January 10, 2017

Mr. Jack Hutchinson
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Dear Jack:

RSM US LLP has performed a performance audit of the Sound Transit Job Order Contract (JOC) program. Our services were conducted and performed on selected accounting records and transactions, in accordance with the terms of our engagement letter and project plan.

Our report includes our conclusions on the adequacy and effectiveness of internal controls of the JOC program and is divided into the following sections:

- **Executive Summary—**Provides the background, scope and objectives, and overall summary and highlights of the engagement

- **Detailed Observations & Recommendations—**Details our specific observations on the JOC program's internal controls and recommendations for management

This report is intended solely for the information and use of management and the Audit and Reporting Committee of Sound Transit. It is not intended to be, and should not be, used by anyone other than the specified parties. Sound Transit's external auditors and regulators may be provided with a copy of this report in connection with fulfilling their respective responsibilities.

We appreciate the cooperation extended to us during this review and are pleased to be of service to Sound Transit. If you have any questions concerning this report, please contact Corey Saunders, Partner, at +1 206 341 8052 or corey.saunders@rsmus.com.

Sincerely,

RSM US LLP

Performance Audit for Job Order Contract (JOC) Program

Sound Transit

January 10, 2017

EXECUTIVE SUMMARY

Background

Sound Transit plans, builds and operates regional transit services for the people of Central Puget Sound. As the regional transit provider, Sound Transit trains and buses offer express service between major population and employment centers in King, Pierce and Snohomish counties. Sound Transit was authorized in 1993 by the state Legislature and approved in 1996 by a vote of the people living in the regional transit district, which stretches across 1,080 square miles and serves about three million people, or approximately 40 percent of Washington State's population.

In May 2013, Sound Transit awarded two contracts for Job Order Contracting (JOC) construction services to support Sound Transit's capital construction projects. The scope of services included under the contracts includes construction, alteration, and repair or improvement of various Sound Transit properties, including rail and bus facilities and infrastructure. The intent of the program is to administer small works construction projects through the use of "work orders", thereby eliminating the time-consuming and costly aspects of traditional public works contracting, such as the Invitation to Bid (ITB) procurement method.

In accordance with the Revised Code of Washington (RCW), the contracts had a maximum value of $4 million per year and a maximum not-to-exceed amount of $350,000 per work order. Sound Transit entered into two contracts for these services: 1) Contract No. RTA/CN 0007-13 with Forma Construction (previously known as Berschauer Phillips Construction Company) for projects that include federal funds, and 2) Contract No. RTA/CN 0008-13 with Centennial Contractor Enterprises, Inc. for projects that do not include federal funding. [Federally funded projects are subject to additional contracting requirements under FTA Circular 4220.1F.] The duration of these contracts was two years with a one-year extension option.

Sound Transit engaged RSM US LLP (RSM) to perform a performance audit of the JOC program and the two JOC contracts effective between May 2013 and May 2016. We performed our procedures in accordance with standards set forth by the Institute of Internal Auditors and the scope and approach set forth in our engagement letter dated July 22, 2016. We were limited to the procedures described therein.

Objective and Scope

The scope of our engagement was to assess Sound Transit's internal policies, procedures and controls in the JOC program management process for areas of risk and assess compliance with RCW. The scope of our audit included the following summary-level objectives:

- To determine whether management controls are effective to ensure post-award compliance with applicable RCWs.
- To determine whether the JOC program has been effective to realize the intended benefits of reduction in the procurement lead-time and construction cost for work orders.
- To identify opportunities for continuing program improvement with practical recommendations.

The objectives of our engagement were to determine whether Sound Transit's existing controls are adequate to mitigate risk and whether those controls are operating as intended. Additionally, we assessed whether Sound Transit's JOC project management processes are operating in an efficient and effective manner, and determined whether existing processes are sufficient to meet the operational goals and objectives of Sound Transit, specifically as they relate to requirements under RCW. To the extent we identified opportunities for improvement within JOC program management processes, policies and procedures, we made recommendations to mitigate risk, increase organizational efficiency, and align current processes with industry best practices.

