's goals, objectives, activities, roles, responsibilities, and timelines, all of which should be guided by an overarching strategy that defines an expected level of service the agency is expected to deliver. Transit should begin by updating its definition of state of good repair and identifying performance metrics that can demonstrate the effectiveness of its activities.

Conclusion

Transit recognizes that it will need to resolve multiple issues in order to address TAMP performance and meet its asset maintenance needs. However, current plans are not thoroughly and comprehensively developed, and it is unlikely that Transit will have information that is necessary to develop the 2017-2018 budget. In the absence of more timely and strategic information, the County can expect Transit to develop a growing backlog of maintenance needs that, if left unchecked, will eventually impact services provided by this agency.

Appendix I

Transit Asset Management Plan Recommendation and Status (2005-2013)

Year	Auditor's Office Recommendation
2005	Transit should consider using the state-mandated Asset Management Plan to document and communicate its asset management approach both internally and externally.
2009	We continue to recommend that the comprehensive Asset Management Guidebook be completed.

Year	Auditor's Office Review of Transit Implementation
2007	Originally planned for the second quarter of 2006, Transit has decided to develop a more comprehensive asset management guidebook that satisfies both state and federal requirements. During this year's federal triennial review, Transit discovered that the state's required plan is inadequate to address federal requirements for documentation of the asset management approach. Instead of updating the state-mandated plan, then, Transit intends to develop a more comprehensive guide. Transit has not set a schedule for developing the document.
2009	Transit developed Asset Management Guidelines in July 2008. This document provides an overview of state, federal, and county requirements for asset management, as well as a description of Transit's replacement processes for different asset types. It is not the comprehensive guidebook on asset management envisioned in Transit's 2007 response. According to Transit, the division has not worked on the document in over a year. Our original recommendation in 2005 was intended to help Transit assimilate and communicate its approach to asset management, using an existing process (the state requirements).
2013	Transit did not concur with this recommendation. They report that they are in compliance with all state and federal asset maintenance requirements. Although we made this recommendation in 2005 and again in 2009 we will close the recommendation as incomplete. [CLOSED]

Executive Response



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October 13, 2015

Kymber Waltmunson King County Auditor Room 1033 C O U R T H O U S E

Dear Ms. Waltmunson:

Thank you for the opportunity to review and comment on the proposed final report on Transit Asset Management Improvements Needed to Meet Workload.

We appreciate the thoughtful approach taken by the auditors as they examined the Metro Transit Asset Management Program (TAMP). Maintaining our assets is a high priority and one that is shared by the Federal Transit Administration (FTA), which has been taking steps to strengthen the requirements for all transit agencies in the country.

The audit provides recommendations that, in conjunction with the developing requirements from the FTA, will allow us to strengthen our program. As you know, Metro Transit has a long history of asset maintenance and is always looking for ways to improve. In this spirit, we concur with the four recommendations identified in the audit report.

The actions necessary to comply with the recommendations are underway and will be an important part of the 2017/2018 budget development process. These actions will extend into the 2019/2020 biennium as we complete the first round of condition assessments and have a clearer picture of our asset management needs.

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Executive Response (continued)

Kymber Waltmunson October 13, 2015 Page 2

Thank you for collaborating on this important work. If you have any questions regarding our audit response, please contact Jill Krecklow, Finance Manager – Enterprise Operations, Metro Transit at 206-477-5899.

Sincerely,

Dow Constantine King County Executive

Enclosure

cc: Fred Jarrett, Deputy County Executive, King County Executive Office (KCEO)

Rhonda Berry, Chief of Operations, KCEO

Harold S. Taniguchi, Director, Transportation (DOT) Kevin Desmond, Division Director, Transit, DOT

Jill Krecklow, Finance Manager-Enterprise Operations, Transit DOT

Executive Response (continued)

Recommendation No. 1

Transit should ensure that the Capital Management and Reporting System (CMRS) is fully integrated with financial and asset management systems and is ready to manage projects in the 2017-2018 biennium. Transit should further ensure that the CMRS effectively tracks performance of capital projects as well as offering reporting capability to outside users.

Select concurrence below	Implementation date or N/A	Responsible agency
Concur (explanation optional)	July 2017 for full	Transit
	reporting	
	0 1 1	0 0 1 1 1

Agency concurrence comment, or reason for partial or non-concurrence for Recommendation 1

The CMRS system is currently being developed. Core functionality is scheduled for implementation in early 2017. The budget development cycle starts in early 2016 and it is very unlikely that the system will be available at that time. It will be available for use early in 2017 and will be used to manage projects during the 2017/2018 biennium. The system requirements will include performance measures for the program.

Recommendation No. 2

Transit should develop and document a comprehensive strategy to resolve barriers to asset maintenance project delivery, including staffing levels, qualifications, organizational culture and structure, and develop a timeline and description of steps it will take to resolve those barriers. These steps should be done in time to support the implementation of the 2017-2018 budget.

Select concurrence below	Implementation date or N/A	Responsible agency
Concur (explanation optional)	May 2016 for budget proposal	Transit

Agency concurrence comment, or reason for partial or non-concurrence for Recommendation 2

An action plan will be developed to identify the steps necessary to identify and evaluate options addressing the concerns identified in the audit and the actions that are currently underway. Actions that require funding or additional resources will be identified and included in the budget that is transmitted to the Executive in July.

Recommendation No. 3

Transit should use the opportunity presented by Performance, Strategy and Budget's CIP-5 initiative to develop and document:

- (a) an updated master-subproject structure for 2017-2018 maintenance projects
- (b) clear criteria for subprojects included in master projects
- (c) methods to reduce the risk of excessive budgeting.

