Appendix A

Delegation of Authority for
WSDOT Chief Financial Officer to Certify Financial Plans

Washington State Department of Transportation
Paula J. Hammond, P.E.
Secretary of Transportation

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May 19, 2009

I, Paula J. Hammond, Secretary of the Department of Transportation of the state of Washington, under the powers granted to me by Title 47 RCW, do hereby delegate my powers, functions, obligations, and duties as Chief Executive Officer with respect to U.S. Department of Transportation related Financial Plans and Annual Reports to Chief Financial Officer and Assistant Secretary of Strategic Planning and Finance, Amy Arnis.

This delegation applies to certification and submittal of Financial Plans and Annual Reports to the U.S. Department of Transportation.

Nothing in the foregoing delegation shall limit my right or the right of the Chief Financial Officer, Amy Arnis, to take the foregoing actions in our own names.

Paula J. Hammond, P.E.
Secretary of Transportation

Appendix B

WSDOT Secretary's Executive Order E 1053.01, "*Project Risk Management and Risk Based Estimating,*" May 11, 2011

Washington State Department of Transportation

Secretary's Executive Order
Number: E 1053.01

Signature on file
Paula J. Hammond, P.E.
Secretary of Transportation

May 11, 2011
Date

Project Risk Management and Risk-Based Estimating

I. Introduction

A. Purpose

The Washington State Department of Transportation (WSDOT) is committed to comprehensive project risk management as an integral part of project management. This Secretary's Executive Order formalizes our continuing commitment to identify, share, and manage risks across organizations and functions. This commitment to project risk management also supports WSDOT's efforts and directions provided in Secretary's Executive Order E 1038.00 *Enterprise Risk Management* and Secretary's Executive Order E 1032.01 *Project Management*.

This Secretary's Executive Order directs employees to apply consistency statewide in the use of project risk management and risk-based estimating for all phases of all WSDOT projects. The project estimate and project risk management plan are developed during the project definition phase and are updated and actively managed through the design and construction phases.

WSDOT has developed tools and methods to identify risks and uncertainties associated with projects and to express cost and schedule estimates as a range, rather than a single estimate.

Our ability to realistically determine a range for both project cost and schedule estimates is directly related to the public's confidence in our ability to estimate and manage costs for large public projects.

B. Supersession

This Secretary's Executive Order supersedes and replaces the prior version with the same title dated December 10, 2008. All references to the superseded E 1053.00 now reference E 1053.01.

C. What Has Changed

Direction is re-worded to be more concise and clear. Direction to employees remains the same.

II. Secretary's Executive Order

Employees that manage projects are directed to actively manage project risks. Risk-based estimating workshops must be conducted for all projects over $10 million total for preliminary engineering, right of way, and construction. These workshops are a part of project risk management and aid in more informed decision making to help project managers control scope, cost, schedule, and manage risks.

The following table provides the minimum risk management process required based on project size. Project managers may choose to use a higher level process than required.

Project Size (M = million)	Minimum Risk Management Process Required[1]
$10 M or less	*Qualitative Spreadsheet* in the *Project Management Online Guide*
$10 M to $25 M	Informal workshop using the *Risk-Based Estimating Self-Modeling Spreadsheet*[2]
$25 M to $100 M	Cost Risk Assessment (CRA) Workshop[3]
$100 M or more	Cost Estimate Validation Process (CEVP®) Workshop[3]

[1] In some cases it is acceptable to combine the value engineering study and the risk-based estimating workshop.

[2] An informal risk-based estimating workshop engages the project team and internal subject matter experts. The analysis is done using the *Risk-Based Estimating Self-Modeling Spreadsheet* and the results are reviewed by the Strategic Analysis and Estimating Office.

[3] Projects $25 million and over should use the informal risk-based estimating workshop in the scoping phase, followed up by the more formal CRA or CEVP® process during the design phase.

III. Information to Carry Out This Secretary's Executive Order

The following required responsibilities are established.

A. Executives and Managers

Executives and managers are required to:

1. Promote and express support for active project risk management.
2. Direct and support project managers to develop project risk management knowledge, skills, and abilities required to deliver capital transportation projects.
3. Require project managers to keep project management plans, including the project risk management plan and risk-based estimates, current and consistent with this Secretary's Executive Order.
4. Require project managers to be prepared to discuss and/or present the project risk management plan and estimate at quarterly project report meetings and executive oversight committee meetings on request.

B. Project Managers

Project managers are required to:

1. Proactively manage projects to reduce threats and maximize opportunities and control project costs and schedules. This includes:
    a. Allocation of appropriate resources to perform project risk-based estimating in support of project risk management.
    b. Use project management best practices as identified in the *Project Management Online Guide*.
    c. Incorporate quality assurance and quality control (QA/QC) for project development activities including project cost and schedule estimating and risk management.
    c. Follow requirements provided in the *Plans Preparation Manual* M 22-31 and other related manuals, guidance, and directional documents.
    d. Review and update the project risk management plan, project schedule, basis of estimate, and project estimate.
    e. Document significant new risks as they are identified and communicate them to senior management and executives.
    g. Follow up on the effectiveness of risk response actions.
2. Keep projects within the intended scope to address identified project need or deficiency.
3. Use the appropriate level of risk analysis for projects based on the table provided in this document.
4. Incorporate project risk management activities into the project schedule.

C. Specialty Groups

Specialty group members are required to:

1. Participate in risk identification and provide the project manager with a schedule and estimate for the planned actions in response to identified risks for assigned projects.
2. Document and communicate new risks as they are identified to the project manager and project team.

D. Headquarters Design Office and Construction Office Staff

The Headquarters Design Office and Construction Office staff members are required to:

1. Review the project management plan, which includes the project risk management plan, as part of the annual process of reviews for preconstruction and construction documents.
2. Identify prominent risks and recurrent risks seen across projects. Evaluate potential changes in policy or procedures to address these risks.

E. Strategic Analysis and Estimating Office Staff

Strategic Analysis and Estimating Office staff members are required to:

1. Provide support and training on developing and maintaining risk-based estimates and project risk management plans.
2. Assist with questions on how to implement this Secretary's Executive Order.
3. Review the results of informal and formal workshops.

IV. Contact for More Information

For more information about this Secretary's Executive Order, please contact the Cost Risk Estimating Management Office at 360-705-7457.

V. References

- Secretary's Executive Order E 1038 *Enterprise Risk Management*
  wwwi.wsdot.wa.gov/publications/policies/fulltext/1038.pdf
- Secretary's Executive Order E 1032 *Project Management*
  wwwi.wsdot.wa.gov/publications/policies/fulltext/1032.pdf
- Instructional Letter IL 4071 *Inflation and Market Conditions Applied to Base Estimates*
  wwwi.wsdot.wa.gov/publications/policies/fulltext/4071.pdf
- *Plans Preparation Manual* M 22-31
  www.wsdot.wa.gov/publications/manuals/m22-31.htm
- Project Delivery Memo 07-01 *Cost Estimating Guidance*
  www.wsdot.wa.gov/design/projectdev/memos.htm
- Strategic Analysis and Estimating Office website
  www.wsdot.wa.gov/design/saeo/

VI. Review and Update Requirements

When changes are necessary to update this document, please inform the Assistant Secretary of Engineering and Regional Operations.

The Assistant Secretary of Engineering and Regional Operations periodically reviews this document and proposes updates to the Secretary of Transportation for approval.

Americans with Disabilities Act (ADA) Information
Materials can be provided in alternative formats by calling the ADA Compliance Manager at 360-705-7097. Persons who are deaf or hard of hearing may contact that number via the Washington Relay Service at 7-1-1.

Appendix C

WSDOT Project Delivery Memorandum 07-01, "*Project Cost Estimate Creation, Update, Review and Approval Procedures,*" July 1, 2008

Washington State Department of Transportation

Project Cost Estimate Creation, Update, Review and Approval Procedures

Effective Date: July 1, 2008
Status: Revision 0
Supersedes: NA
Document Owner: Director, Environmental and Engineering Programs

1. Scope

This procedure applies to the creation, review, update and approval of planning, scoping, design and construction project cost estimates. This procedure is a complement to the Project Cost Estimate Creation, Update, Review and Approval Process Map.

2. Purpose

This document establishes a WSDOT standard methodology for the creation, review, updates and management of project cost estimates.

3. Roles and Responsibilities

The identified roles are provided as a guide to assigning the tasks included in the PMRS processes and procedures. Each region has the flexibility to delegate the role of Project Manager (and other functions) to the appropriate functional level to meet project and project office needs and to accommodate current and planned organizational structures.

Estimates are traditionally developed at WSDOT in project offices under the supervision of a Project Engineer or Project Manager. The regions provide estimating expertise, creation, support and review functions. Headquarters provides expertise, review and policy development for estimating.

3.1 Project Engineer/Manager

- Request development of cost estimate.
- Initiates and requests estimate updates.
- Sets schedule for estimate updates (quarterly at a minimum).
- Reviews estimates prepared by Estimators.
- Participates in determining risk and determining cost range.
- Determines communication approach.
- Endorses estimates and obtains management approval.
- Initiates Change Management Process as necessary.

3.2 Estimators (design team, scoping team, or estimating group)

- Develops estimates based upon project information and schedule as requested by Project Engineer/Manager.
- Determines estimate basis.
- Prepares base estimate.
- Documents basis of estimate, assumptions and risk.
- Participates in estimate review and bid reviews.
- Participates in determining risk and determining cost range.
- Reviews and updates estimates.

3.3 Regional Management

- Application of inflation to project cost estimates.
- Establishment of estimate communication approach.
- Approval of final project cost estimates.

4. Project Estimate Creation, Update, Review and Approval Process Steps

The following process steps are taken from the Project Estimate Creation, Update, Review and Approval Process Map. The sub-numbers listed below correspond to the numbered activity on the process map. For example, item 4.1 corresponds to activity 1 of the process map.

This process was developed from the WSDOT Cost Estimating Guidelines. These guidelines are available on line and are referenced by Project Delivery Memo #07-01. Please refer to the Cost Estimating Guidelines for more detailed information on cost estimating.

4.1 Request Cost Estimate or Update

- Project Engineer/Manager plans for and requests an estimate or update.
- Project Engineer/Manager provides an expected date of estimate delivery.

4.2 Determine Estimate Basis

- For a more complete description of this activity please refer to WSDOT Cost Estimating Guidelines.
- Estimator receives the request, gathers scope, schedule information, and project documents which can be based on planning description, scoping documents, preliminary plans or final plans and specifications.
- Estimator determines which specialty groups are required for this estimate and contacts them for required information.
- If necessary estimator visits the site with appropriate personnel (designer, maintenance, RES or others) to determine unique project characteristics or conditions.
- If information is insufficient, request additional information or clarification from Project Engineer/Manager (box 3).

- Estimator organizes the documents, data and other information that describe project scope into the project estimate file.
- Estimator determines applicable estimating technique(s) for various parts of the estimate per WSDOT Cost Estimating Guidelines.
- Estimate basis and assumptions are documented.
- Estimator communicates to Project Engineer/Manager schedule for estimate process.

4.3 Sufficient Information

- Estimator determines if there is sufficient information to produce an estimate.
- If not, Estimator requests additional information from Project Engineer/Manager (box 3a).

4.4 Prepare Base Estimate

- Costs are estimated using appropriate techniques and project information
- Base cost estimate is summarized to include all costs (PE, ROW, CN (including CE), etc) in current year dollars.
- Project estimate file is updated with this information.