In order to accomplish our objectives, we implemented an audit plan that included the following summary-level procedures:

- Review Sound Transit's policies, procedures and internal guidance for administration and management of the JOC program.
- Review other departmental policies and procedures relevant to the JOC program.
- Review applicable RCW and federal funding requirements for procuring construction services under the JOC program.
- Identify control risks and control objectives within JOC program management process.
- Perform interviews and process walkthroughs with Sound Transit management personnel and process owners.
- Assess if controls in place are adequate to mitigate risk and are operating as intended.
- Review key performance indicators and other benchmarking information from the Capital Projects Advisory Review Board of Washington State (CPARB) and other governmental agencies.
- Identify lead-time efficiencies and potential cost savings in administering construction services under the JOC program in comparison to traditional contracting methods.

This Executive Summary includes the overall summary and highlights of our engagement. Our Detailed Observations & Recommendations are provided in Appendix A.

Overall Summary & Highlights

Overall, we observed that Sound Transit has adequate processes and controls in place to administer work under the JOC program. In the post-award phases of JOC project delivery, there are adequate controls in place to mitigate areas of significant financial, legal and reputational risk to the organization. In some instances, we did identify opportunities to further reduce risk and/or improve the efficiency and effectiveness of the JOC program. We also observed opportunities to update the policies and procedures to reflect current processes performed by Sound Transit management.

Overall, we identified three (3) control deficiencies rated "Moderate" and three (3) control deficiencies rated "Low". We did not identify any control deficiencies rated "High".

Pursuant to our objectives, we were able to identify some cost benefits of administering work under the JOC program. However, we were limited in the benchmarking procedures we intended to perform to further evaluate lead-time efficiencies and cost savings, due to both the availability of industry-wide data on JOC programs and JOC-specific data tracked internally by Sound Transit. We identified an opportunity for Sound Transit to improve current processes by tracking and maintaining key performance data related to the JOC program. These observations are discussed further in our Key Highlights and Process Improvement Opportunities below.

Appendix A to this report includes our detailed observations. For each of our observations, we have provided a recommendation to mitigate the deficiency and improve the overall efficiency of the JOC program.

Key Highlights
We observed several areas in which the JOC program's processes and controls meet or exceed industry standards, which is evident by the following summary highlights. See Appendix A – Detailed Observations and Recommendations for full discussion of each.

- **Sound Transit has realized efficiencies and cost reductions through the JOC program.** Sound Transit has realized efficiencies in procurement processes and reductions in cost by administering work under the JOC program compared to traditional contracting methods. RSM observed that Sound

Transit's change order[1] rate under the JOC program is approximately 5 percent. This rate is lower than JOC industry standards (approximately 16% according to a recent study[2]) and is significantly lower than the rate of change orders on similar size projects performed under Sound Transit's standard Invitation-to-Bid procurement method (RSM observed that rate to be approximately 27%, after accounting for certain variables such as project type and size). Change orders require significant time, project management resources and potentially expose organizations to increased financial risk. Limiting change orders both in frequency and magnitude through the JOC program has decreased Sound Transit's administrative costs typically associated with change orders.

- **Sound Transit management has demonstrated a commitment to continuous process improvement of the JOC program.** Through our interviews with Sound Transit management, we identified various studies and process improvement initiatives undertaken by Sound Transit as they relate to the JOC program. For example, Sound Transit recently performed a Kaizen study to identify, evaluate and mitigate inefficiencies in the JOC program. Implementation of the study's results increased the effectiveness of the program by eliminating redundancies in management processes. Sound Transit management has similarly expressed interest in tracking key performance indicators and other data related to the JOC program to further evaluate the program and measure against other procurement methods.

- **Sound Transit has adequate processes in place for administration of the JOC program and compliance with RCW regulations.** Sound Transit's project management processes incorporate the use of forms, checklists and system controls to ensure adequate segregation of duties and adequate levels of review and approval. Although some processes performed by Sound Transit are not reflected in the policies and procedures, we observed that controls are adequate to mitigate risk, operating effectively and generally adhered to by Sound Transit personnel. As an example, Diversity compliance is monitored through several software applications and platforms. Although these systems are not reflected in the policies and procedures, the implementation of these tools provides additional system controls and increases the efficiency of Diversity compliance.

