



## Internal Audit Report

# Small Capital Projects Audit

Report Number: 2018 - 07 | Report Date: December 14, 2018

# Executive Summary

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**WE AUDITED** the current Operations Small Capital Projects process to assess the controls in place over realistic budget planning, practical scheduling, and adequate performance monitoring.

**AUDIT OBJECTIVE** was to determine whether the agency has effective controls in place to ensure:

- Realistic budget planning and practical scheduling.
- Adequate performance monitoring for reasonable progress within the established budget

The audit examined management controls in place as of July 2018.

## WHAT DID WE FIND?

Capital projects help Sound Transit to build, operate, enhance and maintain a transit system to improve mobility for the Puget Sound area. Over 96% of the agency capital project expenditures are for system expansion. The remainder are referred to as small capital projects for the audit.

Operations projects account for over 70% of the total small capital projects. The agency budgeted \$124 million for 2018 Operations capital projects, of which Operation has incurred \$28 million in project costs as of July 2018.

The agency has a comprehensive project oversight process, the Phase Gate Process. While almost all large expansion projects are subject to the Phase Gate Process, small capital projects are not. Each project group manages and oversees their own small capital projects.

The Operations Department annually prioritizes capital project needs for the following budget year. Project managers perform project planning to identify the scope of work, cost estimates, cash flows, resources, and market research. Small capital project budgets are reviewed based on estimated costs during the planning phase, and if approved, projects are budgeted for execution.

The audit concluded that controls over realistic budget planning and performance monitoring for reasonable progress are not adequate. See Finding #1.



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## Background

Capital projects help Sound Transit to build, operate, enhance and maintain a transit system to improve mobility for the Puget Sound area. A capital project can be for transit system construction, system expansion/replacement, or renovation & maintenance for an existing infrastructure.

Over 96% of the agency capital expenditures are for system expansion projects. The remaining 4% includes projects which are referred to in this audit as small capital projects. Among small capital projects, Operations, IT, and DECM projects are the majority, and together they account for over 90% of total small capital projects.

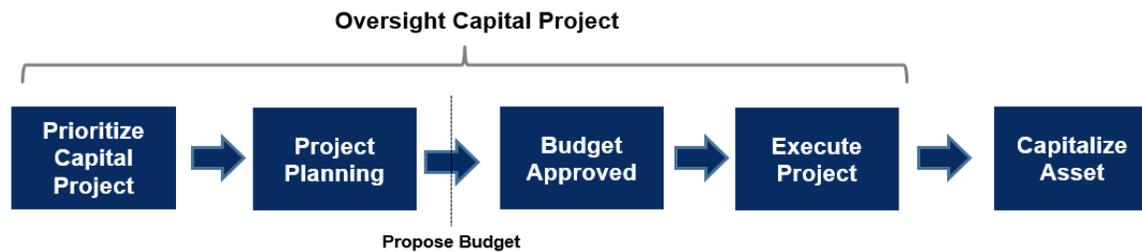
The Operations Department develops the operations' support systems through capital projects to provide safe and efficient agency services to the public. As of July 2018, budgets & actuals for Operations capital projects are as follows:

2018 Operations Capital Projects (Dollars in thousands)				
Project	Total Approved Capital Budget	2018 Project Budget	As of July 2018	
			YTD Budget	YTD Actuals
ST Express	\$254,801	\$58,070	\$20,985	\$21,135
Sounder	94,401	9,495	6,707	2,200
Link	29,816	17,873	5,381	957
Small Works Program	12,064	3,581	1,351	230
Administrative Capital	17,344	10,921	4,933	2,748
Transit Systems	24,336	18,702	9,837	316
Facilities	14,358	5,568	1,545	178
<b>Total</b>	<b>\$447,120</b>	<b>\$124,210</b>	<b>\$50,739</b>	<b>\$27,764</b>

Source: July 2018 Operations Capital Projects Variance Report

The agency has a comprehensive project oversight process, the Phase Gate Process. This oversight process breaks a project into discreet and more manageable/meaningful phases for project management purposes. With the approval of the Phase Gate Committee at each gate, the process provides transparency and ensures reasonable project progress. Every agency project is not subject to the Phase Gate Process. Generally, the voter-approved system expansion projects such as Link Light Rail Construction are required to comply with the process, but small capital projects are not.