4.5 Review Base Estimate

- Estimator and Project Engineer/Manager determine the level of estimate review required (internal, region, HQ, external (independent).
- Estimator and Project Engineer/Manager and appropriate others review the base estimate.
- Review process covers: estimate basis and assumptions, verifies completeness of scope, schedule, appropriate use of estimate information and data and estimate documentation package.
- Current estimate is reconciled with previous estimate(s) and differences explained.
- Estimate package is prepared with revised estimate.
- Project estimate file is updated with this information.

4.6 Resolve Review Comments

- Project Engineer/Manager and Estimator work together to resolve review comments.
- Parts of the estimate may have to be redone to resolve comments.
- All revisions should be clearly documented and made a part of the estimate file.

4.7 Is Risk Based Estimate, CRA or CEVP Needed?

- Project Engineer/Manager decides if risk based estimating is appropriate for the project.
- Project Engineer/Manager determines level of risk analysis required per WSDOT policy for Cost Risk Assessment.

- If CRA or CEVP is required, PE/PM contacts Strategic Analysis and Estimating Office to schedule workshop.

4.8 Determine Risk and Determine Cost Range

- Estimator and Project Engineer/Manager determine the level of risk analysis required (CEVP, CRA, Self Modeling Spread Sheet, other) per WSDOT policy.
- If no risk based estimating is done, then contingency amounts are set per Plans Preparation Manual.
- Risks are identified.
- Risk analysis is preformed and the cost impact(s) of project risks is added to the base cost to derive a total project cost range.
- Project Engineer/Manager develops and implements a risk management plan for project.
- Risk management plan is added or updated to the estimate package and the Project Management Plan.

4.9 Apply Contingency per Plans Prep Manual and Cost Estimating Guidance for WSDOT Projects (M 3034.00)

- Project Engineer/Manager applies contingency per Plans Prep Manual.

4.10 Final Estimate and Cash Flow Estimate by Year

- Estimate document package is complete.
- All costs to complete the project are included (PE, ROW, CN (includes CE)).
- All costs are in current year dollars.

4.11 Assemble Approval Package

- Project Engineer/Manager staff and estimator assembles approval package.

4.12 PE/PM Endorsement

- Project Engineer/Manager endorses estimate.
- Submit estimate to Regional Management for application for inflation.

4.13 Program Management Application of Inflation

- Estimate is submitted to Region Program Management for application of inflation.
- Program Management returns estimate in Year of Expenditure to PE/PM for use.

4.14 Determine Estimate Communication Approach

- Regional Management determines stakeholder needs for project cost information.

- Appropriate methods to communicate project scope, cost and risks are developed.
- Estimate communication package is prepared for approval.

4.15 Regional Approval

- Project Engineer/Manager provides complete estimate package (estimate, risk analysis, risk management plan, estimate communication plan) to appropriate management for approval.
- Following approval, estimate information is released and official estimate is entered into reporting system.

4.16 Determine if Change Management is Needed

- Project Engineer/Manager determines if change management is needed per Project Control and Reporting Manual Appendix C.
- If change management is needed, the Project Engineer/Manager provides information for the change management process.

4.17 Change Management Process

- Project Engineer/Manager initiates the Agreement or Contract Change Management Process as appropriate.

4.18 Change Approved?

- If change is approved, the estimate becomes the official WSDOT estimate.
- If change is not approved, the package is returned to the PE/PM for scope assessment.

4.19 PE/PM Scope Assessment

- Project Engineer/Manager evaluates scope, schedule and budget.
- After changes are made, PE/PM will submit the new package to estimating (box 1 of this process).

4.20 New Estimate Identified as Official WSDOT Project Estimate

5. Term

This standard is effective immediately upon signature and continues in force until modified in writing by the Director, Environmental and Engineering Programs, or his/her designee.

6. Exemptions

Variance from this procedure requires approval of the Director, Environmental and Engineering Programs, or his/her designee.

7. References

7.1 Executive Order Number: E 1032.01 – Project Management, ***date***
7.2 Executive Order Number: E 1042.00 – Project Management and Reporting System, ***date***
7.3 Project Management Web Portal. Copies of all PMRS policies, procedures and guidance documents are available here: ***web address***
7.4 Project Cost Estimate Creation, Update, Review and Approval Process Map
7.5 Plans Prep Manual
7.6 Cost Estimating Guidance for WSDOT Projects (M 3034.00)

Appendix D

WSDOT Secretary's Executive Order E 1038.00, "*Enterprise Risk Management,*" September 4, 2007

Washington State Department of Transportation

Publications Transmittal

Transmittal Number		Date
PT 07-061		September 4, 2007

E-mail Distribution:
Commission Administrator
Secretary of Transportation
Chief of Staff
Assistant Secretary, Eng. and Reg. Operations
Assistant Secretary, Finance and Administration
Assistant Secretary, Washington State Ferries
Administrator, Eastern Region
Administrator, North Central Region
Administrator, Northwest Region
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Director, Aviation Division
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Director, Communications
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Director, Governmental Relations
Director, Highways and Local Programs
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Senior Assistant Attorney General
State Auditor
FHWA
Directional Documents Distribution List

Publication Title	Publication Number
Enterprise Risk Management Secretary's Executive Order	E 1038.00
Originating Organization Enterprise Risk Management Program Finance and Administration Division	

Remarks and Instructions

New Secretary's Executive Order

This new Secretary's Executive Order, *Enterprise Risk Management,* provides policy and direction about about the department's Enterprise Risk Management Program.

Please Keep Employees Informed

Please consider your organization's need to inform employees that this document is available and online. Department policies are available on the intranet at http://wwwi.wsdot.wa.gov/docs/.

For More Information

For more information, please contact your supervisor, the risk management professional in your organization, or the Headquarters Enterprise Risk Management Program Office in Olympia. Internal website: http://wwwi.wsdot.wa.gov/fasc/RiskManagement/.

Distributed By	Phone Number	Signature
Steve Reinmuth Chief of Staff	360-705-7027	*/s/ Steve Reinmuth*

DOT Form 761-003 EF
Revised 4/03

cc: Administrative Services, Administrative and Engineering Publications, MS 47408

Washington State Department of Transportation

Secretary's Executive Order

Number: E 1038.00

/s/ Paula Hammond
Secretary of Transportation

Date: September 4, 2007

Enterprise Risk Management

I. Policy

It is the policy of the Washington State Department of Transportation (WSDOT) to proactively assess and respond to any risks that may affect the achievement of WSDOT's strategic and performance based objectives and their intended outcomes. This policy will be implemented through WSDOT's Enterprise Risk Management (ERM) Program.

II. Secretary's Executive Order

WSDOT employees are directed to support the department's efforts to identify, share, and manage risk across all organizations and functions. Organizations must work together across boundaries to share internal control methods and procedures that implement a comprehensive and coordinated set of processes and approaches to ERM.

The ERM decision-making process fundamentally involves weighing value versus risk. It is the intent of this Secretary's Executive Order to ensure that the department can make informed decisions about risk tolerance. The risk tolerance and strategies of each organization will be used as the basis for department-wide ERM.

Risk reviews are an integral part of budget development. Therefore, budget development must include the analysis of resource allocation in terms of the department's ERM Program.

III. Information to Carry out this Secretary's Executive Order

A. Administration

The Assistant Secretary for Finance and Administration is responsible for establishing procedures and implementing them as outlined in this Secretary's Executive Order.

He or she will convene a subcommittee of WSDOT's Executive Board for the purposes of loss review, the identification of new risks and the development of strategic plans which move WSDOT towards an ERM model of operation.

To achieve this objective, WSDOT will support and implement, through its managers, supervisors and employees, coordinated ERM rules, standards, and procedures that include, but are not limited to the following elements:

- Identification and prioritization of risk on an agency-wide basis.
- Identification, implementation and monitoring of risk mitigation strategies.
- Review and incorporation of best practices into risk mitigation plans.

B. Resources and Other Information

This Executive Order supports:

- Governor's Executive Order 01-05, *State Agency Risk Management* (http://www.governor.wa.gov/execorders/eoarchive/eo_01-05.htm)
- Revised Code of Washington (RCW) 43.41.350 *Risk Management – Safety and Loss Control Program* (http://apps.leg.wa.gov/RCW/default.aspx?cite=43.41.350)

Rules, procedures, and other information on how to carry out this Secretary's Executive Order are available from the WSDOT Enterprise Risk Management Office (formerly Risk Management) and include:

- WSDOT *Risk Management Manual* M 72-01 (http://wwwi.wsdot.wa.gov/fasc/RiskManagement/)
- Office of Financial Management *2001 Loss Prevention Guide* (http://www.ofm.wa.gov/rmd/loss.htm)
- Office of Financial Management *Toolkit Topics Enterprise Risk Management* (http://www.ofm.wa.gov/rmd/erm/erm.asp)

Americans with Disabilities Act (ADA) Information

To request this document in large print, Braille, cassette tape, or on computer disk, call (360) 705-7097. Or, dial 7-1-1 (voice 1-800-833-6384) to contact Washington State Telecommunications Relay Service and Tele-Braille, and request connection to (360) 705-7097.

Appendix E

WSDOT Secretary's Executive Order E 1032.01, "*Project Management,*" July 1, 2008

Washington State Department of Transportation

Secretary's Executive Order

Number E 1032.01

/s/ Paula J. Hammond
Secretary of Transportation

Date: July 1, 2008

Project Management

I. Introduction

The Washington State Department of Transportation (WSDOT) has refined its project management process for delivering Capital Transportation Projects. This process includes "best practices", tools, templates and examples and will enhance the communication process for both pre-construction and construction project management. The process, tools and templates can be found at: *http://www.wsdot.wa.gov/Projects/ProjectMgmt*

This process is supplemented by Secretary's Executive Order 1042.00 which implements the Project Management and Reporting System (PMRS) to assist with managing and reporting the status of Capital Transportation Project delivery.

II. Supersession

This Secretary's Executive Order supersedes and replaces *Project Management* Executive Order 1032.00 dated July 1, 2005.

III. Purpose

WSDOT Management Principle: *Delivery and Accountability*

> *We shall manage the resources taxpayers and the legislature entrust to us for the highest possible return of value. We shall be disciplined in our use of both time and money. We shall account for our achievements, our shortcomings, and our challenges to citizens, to elected officials, and to other public agencies.*
> *http://www.wsdot.wa.gov/accountability/mgmtprinciples.htm*

IV. Secretary's Executive Order

This Secretary's Executive Order directs WSDOT employees to deliver Capital Transportation Projects consistent with the principles and practices of the department's project management process. The project management process is defined at *http://www.wsdot.wa.gov/Projects/ProjectMgmt/.* Use of PMRS provides managers with tools to assist with making effective and efficient business decisions based on management of project scope, schedule, and cost.

V. Information to Carry Out this Executive Order

Please refer to the project delivery information, tools and templates published on the *Project Management Online Guide*: *http://www.wsdot.wa.gov/Projects/ProjectMgmt/.*

Direction and resources to manage and report on project delivery are available in the Secretary's Executive Order *Project Management and Reporting System (PMRS)* E 1042.00.

The following clarifies the requirements for executives, project managers, project team members, and others in the department who participate in project management:

A. Executives and Senior Managers

The following responsibilities must be measured as part of an executive and/or senior manager's performance expectations:

1. Ensure that the project managers they appoint possess the project management knowledge, skills and abilities required to deliver Capital Transportation Projects. In doing so this will be measured as a part of the project manager's performance evaluation.