Process Improvement Opportunities

During our performance audit, we identified several opportunities to improve current processes in the JOC program management. Although Sound Transit's processes, procedures and controls are generally adequate, we believe that the observations summarized below may help to improve the overall control environment of the JOC program and increase program efficiency. See Appendix A – Detailed Observations and Recommendations for full discussion of each.

- **We recommend Sound Transit implement better documentation of the evaluation of projects for JOC procurement.** During our review, we observed that Sound Transit management does not adequately document the evaluation process to determine if JOC is the best and lowest-cost form of procurement to use. We observed that the forms implemented during this process do not include adequate detail of the evaluation process, the factors or criteria considered during the process or the decision-makers involved in the process. The form does not reflect that other forms of procurement are considered or require the initiator to attest that all regulatory requirements have been satisfied. This lack of documentation increases the risk that evaluation may not be performed consistently or appropriately for JOC projects, and that Sound Transit may not comply with RCW requirements. We recommend Sound Transit include detailed forms and processes that verify that all regulatory requirements have been satisfied, demonstrate that other forms of procurement have been considered, and justify the basis for selecting JOC procurement.

[1] Change orders refer to an agreed-upon change in contract price due to increased scope or unforeseen conditions.

[2] Arizona State University. Job Order Contracting Performance: 2015 Industry Survey. Published February 2016.

- **We recommend Sound Transit maintain and track key performance data to periodically evaluate the JOC program against industry standards and other forms of contracting.** As part of its goal towards continuous process improvement, we recommend Sound Transit implement a program of tracking and maintaining key performance data related to JOC construction procurement. Some of the data points that can be tracked are work order price, number and dollar value of change orders, basis for change orders (owner vs. contractor changes), standardized lead-time days, schedule and delay days, design costs, internal person-hours savings, etc. (Sound Transit tracks some of this information in various formats but not collectively or for the purposes discussed here.) To the extent possible, we recommend Sound Transit track similar data points for both JOC projects and projects procured under traditional contracting methods. This information will enable Sound Transit to establish metrics upon which to evaluate and measure the performance of its JOC program.

- **We recommend the policies and procedures be updated to include current processes and controls.** We identified several processes and controls that are being performed by Sound Transit management but are not reflected in the policies and procedures. We recommend that Sound Transit update the policies and procedures to include all key processes, systems and controls that have been implemented by management In order to: 1) ensure processes are performed consistently by both current and future employees, 2) enforce accountability of roles and responsibilities within the organization, and 3) provide an overall effective control environment.

APPENDIX A—DETAILED OBSERVATIONS & RECOMMENDATIONS

Project Initiation			
Ref. 1	**Inadequate documentation for the evaluation of projects and determination of JOC procurement**	**Recommendation**	**Management's Response/Action Plan**
	Observation Rating: Moderate	**Effort Rating: Low**	
	Risk: The processes used to evaluate a project for the JOC program and determine if JOC is the most appropriate type of procurement to use are not adequately documented. The forms used to initiate JOC procurement do not include detailed information regarding the JOC evaluation process, factors considered in determining if JOC or another form of procurement should be used, or the decision-makers involved in the process. It also does not require the responsible party to identify the basis for selecting JOC procurement or attest that all necessary RCW requirements have been satisfied (the intake form does display RCW requirements but does not require a responsible party to verify that those requirements have been met). **Impact of Risk:** Project managers and Sound Transit management may not evaluate projects for the JOC program consistently or using consistent criteria. The basis for selecting projects for JOC may be inconsistent. Projects may be inappropriately selected for the JOC program and/or other forms of procurement may not be considered.	We recommend Sound Transit modify the JOC Work Order Intake form to include a checklist that attests that all regulatory requirements have been satisfied, as well as justify the basis for selecting JOC procurement. This should be evidenced by documentation of the various factors used during the evaluation process and consideration of other forms of procurement. We recommend Sound Transit update their policies and procedures to include detailed procedures related to this process.	Sound Transit's current JOC Work Order Intake Form includes all RCW requirements for electing to utilize the JOC delivery method. Accordingly, we believe the risk associated with this observation is "None to Low" and further note that RCW 39.10.420 does not require public bodies to evaluate JOC against other procurement methods or to justify the basis for selecting the JOC delivery method. Specifically RCW 39.10. 420 authorizes owners to elect to utilize the JOC delivery method on projects less than $350,000 when a determination is made that the use of JOC "will benefit the public by providing an effective means of reducing the total lead-time and cost for the construction of public works projects." **Action Plan:** Sound Transit will evaluate the JOC Work Order Intake Form, as well as the related policies and procedures, for opportunities to further demonstrate and document full compliance with all RCW requirements. **Responsible Party: Procurement & Contracts Division** **Target Date: 4/30/2017**