Operations annually identifies and prioritizes capital project needs for the following budget year. Projects under \$200K are budgeted under the Small Works Program. Capital projects are budgeted as such after confirming capitalization requirements with Finance. Project managers perform project planning to identify the scope of work, cost estimates, cash flows, resources, and market research. Capital project budgets are reviewed based on estimated costs during the planning phase, and if approved, projects are budgeted for execution. Support Service Group in Operations provides oversight over expenditures and the status of project plans.



## Audit Objectives

To determine whether the agency has effective controls in place to ensure:

- Realistic budget planning and practical scheduling.
- Adequate performance monitoring for reasonable progress within the established budget.

## Scope and Methodology

We conducted this performance audit in accordance with the International Standards for the Professional Practice of Internal Auditing. 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.

We gained an understanding of small capital projects at the agency and department/division level through data analysis, documentation reviews, and personnel interviews. We identified risks in the processes and assessed management controls in place to mitigate those risks. Based on the assessment of management control effectiveness, we determined to focus on Operations small capital projects for the period January 2016 - July 2018.

We examined Operations capital projects reports and the agency Transit Improvement Plan as of July 31, 2018.

1. To determine whether the agency has effective controls to ensure realistic budget planning and practical scheduling, the audit performed the following procedures:
  - Selected 20 samples (12 capital projects & 8 Small Works projects), which represent 35% (\$43M) of 2018 budget (\$124M) comprised of 52 Operations small capital projects
    - a. Performed root cause analyses for the variance between budget and actual.
    - b. Reviewed project estimate costs, schedules, and forecasts for realistic

budget planning and practical scheduling.

2. To determine whether the agency has effective controls to adequately monitor performance for reasonable progress within the established budget, the audit performed the following procedures:

- Utilizing capital projects financial status reports from 2014 to July 2018
  - a. Analyzed annual budget, actual, & forecast, and identified over/under budget projects.
  - b. Reviewed the justification of over/under budget projects for reasonableness.

## Conclusion

Controls over realistic budget planning and performance monitoring for reasonable progress are not adequate. See Finding #1.

## Findings and Recommendations

### 1. Small Capital Project Processes Should be Strengthened

For the audit, small capital projects are defined as projects/sub-projects with a budget: 1) under \$200,000 or 2) more than \$200,000 but exempt from the agency Phase Gate Process.

The Operations Department has been managing an increasing number of capital projects to support the expanding transit system. Small capital projects for Operations have increased ~68% by count and ~200% by budget from Year 2016 to 2018. A part of the increase is due to carryovers from the previous year.

Operations Capital Projects			
Description	2016	2017	2018
Number of Capital Projects Budgeted	31	38	52
Capital Projects Annual Budget Amount	\$ 42 million	\$ 63 million	\$ 124 million

Source: July 2018 Operations Capital Projects Variance Report & Projects Financial Status Reports

To effectively manage the increasing number of small capital projects, there is a need for a project management framework that can provide a consistent method to determine the scope of work, estimated costs for budget proposal, annual planned cash flows, and resources availability. Given the size of small capital projects either individually or collectively, the framework is not expected to be as robust and comprehensive as one for large projects (e.g., the Phase Gate Process). Nevertheless, the framework for small capital projects should provide – at a reduced scale - realistic resource planning, timely project completion, and effective budget monitoring. However, the audit noted a number of exceptions in these important areas.

#### Unrealistic Resource Planning and Project Completion

Project timelines appear overly delayed. As shown in the table below, as many as 67% of planned projects are not initiated in the year budgeted. Over the last five years, the trend seems to be worsening. All budgeted projects are not expected to be initiated and/or completed in the year budgeted. However, the extent to which the timelines are being realized as estimated seems low.