2. Know the status of all of the projects assigned to them.

3. Plan for and provide appropriate resources to implement project management.

4. Review and endorse project management plans for each project.

B. Project Managers

The following responsibilities must be measured as part of a project manager's performance expectations:

1. Plan for and provide appropriate resources to implement the project management process.

2. Lead the project management process consistent with the principles and practices defined on the Web site and the *Project Management Online Guide*. *http://www.wsdot.wa.gov/Projects/ProjectMgmt/*

3. Use the Project Management and Reporting System (PMRS) to manage and report business decisions related to project scope, schedule, risk, and cost.

4. Develop, document, use, and maintain a project management plan for each project assigned.

    a. Perform the roles and responsibilities as defined in the project-specific project management plan.

    b. Develop and execute internal agreements with all parties contributing to project scope, risk analysis, schedule and cost; including the design team and specialty groups.

    c. Use PMRS to manage and report on scope, risk analysis, schedule and budget as defined in the *Project Control and Reporting Manual*: M 3026.01 and the following:

        1) As they occur, all proposed project changes that break the approval threshold must be submitted through the project control process using the appropriate Project Change Request Form (PCRF).

        2) Schedule progress and key milestones must be kept up-to-date and reported compared to the planned baseline schedule.

        3) All project status reports must include at a minimum the status of the total project budget, costs, and forecasted cost-to-complete.

C. Project Team Members

The following responsibilities must be measured as part of a project team member's performance expectations:

1. Follow the project management process consistent with the principles and practices defined on the Web site and *Project Management Online Guide.* *http://www.wsdot.wa.gov/Projects/ProjectMgmt/*

2. Perform the roles and responsibilities as defined in the project-specific project management plan.

3. Endorse the work plan.

D. Specialty Groups (Region and Headquarters)

The project manager works with a variety of specialty groups at region and Olympia headquarters. Some examples include Environmental, Bridge and Structures, Materials, and the Geotechnical Services.

The following responsibilities must be measured as part of a specialty group manager's performance expectations:

1. Follow the project management process consistent with the principles and practices defined on the Web site and *Project Management Online Guide.* *http://www.wsdot.wa.gov/Projects/ProjectMgmt/*

2. Develop and execute an internal agreement to provide scope, schedule, risk analysis, and cost to the Project Manager.

3. Provide the project manager with a scope, schedule and estimate for the tasks assigned as identified in the PMRS procedures and processes.

4. Endorse the project management plan.

5. Perform the roles and responsibilities as defined in the project-specific project management plan.

6. Use Project Management and Reporting System (PMRS) to manage and report business decisions related to project scope, schedule, and budget.

E. Headquarters Design, Project Control and Reporting, and Construction

Review the Project Management Plan as part of the normal process reviews for preconstruction and construction documents.

VI. WSDOT Assistant Secretary of Engineering and Regional Operations

The Assistant Secretary of Engineering and Regional Operations is responsible for periodic review and updates to this document. All executives are responsible for informing the Assistant Secretary of Engineering and Regional Operations of changes needed for the maintenance of this document.

Americans with Disabilities Act (ADA) Information

To request this document in large print, Braille, cassette tape, or on computer disk, call (360) 705-7097. Or, dial 7-1-1 (voice 1-800-833-6384) to contact Washington State Telecommunications Relay Service and Tele-Braille, and request connection to (360) 705-7097.

Appendix F

WSDOT Secretary's Executive Order E 1042.00
"Project Management and Reporting System (PMRS)"
July 1, 2008

Washington State Department of Transportation

Secretary's Executive Order

Number: E 1042.00

/s/ Paula J. Hammond
Secretary of Transportation

Date: July 1, 2008

Project Management and Reporting System (PMRS)

I. Introduction

The Washington State Department of Transportation (WSDOT) has implemented the Project Management and Reporting System (PMRS) including the project Electronic Content Management (ECM) system to assist with managing and reporting the status of Capital Transportation Project delivery. This policy supplements Executive Order E1032.01 *Project Management* dated July 1, 2008.

II. Secretary's Executive Order

WSDOT employees are directed to use the PMRS, including project ECM, as the agency wide project management and reporting tools supporting Capital Transportation Project delivery. The PMRS replaces the Project Delivery Information System (PDIS).

III. Benefits of PMRS and ECM

The PMRS, including project ECM, provide WSDOT managers with current business practices and tools to assist with making effective and efficient business decisions based on improved management of project scope, schedule, and cost. Project information is current, easily accessible, transparent, consistent, accurate, and facilitates improved forecasting capabilities, proactive problem resolution, and improved communication. Specific benefits provided by the PMRS include:

- A state of the art project management system, utilizing the most current and effective project management tools in the industry.
- A statewide work breakdown structure that is scalable to project size and complexity that facilitates progress report summaries at the regional and agency levels.

- Tools that enable project team members, including specialty groups, to monitor and efficiently update project activities.
- Resource analysis and management tools for hands on practitioners and managers to better evaluate project status and develop early workable solutions.
- Earned value management capability to provide early warning of project cost and schedule issues to facilitate corrective action including tools to calculate estimates to complete and estimates at completion for regularly forecasting project costs.
- Expanded project cost and schedule reporting capabilities scalable to project size, complexity, and visibility.
- Cost estimating tools to enable project mangers to better develop and analyze cost estimates using a variety of formats and levels of detail depending upon project management needs and the stage of the project including engineer's estimates and construction change orders.
- A uniform, statewide structure for efficient filing, retrieval, processing, sharing, and retention of agency documentation.
- Consistent, streamlined statewide progress reporting from a single data source that reduces the effort required by the region for preparing standard progress reports.
- Electronically linked financial and project management systems to better streamline data handling and transfer, and to further streamline reporting and analysis across the state.
- A more efficient change management process that will reduce preparation time and effort, and streamline the approval process through automated processes.

IV. Definitions

A. Project Management and Reporting System (PMRS)

The enterprise project management and reporting system integrates schedule, contract management, electronic content management, cost control/earned value, and cost estimating with existing WSDOT legacy systems to better support management and delivery of capital projects. Project Electronic Content Management (ECM) is the electronic system used to satisfy document filing and retrieval, business process management (workflow), records management, and retention requirements.

V. Implementation: Pre-Integration

Pre-Integration is defined as the stand alone deployment of the individual PMRS tools. For existing capital projects, the following guidelines should be used when considering moving projects into PMRS. These are minimum guidelines. Other projects may be migrated into PMRS as desired by regional management. The general migration criteria that applies to the following sections of this Secretary's Executive Order includes:

A. PMRS Requirements for Pre-Integration

After the date of the first PMRS deployment in the region, PMRS is required for the following:

1. All new projects with a preliminary engineering (PE) phase start.

2. All existing projects that transition to the construction phase (implementation as of the start of the construction phase).

B. Recommendations for PMRS Pre-Integration

After the date of the first PMRS deployment in the region, PMRS is recommended for the following:

1. Existing projects in the design phase with at least 12 months remaining prior to ad.

2. Existing projects that are early in the construction phase with at least 12 months remaining.

C. Other Considerations for Pre-Integration

1. Resource loading is not a requirement of PMRS.

2. Cost loading at the control account level is required but does not require roles or name resources.

3. PMRS configuration will enable generic roles to be utilized for those regions and specialty groups that require role based analysis at the region level. This would require all projects to be included at a minimum of the control account level in the PMRS. Named resources are not recommended or configured for use, but are an option.

VI. Implementation: Integration Requirements

Integration is when all of the individual PMRS tools are connected together and the web portal is available. The following requirements for PMRS integration apply to all capital projects and programs throughout WSDOT:

A. When and What

1. By June 1, 2010, all projects/all phases must be in PMRS.

2. All new projects started after the date of the first system integration must be in PMRS.

B. PMRS Use

1. Use the PMRS for schedule, cost control, earned value, agreement/contract management, cost estimating, and document control and reporting to perform standard project management functions.

2. By the tenth of each month, ensure status is up to date for active projects (schedule, cost, and earned value) through the last business day of each preceding month. Status is defined as updating schedule activities, physical percent complete and estimate at completion.

3. Use PMRS as the data source for WSDOT internal and external project delivery reports.

C. Electronic Content Management (ECM)

Use project ECM for all project content management and document control needs as required by the project ECM procedures.

D. Work Breakdown Structure (WBS)

Use the WSDOT standard work breakdown structure for all PMRS tools and incorporate a minimum of one control account per project phase. Refer to WBS and control account guidelines on the *Project Management Website* http://www.wsdot.wa.gov/Projects/ProjectMgmt for assistance.

E. Schedule Development and Management

1. Schedule Development

   Build capital projects' schedules for all new projects in the PMRS. Include activities for the preconstruction and construction phases and the milestones required for the project funding type as specified in the *Project Control and Reporting Manual* M 3026.01.

2. Schedule Templates

   Use the schedule templates guideline on the *Project Management Website* http://www.wsdot.wa.gov/Projects/ProjectMgmt for recommendations regarding the use of schedule templates.

3. Contractor's Construction Schedule Review and Update

   Incorporate a summary level rollup of the accepted construction contractor's schedule into the PMRS master schedule for the construction phase of all capital projects. Follow guidance in the *Construction Manual* M 41-01.

4. Project and Activity Code Management

   Forward requests for additions or modifications to standard PMRS activity codes or project codes to the PMRS Code Administrator in WSDOT Headquarters, Olympia, for approval and implementation. http://wwwi.wsdot.wa.gov/ProjectReporting/

5. Earned Value

   Actively cost load the critical path schedule in accordance with the approved project budget for all projects to enable Earned Value Management and reporting. Download actual costs from the financial accounting system in accordance with the WBS developed for each project.

F. Cost Estimating and Cost Management

1. Estimated Outstanding Costs

   Use the estimated outstanding costs guideline on the *Project Management Website* http://www.wsdot.wa.gov/Projects/ProjectMgmt for recommendations regarding the use of "estimated outstanding costs" and enter them into the PMRS Cost tool for management and reporting purposes.

2. Estimate at Completion

   Provide an Estimate at Completion for all phases of all capital projects included in the PMRS and enter them into the PMRS Cost tool for management and reporting purposes.

3. Cost Templates

Use the cost templates guideline on the *Project Management Website* http://www.wsdot.wa.gov/Projects/ProjectMgmt for recommendations regarding the use of cost templates in the PMRS Cost tool.

4. Cost Estimating

Use the *Cost Estimating Guidance Manual for WSDOT Projects* M 3034 issued by the Strategic Analysis and Estimating Office at WSDOT Headquarters, Olympia. http://www.wsdot.wa.gov/Design/SAEO

G. Agreement Administration

1. Internal Agreements

Create internal agreements with WSDOT disciplines/specialty groups that identify the scope, schedule, and estimated costs for the deliverables needed for a specific capital project.

2. Agreement/Contract Management

Enter all internal agreements and consultant agreements into PMRS.

Enter construction contracts into the Primavera Contracts tool of the PMRS.

H. Risk Assessment

1. Conduct Risk Analysis

Conduct a risk analysis and prepare and report on a risk management plan as required by the Project Management Online Guide and the Cost Risk Assessment (CRA) Policy http://www.wsdot.wa.gov/Projects/ProjectMgmt/RiskAssessment/.

2. Update Risk Analysis

Regularly update the risk management plan for each project as required by the Project Management Online Guide and the Cost Risk Assessment (CRA) Policy http://www.wsdot.wa.gov/Projects/ProjectMgmt/RiskAssessment/.

I. Change Management

1. Change Management

   Use the PMRS to manage all project changes including internal and external agreements and follow the change management process included in the *Project Control and Reporting Manual* M 3026.01 and the *Project Management Online Guide*.