Project Initiation			
Ref. 2	**Inadequate definitions to appropriately identify JOC projects**	**Recommendation**	**Management's Response/Action Plan**
	Observation Rating: Moderate	**Effort Rating: Low**	
	Risk: We observed that Sound Transit policies and procedures do not include a clear definition of what constitutes a "project", and do not specify any criteria that would differentiate two scopes of work for the purposes of identifying separate projects. We observed that projects are invariably classified by scope of work, physical location of the work or the subcontractors performing the work. However, there is no clear delineation to prevent a single scope of work from being separated into two or more projects. **Impact of Risk:** Sound Transit management may not understand how "projects" are defined, and/or classifications of "projects" may be applied inconsistently. This increases the risk that Sound Transit may not comply with RCW requirements. Large projects that would not otherwise qualify for the JOC program may be split into smaller projects, thus circumventing the JOC spend threshold. This increases the risk that Sound Transit may not comply with RCW requirements.	We recommend Sound Transit update their policies and procedures to include a clear definition of what constitutes a "project" and specify the criteria necessary to determine whether two scopes of work are in fact separate projects.	Under Sound Transit's current process and practice, we believe the risk of circumventing the JOC Work Order dollar threshold, or of non-compliance with RCW requirements, is "None to Low." The JOC Intake Form is required for each work order for which JOC is the proposed delivery method. While it does not include a definition of what constitutes a "project," the Intake Form, when submitted, provides detailed information about the project that allows the Design and Construction Contracts (D&C) JOC Team to evaluate the applicability of using JOC. When the D&C JOC team finds that separate work orders include a combination of similar scopes of work, location, schedule or budget source, or appear to be repetitive work, the D&C JOC team halts the process and requests more information or clarifications from the Originator. Based on that information, the JOC Team may reject the use of JOC. In addition to the scrutiny of the JOC team, a Work Order is reviewed and must be approved by several layers of Sound Transit management. **Action Plan:** Sound Transit will evaluate its JOC policy and procedures to determine the benefit of adding a definition of "project" and, if so, to establish what the definition should be. **Responsible Party: Procurement & Contracts Division** **Target Date: 6/30/2017**

Contractor Price Proposal Review			
Ref. 3	**Inadequate processes and procedures for the verification of contractor unit-prices**	**Recommendation**	**Management's Action Plan**
	Observation Rating: Moderate	**Effort Rating: Moderate**	
	Risk: RCW requires that contractors adhere to an agreed-upon unit-price book for the purposes of pricing JOC work orders. The agreed-upon unit price book is RSMeans. Per RCW, no more than twenty percent of the dollar value of a work order may consist of items of work not contained in the unit-price book. However, Sound Transit does not utilize a process to verify individual unit-prices in contractor estimates to published RSMeans rates. **Impact of Risk:** Sound Transit may approve estimates that include unit-prices that do not comply with RSMeans. Sound Transit may not be able to verify less than twenty percent of a work order consists of non-RSMeans costs. This increases the risk that the JOC program does not comply with RCW requirements.	We recommend Sound Transit develop detailed processes to verify the accuracy of RSMeans unit-prices included contractor estimates. We recommend the policies and procedures be updated to include these processes.	Under Sound Transit's current process and practice, we believe the risk associated with this observation is "None to Low." The contracts for our two JOC contracts requires that the JOC contractor use RSMeans unit prices. The JOC contractor is also required to submit unit prices for items of work that are not found in the price book and identify them in the cost proposal for each work order. Non-priced items are then reviewed by the D&C JOC Team to verify that, consistent with the RCW, the total cost of non-priced items is less than 20% of the work order cost. The JOC contractor utilizes the RSMeans software to generate cost proposals; there is, therefore, a high level of confidence in the accuracy of unit prices. Each cost proposal is then reviewed by the JOC Team using RSMeans to further evaluate items or unit prices that are out of the ordinary or for verification of non-priced items. **Action Plan:** Sound Transit will evaluate its JOC policy and procedures to determine the benefit of adding a process to verify the accuracy of RSMeans unit prices in contractor estimates and, if so, to establish what it should be. **Responsible Party: Procurement & Contracts Division** **Target Date: 12/31/2017**