July 2016 submittal of	Transit
Transit's proposed	
2017/2018 budget	
	Transit's proposed

Agency concurrence comment, or reason for partial or non-concurrence for Recommendation 3

The 2017/2018 budget will include project structures that have been agreed with PSB that meet the goals of providing more transparency while providing sufficient flexibility to address biennial budgeting limitations \cdot .

Executive Response (continued)

Recommendation No. 4

As we recommended in 2005 and again in 2009, Transit should complete a robust asset management plan that outlines the agency's goals, objectives, activities, roles, responsibilities, and timelines, all of which should be guided by an overarching strategy that defines an expected level of service the agency is expected to deliver. Transit should begin by updating its definition of state of good repair and identifying performance metrics that can demonstrate the effectiveness of its activities.

Select concurrence below	Implementation date or N/A	Responsible agency	
Concur (explanation optional)	June 2018	Transit	
Agency concurrence comment, or reason	Agency concurrence comment, or reason for partial or non-concurrence for Recommendation 4		
The Federal Transit Administration of	on September 30, 2015 issued	proposed rules for	
Transit agencies that accept federal fu	ands. The proposed rules out	line the expectations	
and elements for Transit Asset Management Plans that will be required. King County			
Metro Transit will be working to be in compliance with the final rules when they are			
adopted. The deadline for implementation is no later than 2 years following the issuance			
of final rules. We do not have a timeline for when the final rules will be issued but have			
selected June 2018 as our deadline for full implementation as a complete cycle of			
condition assessments will be completed by that time and will be available for the			
2019/2020 budget development. The resulting Asset Management Plan will be compliant			
with FTA rules and requirements and should generally address the concerns identified in			
the audit.			

Statement of Compliance, Scope, Objective & Methodology

Statement of Compliance with Government Auditing Standards

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Scope of Work on Internal Controls

We assessed internal controls relevant to the audit objectives. This included review of selected policies, plans, processes, and reports. We reviewed Transit's capital expenditure data from 2012-2014 and found it sufficiently reliable for our purposes.

Scope

This audit focuses on Transit's performance, planning, and management of capital asset maintenance projects.

Objectives

To what extent does Transit incorporate best practices in the management of Transit Asset Management Program (TAMP) projects, and to what extent is Transit preparing for the projected increase in TAMP expenditures.

Methodology

The Auditor's Office utilized a multi-methodological approach to complete this audit. Key activities that informed our findings include:

- A review of financial (expenditure and budget) data from 2012-2015
- A review of recent asset management guidance published by the Federal Transit Administration (FTA), Transit Cooperative Research Program (TCRP), and American Public Transportation Association (APTA)
- Interviews with management and staff from Transit; Performance, Strategy and Budget (PSB); and Wastewater Treatment Division (WTD)
- Desk review of the documentation from three recent, large TAMP projects
- Site visits at three bus bases (Atlantic Base, East Base, and North Base).

List of Recommendations & Implementation Schedule

Recommendation 1: Transit should ensure that the Capital Management and Reporting System (CMRS) is fully integrated with financial and asset management systems and is ready to manage projects in the 2017-2018 biennium. Transit should further ensure that the CMRS effectively tracks performance of capital projects as well as offering reporting capability to outside users.

Implementation Date: July 2017

Estimate of Impact: When the CMRS is fully integrated and used to manage projects, it will improve the accomplishment rate of capital projects. The system will provide information that can be used to monitor and report on project performance. This information can be used to identify and mitigate project management issues, and prevent the buildup of unmet maintenance needs.

Recommendation 2: Transit should develop and document a comprehensive strategy to resolve barriers to asset maintenance project delivery, including staffing levels, qualifications, organizational culture and structure, and develop a timeline and description of steps it will take to resolve those barriers. These steps should be done in time to support the implementation of the 2017-2018 budget.

Implementation Date: May 2016

Estimate of Impact: By implementing this recommendation, Transit will have a better understanding of the challenges it faces to complete maintenance projects and clear steps to resolving them. By completing these steps, Transit will increase its capacity to accomplish these projects and prevent the buildup of unmet maintenance needs.

Recommendation 3: Transit should use the opportunity presented by Performance, Strategy and Budget's CIP-5 initiative to develop and document:

- a) an updated master-subproject structure for 2017-2018 maintenance projects
- b) clear criteria for subprojects included in master projects
- c) methods to reduce the risk of excessive budgeting.

Implementation Date: July 2016

Estimate of Impact: By implementing this recommendation, entities outside of Transit (including County Council, Performance, Strategy and Budget, the King County Auditor, etc.) will be able to understand Transit's asset maintenance plans, monitor the progress Transit is making in accomplishing projects, and have reasonable assurance that Transit is meeting priorities. This recommendation will also help reduce the risk of Transit building up unnecessary spending authority in the master project.

List of Recommendations & Implementation Schedule (continued)

Recommendation 4: As we recommended in 2005 and again in 2009, Transit should complete a robust asset management plan that outlines the agency's goals, objectives, activities, roles, responsibilities, and timelines, all of which should be guided by an overarching strategy that defines an expected level of service the agency is expected to deliver. Transit should begin by updating its definition of state of good repair and identifying performance metrics that can demonstrate the effectiveness of its activities.

Implementation Date: June 2018

Estimate of Impact: By implementing this recommendation, Transit will be able to keep its assets in a state of good repair. The plan will provide clear direction for Transit to achieve specific, measurable, attainable, and relevant objectives. The plan will allow Transit to realistically predict the impact of its policies and investment decisions, and proactively invest in its assets before conditions deteriorate to an unacceptable level.