2. Construction Contracts

   Construction contract changes will continue to be processed through Construction Contracts Information System (CCIS). The effects of cost and schedule will be tracked through PMRS. More information about CCIS can be found at http://wwwi.wsdot.wa.gov/eesc/cons/Default.cfm

3. Project Change Request Form (PCRF)

   Use the PCRF included with the PMRS per the established PCRF procedures included in the *Project Control and Reporting Manual* M 3026.01.

J. Status Reporting

Use only the PMRS reports as the standard agency reporting source for programmed capital projects.

VII. Contact for More Information

Project Control and Reporting Office, (360) 705-7152,
http://wwwi.wsdot.wa.gov/projectreporting/

VIII. References

- Secretary's Executive Order *Project Management* E 1032.01 dated July 1, 2008
- *Project Control and Reporting Manual* M 3026.01 dated February 2008
- Cost Risk Assessment Policy, under development. Please check the following website for updates http://www.wsdot.wa.gov/Design/SAEO/

- Project Management Online Guide
  http://www.wsdot.wa.gov/Projects/ProjectMgmt/Process.htm
- *Construction Manual* M 41-01
- The following are under development, please check the Project Management Website for updates http://www.wsdot.wa.gov/Projects/ProjectMgmt/Process.htm
  - PMRS Procedures
  - PMRS Guidelines
  - PMRS Migration Protocols

IX. WSDOT Assistant Secretary of Engineering and Regional Operations

The Assistant Secretary of Engineering and Regional Operations is responsible for periodic review and updates to this document. All executives are responsible for informing the Assistant Secretary of Engineering and Regional Operations of changes needed for the maintenance of this document.

Americans with Disabilities Act (ADA) Information

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Appendix G

WSDOT Instructional Letter, IL 4071.01
"Risk-Based Project Estimates for inflation Rates, Market Conditions, and Percentile Selection"
May 7, 2010

Washington State Department of Transportation

Instructional Letter
Number: IL 4071.01
Date: May 7, 2010
Expires: ~~May 8, 2011~~
June 1, 2012

Signature on file
J. C. Lenzi, Chief Engineer
Assistant Secretary for Engineering and
Regional Operations

Risk-Based Project Estimates for Inflation Rates, Market Conditions, and Percentile Selection

I. Introduction

The Secretary of Transportation directs project management requirements in the following Secretary's Executive Orders:

- E 1032.01 *Project Management*
- E 1042.00 *Project Management and Reporting System (PMRS)*
- E 1053.00 *Project Risk Management and Risk Based Estimating*

A. Purpose

The purpose of this Instructional Letter (IL) is to provide Washington State Department of Transportation (WSDOT) project management staff with information necessary to conduct required risk-based estimating workshops on projects over $10 million. It covers risk-based project estimates for inflation rates, market conditions, and percentile selection. It identifies data requirements for the Capital Program Management System (CPMS).

For projects over $10 million, this IL directs project management staff to:

- Achieve project costs that are as close as possible to the base cost estimate.
- Manage to the base cost estimate.
- Establish a separate risk reserve to pay for risks realized during the course of project delivery.

B. Supersession

This IL supersedes Instructional Letter IL 4071.00 *Inflation and Market Conditions Applied to Base Estimates* dated July 13, 2007.

C. What Has Changed

The following table indicates major changes.

Description	IL 4071.00 Dated July 14, 2009	Revised IL 4071.01
Selection of a high percentile figure from a risk-based estimate range does not create an environment conducive to aggressive project risk management to deliver projects on-time and on-budget.	90th percentile was set as the default figure to use from the risk-based estimate. No formal risk reserve was established in CPMS.	60th percentile is set as the default figure to use from a risk-based estimate. A formal risk reserve is established in CPMS as the difference between 60th percentile and base estimate. Project managers manage to the base estimate, risk reserve is a tool to cover additional costs if needed.
Estimates should be updated regularly.	Does not address.	Must be updated regularly (at least every six months).
Inflation (use WSDOT CPMS inflation tables).	Prescribed in IL.	Prescribed in IL (except for WSF vessel construction).
Use and reporting of risk-based estimating information.	90th percentile.	Base cost estimate and 60th percentile.
Process for deviating from IL.	Provided.	Provided.
Statement on WSDOT inflation rates.	Provided.	Provided.
Detailed implementation guidance.	Not provided.	Provided.
Basis of estimate document.	Not provided.	Link provided. The basis of estimate is a comprehensive record of the assumptions used for a project estimate.
Base estimate.	Does not address.	The base cost represents the cost which can reasonably be expected if the project materializes as planned. The base cost estimate is unbiased and neutral. It is not optimistic and it is not conservative. The base cost estimate includes the standard WSDOT construction contingency (limited to 4 percent) as described in the *Plans Preparation Manual* M 22-31, Division 8. The base does not include any significant risks.

Attachments A and B are revised. Attachments C and D are new.

II. Rules

This IL establishes the following rules and procedures.

A. Use and Reporting of Risk-Based Estimating Results

1. Establish base cost estimate.

   Early in the project development process, a Cost Estimate Validation Process (CEVP) and Cost Risk Assessment (CRA) workshop, or a self-modeling process, is planned and conducted to provide the project manager with a base cost estimate that will be used as a baseline to measure delivery performance.

The cost lead, risk lead, subject matter experts, and project team review the estimate. Based on experience, bid tab data, and recent projects in the area, unit costs and quantities may be revised. This reviewed and validated estimate becomes the base estimate for the workshop.

2. Establish risk reserve, which is the 60th percentile minus the base cost estimate.

   For WSDOT projects over $10 million, the estimate is expressed as a range determined through risk-based estimating. The low end of the range is the base cost estimate; the high end of the range is the 60th percentile cost from the risk based estimate.

3. Evaluate the construction cost estimate every six months or sooner when any of the following occur and, if warranted, update the estimate. The level of effort for estimate updates is scalable and should be appropriate for the amount of change:
   - New information is gathered or processed (quantity change or new items).
   - Major design levels are completed (30 percent, 60 percent, 90 percent).
   - Volatile price fluctuations occur.
   - Highest cost items change.
   - To match updated versions of the *Cost Estimating Manual for WSDOT Projects* M 3034.

4. Enter post-mitigated results in CPMS.

   If post-mitigated figures are not available, the pre-mitigated figures may be reported, and adjusted later.

5. Enter uninflated base cost estimates and the uninflated risk reserve estimate in CPMS.

   The risk reserve may be entered either by project phase or as a single number in the construction phase. CPMS reports will then correspond to the 60th percentile estimate, using CPMS inflation tables.

6. Manage to the base cost estimate.

   Project managers are responsible for managing their projects to the base cost estimate, inflated by CPMS. The risk reserve is just that, and will be held in reserve for use if risks materialize.

7. Use of risk reserve.

   If risks materialize, the project manager submits a request to Regional Program Management for funds to be transferred from the risk reserve to the authorized project funding. If the risk reserve nears depletion or is depleted, despite active risk management on the part of the project team, the 60th percentile estimate should be reviewed and, if necessary, the risk model should be updated.

8. Ensure that risk-based estimating results provide a 60th percentile estimate usable for budgetary purposes.

   As the project goes through the budgeting process (biennial and annual supplemental) the 60th percentile estimate will be submitted for legislative approval. If the 60th percentile represents a change from the previously approved budget or the last estimate approved by the department, the new estimate will be submitted through Regional Program Management to Headquarters Program Management. If approved, it will then be sent to the legislature as a budget request by Headquarters. Any changes to the base cost estimate or the risk reserve will be documented in CPMS.

B. Project File Documentation

Documentation needed to support the proposed budget level shall include:

1. Basis of estimate (assumptions): www.wsdot.wa.gov/publications/fulltext/cevp/estimatingguidelines.pdf
2. Current base estimate for the project.
3. A description of each significant risk, including threats and opportunities, which have been identified. Include the potential impacts to the project cost and schedule.
4. A plan for managing each of the significant risks that have been identified, as determined through an updated risk-based estimate model output.

C. Inflation and Market Conditions

1. Inflation rates.

   The inflation rates for construction, right of way, and preliminary engineering used to inflate current year (CY) dollars to the year of expenditure (YOE) dollars must be the current (at time of the risk-based estimating) CPMS inflation rate tables: wwwi.wsdot.wa.gov/ppsc/pgmmgt/cpms/tables.asp

2. Market conditions.

   Market conditions for a project may be influenced by several factors. The following factors must be documented and mitigation strategies proposed when preparing cost estimates if the project team determines that special market conditions are applicable to their project.

   a. Bidding environment and other construction market conditions.

      (1) Bidding environment refers to how the number of potential bidders for a project might impact the estimate for construction. The project team must document whether the project will be subject to a "non-competitive" bidding environment and develop mitigation strategies for this risk. Conversely, any potential of a "highly competitive" bidding environment must also be captured.

(2) Other market condition risks for construction are to be captured through the risk elicitation process. A well-documented explanation must be provided that describes why the project is subject to additional market condition risks. Potential response strategies to these risks must be provided.

b. Right of way market condition risks.

Right of way market condition risks must be obtained from subject matter experts. The project team must document information that affects the project including right of way, zoning, speculation, and other market condition risks that may be obtained from a variety of sources such as real estate services or planning. Comparable recent real estate transactions must be a primary source of right of way cost data.

c. Preliminary engineering (PE) market condition risks.

Preliminary engineering (PE) market condition risks must be identified and documented. Sources for characterization of the risk must be clearly stated in the documentation describing why this project is at risk (e.g., availability of skilled labor or specialty professional services).

D. CPMS Data Requirements

Project teams must provide specific data to the Regional Program Management Office for inclusion into CPMS. The required data includes:

1. Project scheduling data for the following milestone dates:
   - Project definition completion date.
   - Date for the beginning of preliminary engineering.
   - Completion date for the environmental document.
   - Date of right of way (RW) certification.
   - Project advertisement date.
   - Date project will be operationally complete (60th percentile).
2. Estimated project cost data in current year dollars (CY$).
   - Date of estimate basis in current year (CY); for example, February 2009.
   - Project base estimates for:
     - Design cost.
     - Right of way cost.
     - Construction cost.
     - Project risk reserve.
3. Basis of estimate form (see Appendix D and template: ~~www.wsdot.wa.gov/publications/fulltext/eevp/basisofestimateform2009.doc~~

E. Exceptions

Exceptions to the use of the 60th percentile requirement in this instructional letter must use one of the following approval processes. See also Attachment A.

1. Projects with an executive oversight committee (EOC).
    a. The project manager presents the results of the CEVP to the EOC along with a recommendation, including supporting information on the percentile level to be included in management plans and budget.
    b. If the EOC approves, regional executive management will request in writing and obtain written approval from the Assistant Secretary of Engineering and Regional Operations.
2. Projects without an EOC:
    a. The project manager presents the results of the CEVP or CRA to regional executive management and provides supporting information on the percentile level requested to be included in management plans and budgets.
    b. Regional executive management will request in writing and obtain written approval from the Assistant Secretary, Engineering and Regional Operations.

III. Contact Information

For information regarding this IL, please contact the Strategic Analysis and Estimating Office at 360-705-7452 or visit their website: www.wsdot.wa.gov/Projects/ProjectMgmt/RiskAssessment

IV. References and Resources

[10/20/2010 updated links.]