Project Initiation			
Ref. 4	**Policies and procedures do not reflect current processes for evaluation of JOC projects estimated to exceed $300,000**	**Recommendation**	**Management's Response/Action Plan**
	Observation Rating: Low	**Effort Rating: Low**	
	Risk: As part of Sound Transit's internal processes, JOC projects that are estimated to exceed $300,000 are discussed between Project Managers and Contracts Specialist. However, the process for performing those consultations and documenting the results are not included in the current policies and procedures. **Impact of Risk:** Project Managers and Contracts Specialist may not understand their roles and responsibilities for further evaluations of projects estimated to exceed $300,000. Project Managers and Sound Transit management may not evaluate projects for the JOC program consistently or using consistent criteria. Projects may be inappropriately selected for the JOC program and/or other forms of procurement may not be considered.	We recommend Sound Transit update their policies and procedures to include detailed procedures related to evaluation of projects estimated to exceed $300,000.	The RCW threshold for JOC Work Orders is $350,000. There is no regulatory, policy, or process threshold for work orders estimated to exceed $300,000. Current Sound Transit procedures require all potential JOC Work Orders be thoroughly reviewed for a number of items, one of which is to ensure that the scope of work and its associated risk, and any potential change orders do not, under any circumstances, exceed the RCW ceiling of $350,000. Creating additional review procedures for potential work orders over $300,000 would be redundant. **Responsible Party: N/A** **Target Date: N/A**

Contractor Price Proposal Review			
Ref. 5	**Inconsistent cost-variance analysis performed for JOC projects**	**Recommendation**	**Management's Response/Action Plan**
	Observation Rating: Low	**Effort Rating: Low**	
	Risk: Sound Transit policy requires that the Project Manager perform a cost-price analysis to evaluate variances between contractor pricing and ICEs. We observed several work orders that did not include a cost-price variance analysis. **Impact of Risk:** Cost-variance analyses may not be consistently performed to evaluate contractor pricing. Sound Transit may receive pricing from contractors that is not accurate or reasonable.	We recommend that Sound Transit more strictly enforce the requirement that a cost-variance analysis is performed prior to approval of a JOC work order.	Sound Transit will continue to enforce its procedure that requires a cost-price analysis. The requirement for a cost-price analysis is strictly enforced and is performed prior to approval of every JOC Work Order. Out of eighty Work Orders executed, four of the files reviewed by the Auditor did not contain documentation of a formal cost-price analysis. There was, however, documentation from the Construction Manager verifying that the price proposal was evaluated and that it was fair and reasonable. **Action Plan:** Sound Transit will continue to enforce its procedure requiring a cost-price analysis prior to approval of every JOC Work Order. **Responsible Party: Procurement & Contracts Division** **Target Date: On-going**