Year	Total Number of Budgeted Small Projects	Not Commenced Project in the Budget Year	
		Count	Percentage of the Total
2014	26	9	35%
2015	25	5	20%
2016	31	10	32%
2017	38	17	45%
<b>*2018 (As of 7/31)</b>	52	35	67%

Source: July 2018 Operations Capital Projects Variance Report & Projects Financial Status Reports

There is always a degree of uncertainty associated with budgets and budgeted timelines, especially when assumptions are involved. To reduce uncertainty, planning efforts bring practicality into the process to eliminate as many assumptions as feasible. However, the agency’s current small project budgeting practices seem to focus on financial resources planning and appear to be lacking administrative and staffing capacity planning. Two specific considerations absent from the current practices are 1) procurement timelines and 2) ex/internal project staffing.

Many projects require cross-functional teams (e.g., Operations to/from DECM). As such, project planning without consulting the availability of potential team members can result in unintended delays. Likewise, projects delays are unavoidable if procurement timelines are not considered when a contractor/consultant is necessary. Procurement lead times can range from 6 months to well over a year, depending on procurement complexity. Thus, an approved project without capacity considerations has an implicit schedule delay before the project begins. Moreover, inadequate capacity planning can continuously impede reasonable project progress.

- 25% (3 of 12 capital projects tested) did not start because of the availability of project managers or contractors.
- On average, approximately 83% of projects was underspent over the last four budget years. The availability of financial resources (i.e., budget) alone was not sufficient to advance the projects.

Operations Small Capital Projects				
Description	2014	2015	2016	2017
Total projects budgeted	26	25	31	38
> \$1M under budget	4	4	5	10
\$500K < > \$1M under budget	2	4	6	6
\$250K < > \$500K under budget	11	13	16	21

Source: Projects Financial Status Reports

Budgets establish performance expectations. When expectations are not realized because of incomplete budget/project planning, accountability is impacted. When fully funded projects are not completed as budgeted, there could be perception challenges for the agency. Further, unrealistic project planning has financial costs. Once budgeted, the agency has to make funds available through various methods (e.g., not investing available funds). While the costs may not be significant, given the sizes of these projects, they represent real financial resources that could be available for other uses.

**Recommendations:**

We recommend the agency:

1. Include capacity considerations in the project planning process.

The following should be considered:

- Include dialogs with departments/divisions (e.g., IT, Procurement, DECM, etc.) about staff availability to support planned projects.
- Include project management consultant costs if projects are required but agency project support staffing is not available.
- Conduct a project completion feasibility study (i.e., root cause analysis) before carrying forward unspent budget to the next budget year.
- Develop procedures to forecast adequacy of cash flow for the project and update the forecast as projects progress.

### **Management Response:**

Operations management agrees with the findings, and our analysis shows that the timing of initiating small projects relative to budget authorization contribute to out of period expenditures relative to budget. This is driven primarily by process lead time, dependencies on other departments, the inherent variability of small projects, and existing resource constraints at the Agency, in particular project managers, engineers, and procurement specialists. We will work with Finance, DECM, and Procurement to collaborate on a number of improvements to the capital projects budgeting and planning process as outlined below.

Working with our partner Departments, Operations plans to implement a number of process improvements to gain better controls over planning for spending.

- 1) Operations is implementing a program management function within the Capital Asset and Technology division (CAT). Combining the Capital Projects and Asset Control group with the Operations Engineering and Technology group will allow for better planning of small projects and better resource allocation for project managers. CAT will leverage existing communication channels to better utilize design and construction manager resources from DECM.
- 2) Operations will analyze the lead time required for procurement. Currently, procurement processes and lead times are inconsistent. Operations will participate with Procurement in a scheduled for first quarter 2019 for a small projects process to improve predictability of procurement time frames to aid in project delivery and cash flow projections. We will use the information to identify project process efficiencies and improve overall cash flow projections for small projects.
- 3) Operations will establish expectations for project managers to provide monthly reports so changes in project timelines and invoicing can be reflected in cash-flow analysis. A centralized process will be established to communicate project information efficiently and transparently. Operations will work with Finance to incorporate these monthly updates into Agency reporting to provide timely and relevant reporting for the Executive Leadership team.