- Basis of Estimate
  www.wsdot.wa.gov/projects/projectmgmt/riskassessment/information.htm
- Basis of Estimate (Assumptions)
  www.wsdot.wa.gov/publications/fulltext/cevp/estimatingguidelines.pdf
- Basis of Estimate Form
  ~~www.wsdot.wa.gov/publications/fulltext/cevp/basisofestimateform2009.doc~~
- CPMS Inflation Rate Tables
  wwwi.wsdot.wa.gov/ppsc/pgmmgt/cpms/tables.asp
- Construction Cost Index, Right of Way, Preliminary Engineering
  wwwi.wsdot.wa.gov/ppsc/pgmmgt/cpms/tables.asp
- *Cost Estimating Manual for WSDOT Projects* M 3034
  www.wsdot.wa.gov/publications/manuals/m3034.htm
- Glossary of Cost Risk Estimating
  www.wsdot.wa.gov/publications/fulltext/cevp/glossary.pdf
- Guidelines for CRA CEVP Workshops
  www.wsdot.wa.gov/projects/projectmgmt/riskassessment/

- *Plans Preparation Manual* M 22-31
  www.wsdot.wa.gov/publications/manuals/m22-31.htm
- Project Management Online Guide
  www.wsdot.wa.gov/projects/projectmgmt
- Project Risk Management Guidance for WSDOT Projects
- Secretary's Executive Order E 1032 *Project Management*
  ~~wwwi.wsdot.wa.gov/docs/operatingrulesprocedures/1032.pdf~~
  wwwi.wsdot.wa.gov/publications/policies/fulltext/1032.pdf
- Secretary's Executive Order E 1042 *Project Management and Reporting System* (PMRS)
  ~~wwwi.wsdot.wa.gov/docs/operatingrulesprocedures/1042.pdf~~
  wwwi.wsdot.wa.gov/publications/policies/fulltext/1042.pdf
- Secretary's Executive Order E 1053 *Project Risk Management and Risk Based Estimating*
  ~~wwwi.wsdot.wa.gov/docs/operatingrulesprocedures/1053.pdf~~
  wwwi.wsdot.wa.gov/publications/policies/fulltext/1053.pdf
- Training: Introduction to Cost Estimating Course Code CZV
- Training: Risk-Based Transportation Cost and Schedule Estimate Evaluations Course Code CZ2

V. Attachments

A. Approval Process for Using a Different Percentile

B. Statement on Inflation Rates

C. How to Implement This Instructional Letter

D. Basis of Estimate

VI. Executive Review and Update Requirements

All executives are responsible for informing the Assistant Secretary for Engineering and Regional Operations of changes needed for the maintenance of this document.

The Assistant Secretary for Engineering and Regional Operations is responsible for periodic review and updates to this document.

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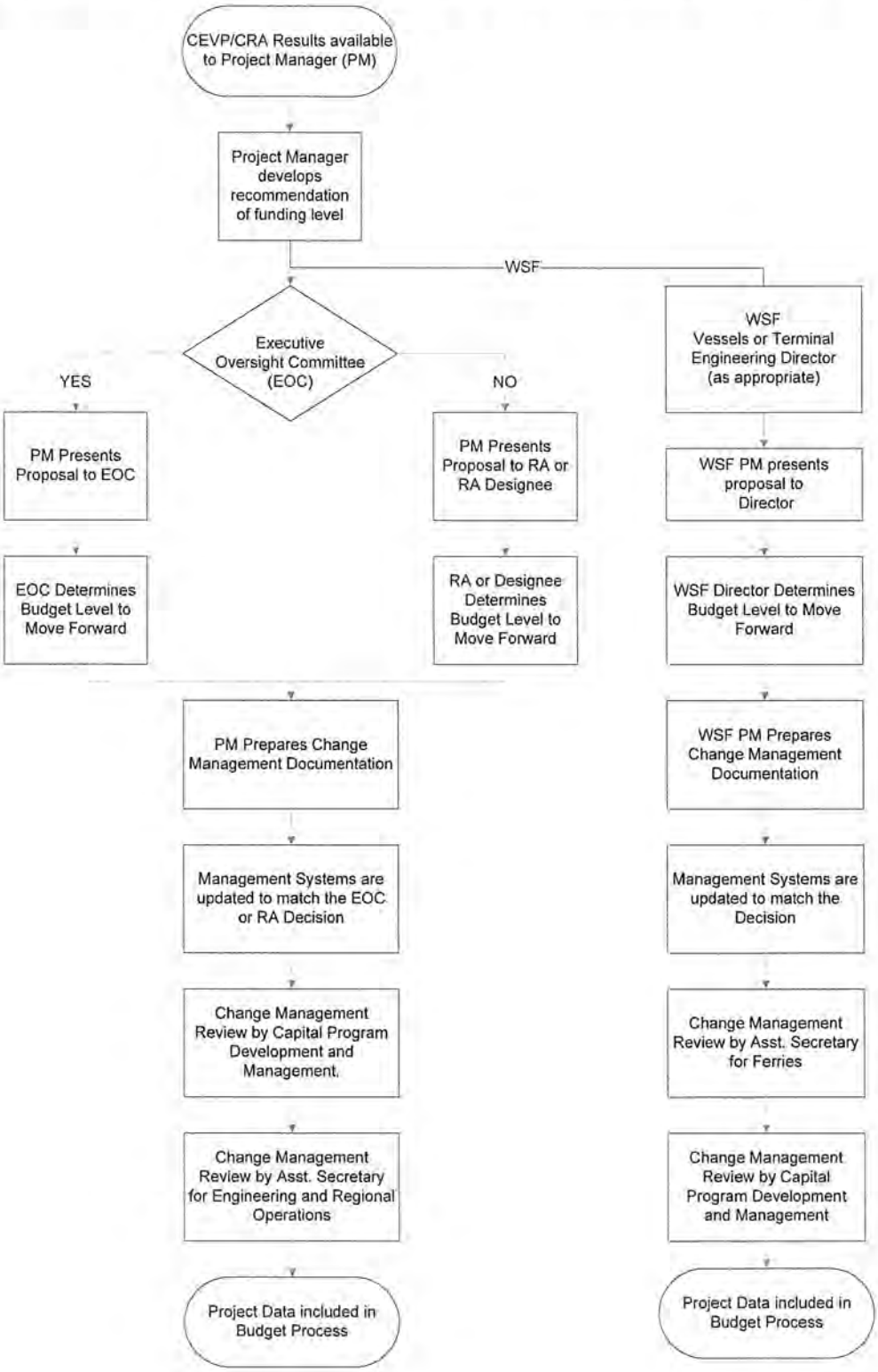
Attachment A: Approval Process for Using a Different Percentile



Attachment B: Statement on Inflation Rates[1]

WSDOT requires the use of CPMS inflation tables posted at the time of the estimate. The projections in the inflation tables are provided by experts in PE, right of way, and construction and are to be used to forecast Year of Expenditure (YOE) costs. When the recommendations of these experts change, their recommendations are reviewed by WSDOT management, and if appropriate, the tables in CPMS are changed.

The Regional Program Management Office enters project estimates in current year dollars (CY$) into CPMS, which then inflates project estimates to YOE dollars. Model forecasts prepared following CRA and CEVP workshops will also use the CPMS inflation tables. It is important that the most current CPMS tables are used and the date of these tables well documented in the CRA or CEVP report. CPMS will calculate the midpoint for construction phases using the project award date and the operationally complete date.

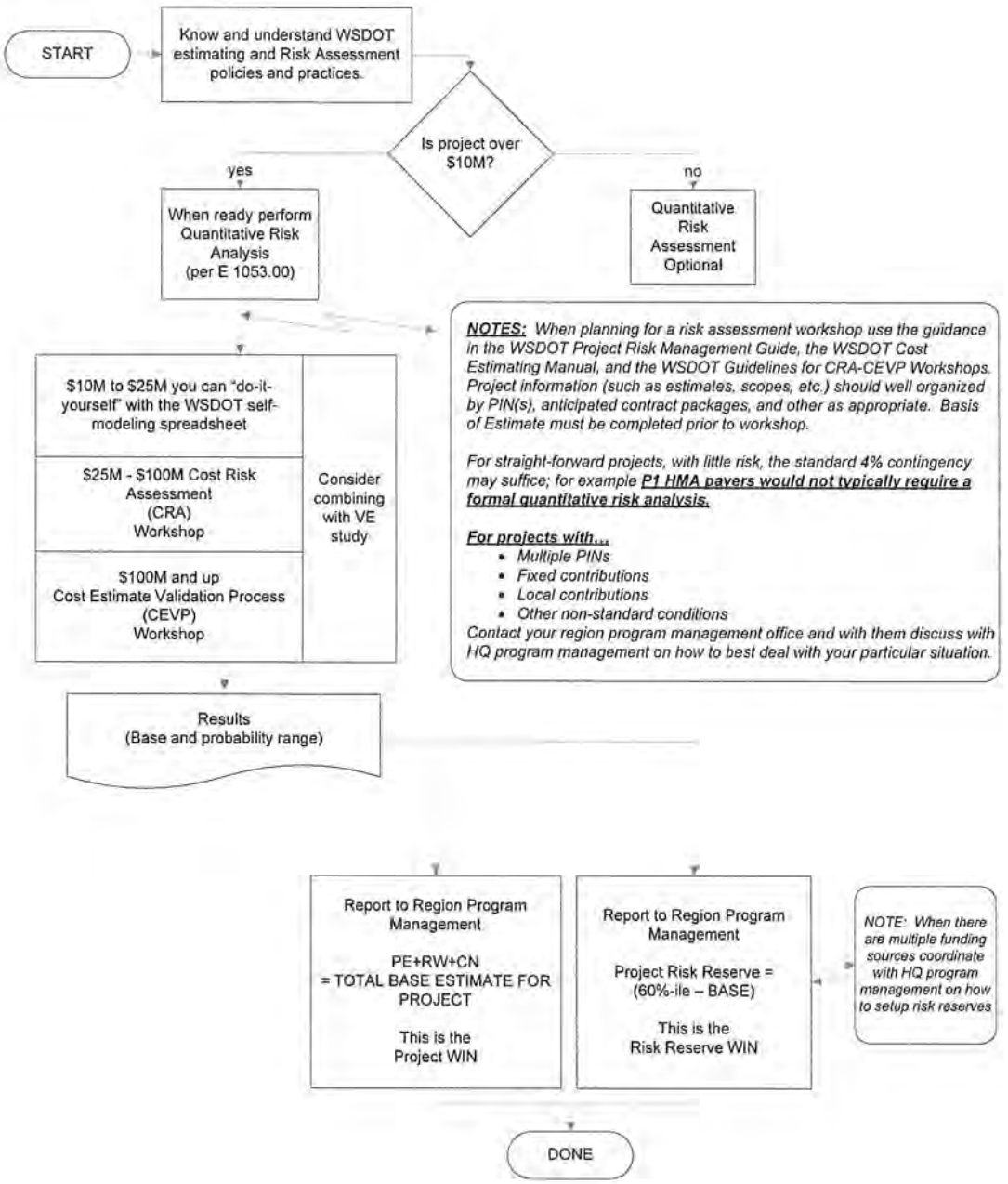
It is not allowed for project estimators or the participants at CRA and CEVP workshops to unilaterally establish inflation forecasts. Therefore, the discussion of inflation and uncertainty is not an effective use of time at CRA and CEVP workshops. The responsibility of inflation rates rests with the Capital Program Development and Management (CPDM) Office in Headquarters. The rates to be used are those posted in CPMS at the time of the estimate:

- WSDOT CPMS Inflation Rate Tables
  wwwi.wsdot.wa.gov/ppsc/pgmmgt/cpms/tables.asp

Liberal use of market condition risks creating a "range" of inflation rates is not allowed. Workshops need not discuss inflation rates and should focus on areas of respective expertise for the project.