Work Order Invoicing			
Ref. 6	**Policies and procedures do not reflect current processes for Diversity compliance**	**Recommendation**	**Management's Response/Action Plan**
	Observation Rating: Low	**Effort Rating: Low**	
	Risk: As part of Sound Transit's internal processes, invoices are reviewed by the Lead Diversity Program Specialist to ensure compliance with applicable diversity requirements, such as SBE/DBE participation goals, certification of wages paid and compliance with prevailing wage or Project Labor Agreement requirements. Specific applications and modules are used to monitor compliance, such as B2G and LCP Tracker. However these processes and the related systems utilized are not included in the current policies and procedures. **Impact of Risk:** Sound Transit management may not understand their roles and responsibilities for monitoring contractor compliance with diversity goals, federal funding requirements or RCW requirements. Compliance with diversity goals, federal funding requirements or RCW requirements may not occur or occur consistently across projects.	We recommend Sound Transit update their policies and procedures to include detailed procedures for Diversity's roles and responsibilities in monitoring contractor compliance with diversity goals, federal funding requirements or RCW requirements.	JOC procedures are included in the Office of Small Business Development and Labor Compliance's (OSBDLC's) DBE Administrative Manual which include how JOC project data will be input and monitored for compliance. Sound Transit will, however, review all opportunities for continuous process improvement in this area. **Action Plan:** Sound Transit policies and procedures related to JOC will be evaluated and updated, as needed, to clarify OSBDLC's roles and responsibilities for monitoring contractor diversity and labor compliance requirements. **Responsible Party: Office of Small Business Development and Labor Compliance** **Target Date: 6/1/2017**

Process Improvement Opportunity			
Ref. 7	**JOC Program Performance Data Tracking**	**Recommendation**	**Management's Response/Action Plan**
	Opportunity: As part of its goal towards continuous process improvement, we recommend Sound Transit implement a program of tracking and maintaining key performance data related to JOC construction procurement. Some of the data points that can be tracked are work order price, number and dollar value of change orders, basis for change orders (owner vs. contractor changes), standardized lead-time days, schedule and delay days, design costs, internal person-hours savings, etc. (Sound Transit tracks some of this information in various formats but not collectively or for the purposes discussed here.) To the extent possible, we recommend Sound Transit track similar data points for both JOC projects and projects procured under traditional contracting methods. This information will enable Sound Transit to establish metrics upon which to evaluate and measure the performance of its JOC program.	We recommend Sound Transit maintain and track key performance data to periodically evaluate the JOC program against industry standards and other forms of contracting.	Sound Transit's current practice already includes a program of tracking and maintaining all key performance data related to the JOC program. We have evaluated the recommendation and believe, as well, respectfully, that some of the data points mentioned in the observation are either not measurable or would not be helpful to track. In addition, it is important to note that, as an RCW requirement, the state's Capital Projects Advisory Review Board (CPARB) regularly collects quantitative and qualitative project data from all public bodies using JOC. With the collected data, CPARB evaluates JOC contracting procedures and provides guidance to state policymakers on ways to further enhance the quality, efficiency and accountability of all public works contracting methods including JOC. Sound Transit continuously collects and submits to CPARB the JOC program data required by the RCW.

APPENDIX B—RATING DEFINITIONS

Observation Risk Rating Definitions	
Rating	**Definition**
Low	Observation presents a low risk (i.e., impact on financial statements, internal control environment, or business operations) to the organization for the topic reviewed and/or is of low importance to business success/achievement of goals. Action should be taken within twelve months (if related to external financial reporting, must mitigate financial risk within two months unless otherwise agreed upon).
Moderate	Observation presents a moderate risk (i.e., impact on financial statements, internal control environment, or business operations) to the organization for the topic reviewed and/or is of moderate importance to business success/achievement of goals. Action should be taken within nine months (if related to external financial reporting, must mitigate financial risk within two months).
High	Observation presents a high risk (i.e., impact on financial statements, internal control environment, or business operations) to the organization for the topic reviewed and/or is of high importance to business success/achievement of goals. Action should be taken immediately, but in no case should implementation exceed six months (if related to external financial reporting, must mitigate financial risk within two months).

Level of Effort Rating Definitions	
Rating	**Effort**
Low	Level of effort to address improvement opportunity meets the following criteria: • Completion in < 3 months • Requires change to no more than two manual processes • Only local/department resources needed
Moderate	Level of effort to address improvement opportunity meets the below criteria: • Completion in 3 to 12 months • Requires modification to current system application set up • Cross-functional resources
High	Level of effort to address improvement opportunity meets the below criteria: • Completion requires more than 12 months • Requires new system or module or significant programming change to existing system • Entity-wide resources

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