[1]CPMS inflation tables do not apply to WSF vessel engineering projects.

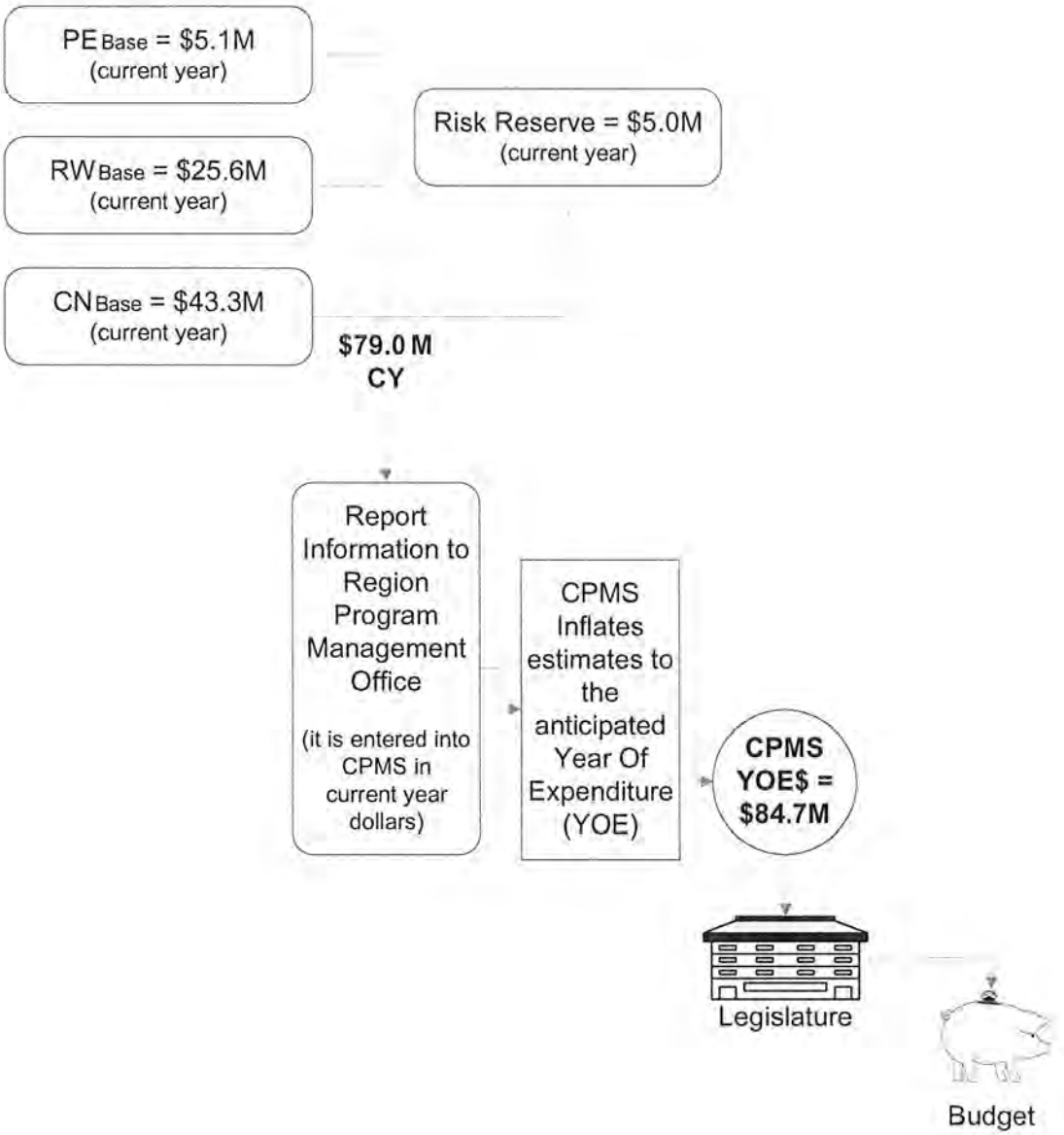
Attachment C: How to Implement This Instructional Letter



Project Risk Management
Risk Management Planning
Risk Identification
(determine and document risk characteristics
Produce Preliminary Risk Register
Risk Analysis
Qualitative
Quantitative
Pre - mitigation Analysis
Risk Response Planning
Post - mitigation Analysis
CURRENT
Project Management Plan
Scope
Schedule
Estimates
Documentation
Update
Project Management Plan
Risk management is at the heart of project management and is an ongoing activity until the project is completed .
TAKE ACTION
IMPLEMENT RISK RESPONSE PLAN
Risk Monitoring and Control
Results Of Mitigation Actions
Document and record Change Orders and their effect on the project scope, schedule and cost
Planning and Project Development Phases
Needs/deficiencies
Planning
Highway System Plan
Scoping
Capital Improvement and Preservation Program(CIPP) & Biennial Program
Design
PS & E
Advertise and Bid
Award
Construction
Program(project) scope (category, concepts, schematics& location)
Cost Estimates (recycle loop)
Project scope (schematics type– PI; preliminary plans alternatives location)
Baseline Cost Estimate
Project scope(design development e.g. plans for approval etc.)
Periodic Cost Estimate Updates
Project scope(final plans, specs, and bid documents)
Engineer's Estimate
Cost Estimating
Conceptual Estimating
Estimate potential funds needed& prioritize needs for Highway System Plan(HSP).
Scoping Estimating
Set baseline cost for project and program project(CIPP and biennial program).
Design Estimating
Estimate for Cost Management
PS&E Estimating
Estimate construction costs to obligate funds& compare with bids

The table below illustrates output from a risk-based estimate model and how to use the results.

Example of typical output for risk-based estimate.			Notes:
Project Estimate (opinion of cost at this time)	Estimated Project Cost (Current Year/CY) YYYY $M	Total Project Cost Year-Of-Expenditure $M	Use of risk based estimating results.
1Base Cost Est.	74.0	80.0	Reviewed/validated base estimate Base ='if project goes as planned'
Mean	77.4	83.0	
Std Dev	6.5	7.2	Risk reserve = 60%-ile – Base = $79.0 M – $74.0 M = $5.0 M Report estimates as follows: PEBASE = $5.1 M RWBASE = $25.6 M CNBASE = $43.3 M ========== Estimate Project BASE = $74.0 M Risk Reserve WIN = $ 5.0 M ========== = Total available for project = $79.0 M
Percentiles			
1%	62.3	66.2	
5%	67.3	71.7	
10%	69.2	73.8	
20%	72.0	76.9	
25%	73.1	78.2	
30%	74.0	79.2	
40%	75.7	81.1	
50%	77.3	82.9	
60%	79.0	84.7	Figure submitted to CPMS
70%	80.6	86.6	
75%	81.7	87.8	


PE Base = $5.1M
(current year)
RW Base = $25.6M
(current year)
CN Base = $43.3M
(current year)
Risk Reserve = $5.0M
(current year)
$79.0 M
CY
Report Information to Region Program Management Office
(it is entered into CPMS in current year dollars)
CPMS Inflates estimates to the anticipated Year Of Expenditure (YOE)
CPMS YOE$ = $84.7M
Legislature
Budget

CPMS Implementing Guidelines

This IL incorporates risk-based estimating into the WSDOT budgeting process and figures entered into CPMS will reflect the results of the risk-based estimating effort for the project. There is an expectation that implementation of this IL will be accompanied with prudence and sound judgment. For example, projects with little risk such as P1, HMA pavers do not need an intensive workshop and quantitative analysis.

Setting Up Risk Reserves in CPMS

- Overview: The objective of identifying a risk reserve in CPMS is to more fully integrate risk-based estimating with normal business practices at WSDOT. CPMS is the official repository for department estimates. It is used for expenditure planning, bond sale sizing, and budget/program building. It is important for the department to understand how much project risk is addressed in our program estimates. This can be done by differentiating between the base estimate and risk estimate on large projects in CPMS. This is particularly important for high visibility Nickel and TPA projects with line-item appropriations in the legislatively approved transportation budget. These projects need to be "self-insured" against risk from a budget standpoint. However, it should be noted that estimate details (base estimate dollars and risk estimate dollars) are not reported externally in the *Gray Notebook* or in budgetary documents.
- To self-insure line-item projects (PINs), reserves are set up on a Work Item Number (WIN) in CPMS under the budgeted PINs. A large project which employs risk-based estimating will now have a minimum of two WINs associated with it: One WIN containing the project's base cost estimate, which includes up to 4 percent construction contingency (the base cost estimate is the cost that can reasonably be expected if no significant risks materialize), and the other WIN containing the risk reserve estimate (the cost impact calculated by considering the probability of uncertain events occurring).
- A "project" as assigned to a project manager may occasionally have more than one PIN associated with it. The regional program manager will establish one WIN for each PIN needing a reserve. The project manager will be responsible for managing the risk register for his project and for providing the regional program manager with guidance for proper sizing and maintenance of the risk reserve by PIN.
- Each WIN has the flexibility to be subdivided into three phases: PE, RW, and CN. At least one phase must be designated. The simplified default phase for a risk reserve is CN. The project manager and regional program manager will decide if it is desirable to establish more than one phase in a risk WIN (e.g., if a relatively large RW risk exists, it may not be appropriate to put all the risk in the CN phase especially if RW and CN phases occurs in different biennia).
- Typically, the fund types budgeted for the project or authorized for the current phase will be the same as those used in the risk reserve. These may include "local" funds if a local agency is participating in the project. However, some funds (e.g., American Recovery and Reinvestment Act) may not be suitable for a reserve. Please contact CPDM when in doubt.

Aging a Risk Reserve in CPMS

- For simplicity and ease of data maintenance in CPMS, most risk reserves may be aged in the 25th month of the biennium in which they will most likely be spent. This aging approach is very appropriate when the project manager believes that active risk management may preclude the need to expend risk funds.
- CPMS has the flexibility to age risk reserves in the months in which they are most likely to be spent. For any individual risk, if the project manager believes it will most likely materialize in a specific month(s), risk funds should be aged accordingly. The balance of the risk reserve may be left in the appropriate 25th month.
- As soon as a risk lapses and the funds are no longer needed in the reserve, the project manager should ask the regional program manager to adjust the reserve. If the reduction to the reserve is significant, and remaining risks are substantial and their impact is likely to extend six or more months, it is recommended that the Strategic Analysis and Estimating Office be contacted to ensure adequate reserve sizing.
- At least six months before the end of the biennium, the reserve balance in the 25th month should be evaluated by the project manager and reduced or re-aged as appropriate into the 25th month of the next biennium by the regional program manager.

Managing the Base Cost and Risk Reserve Estimates

- Base and risk estimates are first established by use of a risk-based estimating process. The results of a CRA or CEVP workshop or of a self-estimating process need to be sufficiently detailed to feed CPMS requirements. The results must provide the base cost estimates by phase, by PIN, and by WSDOT/Local Agency contribution. The total percentile estimates also need to be broken down by PIN and funding agency when more than one exists.
- After a risk-based estimate is created, the base cost estimated will continue to be updated by the project manager on a regular basis (monthly/quarterly/etc.) at least every six months. Insignificant changes to the base cost estimate WIN can be implemented without regard to the risk reserve WIN.
- Significant changes to the base cost estimate WIN require adjustment of the risk reserve WIN. A significant increase to the base may be accommodated by a corresponding decrease to the risk reserve WIN.
- When transferring funds from the risk reserve to the base WIN,consideration should be given to the reason the base is increasing. If the increase is due to an identified risk, the transfer of funds is appropriate and the total project cost (60th percentile) is unchanged.
- If a significant increase in the base estimate was caused by an unanticipated occurrence not identified in the risk reserve, consider seeking a budget increase (60th percentile). This might be the decision if the magnitude of the unanticipated increase is large in comparison to the size of the risk reserve.

- The cumulative effect of numerous small increases (or decreases) to the base cost estimate may require adjustment of the risk reserve. It may be appropriate to reevaluate the size of the risk reserve if the reserve is being depleted but significant time and risk issues remain on the project. Consider updating the risk-based estimate model created earlier.

Accessing Risk Reserve Funds

- The base cost estimate and the risk reserve estimate may be updated by the project manager at any time. The regional program manger will reflect those changes in CPMS in a timely manner. Most changes will likely involve the transfer of estimated dollars from the reserve WIN to the base estimate WIN. CPDM should be notified of significant changes by the program manager. CPDM will perform a quarterly review of risk reserves with the regional program manager.
- Some transfers from the reserve WIN will also require authorization to spend the transferred dollars. Additional PE funds may be needed to complete PS&E, additional RW funds may be needed for a pending real estate purchase, or additional CN funds may be needed due to executed change orders. In these cases, a WO needs to be processed to CPDM to authorize the funds for expenditure. The WO justification should mention the reason for the increase and the amount that is being transferred from the risk reserve.
- At award and contract execution, a 4 percent contingency (see the *Plans Preparation Manual* M 22-31) is authorized on the CN work order for expenditure by the project manager. This contingency is considered part of the base estimate during risk-based estimating and PS&E preparation. During CN, the authorized contingency should be depleted before transferring and authorizing expenditures of additional funds from the risk reserve WIN.

Helpful Hints

1. Plan for risk management in your project management plan. Consider budget reporting requirements and dates and the calendar for the legislative sessions. The intent of this letter is simple and straightforward. Projects required to prepare risk-based estimates will use the information gleaned from the estimates to establish a project base cost estimate and risk reserve.
2. When reporting figures to Program Management for entry into the budget it is imperative that deadlines for submitting project budget numbers are met. "Pre-mitigated" or "Post-Mitigated" numbers may be used. However, there is an expectation that figures in CPMS are current and correct, hence update figures with post-mitigated analyses and/or other updates as warranted and as they become available.
3. The mechanism used for creating the risk reserve, as outlined in this IL, emerges from the reviewed/validated base estimate and the 60th percentile estimate for the project.

4. The workshop results provide Project BASE Estimate by phase (PE, RW, and CN). The risk reserve is determined by subtracting the Total BASE Estimate (PE+RW+CN) from the 60th percentile figure for the total project. CPMS is then set up with a BASE + an additional WIN for the Project Risk Reserve. As an added feature, projects that wish to set up separate risk reserve WINs for PE and/or RW may do so. The minimum requirement is for the project to set up at least one risk reserve WIN.
5. CY dollars: "Today's price;" the estimated cost of the project if the project were built and completed in the analysis year, in present day dollars. YOE dollars: The estimated cost of the project when it is anticipated to be built. WSDOT forecasts the estimated YOE cost by inflating the estimate (which is in CY dollars) to the anticipated midpoint of construction.
6. Be prepared to present and discuss risk management at Quarterly Project Report meetings.
7. Estimates must be updated regularly. To that end, use the following guidance for updating estimates:
    - Update estimates as new information is gathered and/or processed (quantity change or new item).
    - Update estimates at major design levels (30 percent, 60 percent, 90 percent PS&E).
    - Update estimates ***at least every six months***.
    - Be aware of volatile items in the estimate and assign someone to watch the price of these items more often, maybe monthly, and ***update estimates for these items***.
    - ***Be aware of the largest cost items in the estimate, assign someone to watch them, and update more frequently (i.e., monthly or every other month, usually only five to eight items)***.

Attachment D: Basis of Estimate (Assumptions)

The Basis of Estimate is required documentation for all project cost estimates from planning through PS&E. The Basis of Estimate is a part of clear documentation as the project passes from one group to another, or as team members change. The project estimate file should follow the project through the various stages so that each new estimate can be easily tied to the previous one.

A well-documented estimate basis and comprehensive documentation of the assumptions used in the development of a project estimate can eliminate overlap of future estimate assumptions and provide a document trail regarding what is known about the project. This allows project "knowns" and "unknowns" to be clearly identified. This document enables the agency to easily track changes to project scope, cost, and schedule.

The basis of estimate can be found at:
www.wsdot.wa.gov/projects/projectmgmt/riskassessment/information.htm

Appendix H

Memorandum of Agreement for Construction of the Bored Tunnel Alternative between the State of Washington and the City of Seattle

(GCA 6366)

October 24, 2009

MEMORANDUM OF AGREEMENT
NO. GCA 6366
FOR THE ALASKAN WAY VIADUCT AND
SEAWALL REPLACEMENT PROGRAM
BORED TUNNEL ALTERNATIVE

THIS agreement for the Alaskan Way Viaduct and Seawall Replacement (AWVSR) Program ("Agreement") is made and entered into between the State of Washington, hereinafter the "STATE," and the City of Seattle hereinafter the "CITY,' collectively the "Parties" and individually the "Party."

WHEREAS, in the 1950s, the City of Seattle and the Washington State Department of Transportation jointly designed and built the Alaskan Way Viaduct to accommodate passenger and freight mobility into the foreseeable future; and

WHEREAS, the central waterfront section of the Alaskan Way Viaduct is located in and adjacent to downtown Seattle's urban core and the Seattle waterfront, an area increasingly used for tourism and recreation; and

WHEREAS, the Duwamish and Interbay industrial areas in Seattle are served by the SR 99 corridor and constitute a portion of Seattle's industrial sector which accounts for over 120,000 jobs and an estimated $28.5 billion in annual economic activity city-wide. The SR 99 corridor provides important proximity to freight-dependent customers, distributors and suppliers; and

WHEREAS, in 2001 the Nisqually earthquake damaged the Alaskan Way Viaduct and Seawall; and

WHEREAS, the Alaskan Way Viaduct and Seawall are at risk of sudden and catastrophic failure in an earthquake and are nearing the end of their useful lives; and

WHEREAS, various studies conducted have determined that it is not fiscally responsible to retrofit the viaduct, and that retrofitting would cause significant construction impacts; and

WHEREAS, in March 2007, the Washington State Governor, the King County Executive, and the Mayor of Seattle pledged to advance a series of key SR 99 projects (Moving Forward Projects) that will facilitate the removal and/or repair of key portions of SR 99, including the Yesler Way Vicinity Stabilization Project, Electrical Line Relocation, the SR 99 South Holgate Street to South King Street Viaduct Replacement Project, and Transit Enhancements and Other Improvements; and

WHEREAS, in 2008 the STATE and CITY agreed to guiding principles for replacing the Alaskan Way Viaduct: improve public safety; provide efficient movement of people and goods now and in the future; maintain or improve downtown Seattle, regional, Port of Seattle and state economies; enhance Seattle's waterfront, downtown and adjacent

neighborhoods as a place for people; create solutions that are fiscally responsible; and improve the health of the environment; and

WHEREAS, in 2008 the STATE and the CITY considered feedback from 16 meetings of a stakeholder advisory committee made up of representatives from business, labor, environmental, and neighborhood interests and more than one thousand public comments collected during quarterly public meetings; and more than 50 community briefings; and

WHEREAS, in January 2009, the Governor of Washington state, the Mayor of Seattle and the King County Executive jointly recommended replacing the Alaskan Way Viaduct with a bored tunnel beneath downtown Seattle; and

WHEREAS, the Washington State Legislature passed Engrossed Substitute Senate Bill 5768 and the Governor signed the bill into law designating and funding the Bored Tunnel Program as the replacement for the Alaskan Way Viaduct; and

WHEREAS, the AWVSR Program consists of a four-lane bored tunnel and improvements to City streets, the City waterfront, and transit; and the Moving Forward Projects; and

WHEREAS, the new surface Alaskan Way boulevard will have four through travel lanes north of Colman Dock and will have signalized intersections and function similarly to other downtown arterial streets; and

WHEREAS, the AWVSR Program is consistent with the City of Seattle's adopted Comprehensive Plan; and

WHEREAS, the STATE and the CITY are committed to designing the bored tunnel and access portals to be consistent with Seattle's vision for the central waterfront, including reconnecting the downtown with the waterfront, enhancing the waterfront's environmental sustainability, increasing views of Elliott Bay and the landforms beyond, facilitating revitalization of Seattle's waterfront, maintaining transportation access to and through the waterfront, and increasing opportunities for the public to access and enjoy the shoreline and waterfront; and

WHEREAS the Port of Seattle is responsible for nearly 194,000 jobs in Washington state, $17 billion in business revenue and tenants, half of the $80 billion in cargo in Puget Sound ports, and is ranked the ninth largest port in the United States;

WHEREAS the Port of Seattle is funding projects that are part of or complement the AWVSR Program and which will provide capacity for future growth and improved safety, including the East Marginal Way Grade Separation Project, and the SR 519 South Seattle Intermodal Access Project Phase 2, has endorsed the bored tunnel concept, and is reviewing a proposed $300 million investment in the AWVSR Program; and

WHEREAS King County is responsible for providing bus service, which serves an annual ridership of 100 million within a 2,134 square mile area; and

WHEREAS, King County is funding transit investments as part of the AWVSR Program, which will provide capacity for an additional 17,000 riders and include RapidRide investments, park and ride facility expansion, enhanced express and local service during peak periods, and investments in maintenance base capacity.

NOW, THEREFORE, the Parties agree to proceed with the AWVSR Program in accordance with the following principles.

IT IS MUTUALLY AGREED THAT:

Jointly the STATE and CITY intend to:

1. Continue to work collaboratively toward the successful completion of the AWVSR Program; and
2. Endeavor to open the bored tunnel to drivers by the end of 2015; and
3. Develop additional program-wide agreements (Additional Agreements), such as utility relocation, right-of-way, ownership and maintenance, and others to be consistent with this Agreement.

Responsibilities, implementation, and funding to be addressed in Additional Agreements are assigned as follows:

I. RESPONSIBILITIES

The STATE will be responsible for the following:

1. The Moving Forward Projects; and
2. A bored tunnel from a point just north of S. Royal Brougham Way to Harrison Street including connections to the city street system and the reconnection of John Street, Thomas Street, and Harrison Street over SR 99; and
3. A surface street from S. King Street along Alaskan Way to Elliott and Western avenues, ending at Battery Street, including replacement of the Marion Street pedestrian overpass and reconstruction of the Lenora Street pedestrian overpass; and
4. A new roadway connecting the realigned Alaskan Way to East Marginal Way S.; and
5. Alaskan Way Viaduct demolition; and
6. Battery Street Tunnel decommissioning; and
7. Partial construction transportation mitigation; and
8. Protection of public and private facilities which can safely remain in place throughout construction of the bored tunnel; and
9. Agreement with King County for transit investments associated with the AWVSR Program; and
10. Agreements with the Port of Seattle for freight mobility improvements associated with the AWVSR Program.

The CITY will be responsible for the following:

1. City utility relocations associated with the AWVSR Program; and
2. Seawall replacement along the CITY's central waterfront; and
3. A promenade or public space along the central waterfront; and
4. Other City street improvements including the west phase of the Mercer Corridor Project and partial funding for the Mercer Corridor East and Spokane Street Viaduct projects; and
5. Evaluation of a potential streetcar on First Avenue, including a segment phasing approach.

II. IMPLEMENTATION

The Parties recognize that it may be in the public interest for one Party to implement portions of the other Party's program responsibilities. Each Party will be responsible for implementation roles, which are subject to change by agreement of the Parties, and may include, but are not limited to, the following:

The STATE shall, in accordance with the Additional Agreements:

1. Complete the following Moving Forward Projects: Electrical Line Relocations – Phase 1, S. Holgate to S. King Street Viaduct Replacement Project; SR 99 Intelligent Transportation System Projects; and establish an agreement with King County for transit service during construction; and
2. Design and construct a single bore tunnel from approximately S. Royal Brougham Way to Harrison Street, with four lanes of traffic including tunnel portals at either end; and
3. Design and construct the relocation of some CITY-owned utilities at the portal locations and bored tunnel alignment on behalf of the CITY; and
4. Design and construct new crossings of the SR 99 bored tunnel at John, Thomas, and Harrison streets; and
5. Design and construct a new City street grid between S. King and S. Atlantic streets including the realignment of Alaskan Way; and
6. Design and construct a new roadway connecting the realigned Alaskan Way to East Marginal Way; and
7. Demolish the existing Alaskan Way Viaduct from S. King Street to the Battery Street Tunnel; and
8. Decommission the Battery Street Tunnel; and
9. Complete the environmental review process for the Bored Tunnel Alternative, as required by federal and state law; and
10. Establish an agreement with the Port of Seattle to secure the $300 million port investment for the Alaskan Way Viaduct Replacement Program including the bored tunnel project.

The CITY shall, in accordance with the Additional Agreements, and subject to appropriation of funds for these purposes:

1. Design and construct the relocation of some CITY-owned utilities required for the AWVSR Program; and
2. Design and construct a new seawall between Colman Dock and Pine Street; and
3. Design and construct a new promenade or public space along the central waterfront; and
4. Design and construct two-way Mercer Street from I-5 to Elliott Avenue, including a new Sixth Avenue from Harrison Street to Mercer Street; and
5. Design and construct a widened Spokane Street Viaduct, including a new ramp to Fourth Avenue; and
6. Evaluate a potential streetcar on First Avenue between S. Jackson Street and the Seattle Center, including a segment phasing approach; and
7. Design and construct a new four-lane connection from Elliott and Western avenues, beginning at Battery Street, to Pine Street; and
8. Design and construct a new surface road from S. King Street to Pine Street; and
9. Design and construct intelligent transportation system projects along the SR 99 corridor.

III. FUNDING

Funding responsibilities for the estimated costs are as follows (these are preliminary cost estimates, with final funding commitments to be determined).

The STATE shall fund or procure funding for, if, and to the extent that the Washington State Legislature appropriates funds for these purposes as agreed to in the Additional Agreements, consistent with the State funding limits established in Engrossed Substitute Senate Bill 5768:

1. Bored tunnel from north of S. Royal Brougham Way to Harrison Street -- $1.9 billion
2. Surface street connection from S. Yesler Street along Alaskan Way to Pike Street, including replacement of the Marion Street pedestrian overpass; a new connection from Pike Street to Elliot and Western avenues; reconstruction of the Lenora Street pedestrian overpass; viaduct removal; Battery Street Tunnel decommissioning -- $290 million
3. Completion of the Moving Forward Projects including a new surface Alaskan Way from S. King to S. Yesler streets, and a new roadway connecting the realigned Alaskan Way to East Marginal Way S.-- $600 million
4. Partial construction transportation mitigation (mitigation to offset loss of on-street parking during construction) -- $30 million

The CITY shall fund or procure funding for, if, and to the extent that, the Seattle City Council appropriates funds for these purposes as agreed to in the Additional Agreements (the Parties acknowledge that no funds will be appropriated by the ordinance that approves this Agreement):

1. City utility relocation costs associated with the program -- $248 million
2. Central seawall replacement -- $225 million
3. Promenade or public space along the central waterfront -- $123 million

4. City streets and transit pathways including the west phase of the Mercer Corridor Project and partial funding for the Mercer East and Spokane Street Viaduct projects -- $191 million
5. Evaluation of a potential First Avenue Streetcar, including a segment phasing approach -- $140 million (design and construction estimate)

The STATE and CITY shall jointly work with King County and the Port of Seattle to endeavor to fully secure the respective funding commitments of these contributing agencies.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement as of the last day and year written below.

CITY OF SEATTLE

By: _____

Print: _____

Title: _____

Date: 10/24/2009

STATE OF WASHINGTON

By: _____

Print: _____

Title: _____

Date: 10/24/09

APPROVED AS TO FORM:

Elizabeth Lagerberg
By (print)

_____
Signature
Assistant Attorney General

Date: 10-22-09

Appendix I

Updated SR 99 Alaskan Way Viaduct Replacement Updated Cost and Tolling Summary Report to the Washington State Legislature, January 2010

SR 99 Alaskan Way Viaduct Replacement Updated Cost and Tolling Summary Report to the Washington State Legislature

January 2010

Washington State Department of Transportation

Executive Summary
Why was this report prepared?

The Washington State Legislature approved Engrossed Substitute Senate Bill (ESSB) 5768 during the 2009 session, which identified a deep bored tunnel as its preferred option for replacing the SR 99 Alaskan Way Viaduct. ESSB 5768 committed a maximum of $2.8 billion in state funding to the replacement program, with $2.4 billion raised from existing state and federal sources and no more than $400 million raised from tolling the proposed bored tunnel. A $300 million contribution from the Port of Seattle brings the total replacement budget to $3.1 billion.

ESSB 5768 directed WSDOT to:

- Provide updated cost estimates for the SR 99 Alaskan Way Viaduct replacement, including the bored tunnel, to the legislature and governor by January 1, 2010;
- Consult with independent tunnel engineering experts to review the cost estimates and risk assumptions; and
- Prepare a traffic and revenue study to determine the potential for tolls to contribute to construction funding. The study should include an analysis of potential diversion, mitigation to offset diversion, and impacts on the performance of the facility from tolling.

.

This report summarizes the work completed by WSDOT as required by the legislature. This work was comprised of four integral and related steps as illustrated in Exhibit 1:

Step 1 — The SR 99 bored tunnel has a cost which must be defined in order to identify the funding required. A revised, risk-adjusted tunnel cost estimate was the outcome of an updated cost assessment including elements of an enhanced Cost Estimate Validation Process (CEVP®) based on extensive cost and risk workshops, value engineering and design changes.

Step 2 — Tolling tunnel traffic is part of the funding equation. The City of Seattle's travel demand model was used to predict future traffic patterns for five toll scenarios after the tunnel and other program improvements have been completed.

Exhibit 1 – Approach to Analysis

Step 3 — A revenue model was used to estimate gross annual revenues from the traffic projections, deduct costs for toll collection and facility operations and maintenance, and calculate net toll revenue.

Step 4 — The Office of the State Treasurer's financial advisors applied a financial model to determine the toll funding contribution that could be supported by borrowing against future net toll revenues for each of the five scenarios. When combined with

other identified funding, toll scenarios for which the SR 99 program is financially feasible were identified.

What is the SR 99 Alaskan Way Viaduct replacement and how much will it cost?

The southern mile of the SR 99 Alaskan Way Viaduct will be replaced by a one–mile-long side-by-side road with three lanes in each direction. The bridge and roadway work for this project, known as the S. Holgate Street to S. King Street Viaduct Replacement, is currently on advertisement to contractors and has been completely designed. The south end replacement is one of several safety and mobility projects in the corridor that are known as the "Moving Forward" projects[1].

An approximately two-mile-long bored tunnel, with two lanes in each direction, has been proposed to replace the section of viaduct along Seattle's downtown waterfront. The bored tunnel would be built beneath downtown. Once the remaining viaduct is removed, a four-lane surface street would be built along the central waterfront. WSDOT has advanced the design of the proposed SR 99 bored tunnel to approximately 15 percent and has pre-qualified four teams of interested contractors for the tunnel design-build contract.

Using the final design for the south end viaduct replacement and the current 15 percent design/engineering plans for the proposed bored tunnel, WSDOT updated the cost estimates for the SR 99 Alaskan Way Viaduct (AWV) replacement using an updated cost assessment including elements of an enhanced Cost Estimate Validation Process (CEVP®) based on extensive cost and risk workshops, value engineering and design changes. The updated costs estimates for the key project components are:

Exhibit 2 – AWV Replacement Projects Cost Estimate by Element

Project	2009 Cost Estimate (millions)*	2010 Cost Estimate (millions)*
S. Holgate Street to S. King Street viaduct replacement	$537	$483
Other Moving Forward projects and prior expenditures	$363	$345
SR 99 proposed bored tunnel and systems	$1,900	$1,960
Alaskan Way surface street and viaduct removal	$290	$290
Central waterfront construction mitigation	$30	$30
Total Cost Estimate	**$3,120**	**$3,108**

*All costs are rounded in year of expenditure dollars.

[1] Other "Moving Forward" projects include Yesler Way Vicinity Foundation Stabilization, Electrical Line Relocation, Battery Street Tunnel Fire and Safety Improvements, and Transit Enhancements and other Improvements.

In January 2009, Governor Gregoire, former King County Executive Sims, former Seattle Mayor Nickels and Port of Seattle Chief Executive Officer Tay Yoshitani agreed to replace the aging Alaskan Way Viaduct with a deep bored tunnel. In addition to the tunnel, the executives agreed to a program of investments, funded through state, local and federal sources, that includes improvements to Alaskan Way and other city streets, additional transit service and improvements to freight, bike and pedestrian pathways. At that time, the Port of Seattle stated its intent to contribute $300 million toward the replacement of the Alaskan Way Viaduct, to close the funding gap between $2.8 billion in state funding and the $3.1 billion cost to replace SR 99 through downtown Seattle. The port and state will enter into a memorandum of agreement to confirm the port's funding commitment in February 2010.

Can $400 million be raised by tolls?

WSDOT evaluated five scenarios to determine whether tolling could raise up to $400 million in funding for the replacement of the Alaskan Way Viaduct. These five scenarios considered a range of toll rates which vary by time of day and direction of travel according to a set schedule. Some of the scenarios would only toll the tunnel, while others would toll the tunnel as well as trips using ramps in the portal areas to access downtown.

The results of the analysis are:

- Three of the five scenarios could raise $400 million in toll funding. A fourth scenario comes close.
- Tolls should be different in each direction during peak periods due to directionality of traffic.
- Peak period tunnel toll rates could range from $2.75 to $5.00 in the year of opening (2015 dollars) or from $2.30 to $4.20 in 2008 dollars, depending on the scenario and direction of travel.
- A scenario charging a low toll rate during weekday peak periods, which would minimize diversion from the tunnel, could contribute approximately $100 million for construction funding.

How would the performance of the transportation system change with tolls?

The combination of the proposed bored tunnel and an improved Alaskan Way surface street would accommodate the future trips that use the Alaskan Way Viaduct today. The surface street would primarily handle trips to and from downtown Seattle while the bored tunnel would serve through trips.

If drivers were charged a toll to use the proposed bored tunnel, some drivers traveling through downtown Seattle would seek alternative routes, especially during off-peak times (midday, evenings and weekends). Some would use Alaskan Way, some would divert to other city streets, and some would choose I-5.

However, analysis of the transportation system in 2030 shows that tolling would result in little or no change to travel times for trips to and through downtown Seattle. Due to the little or no change to travel times, WSDOT is not recommending mitigation for diversion from the tunnel, if a toll is charged.

Other key findings from the 2030 transportation analysis are:

- The majority of drivers in peak periods would use the tunnel even if it is tolled. Of the peak period commute traffic that would use the tunnel if there were no toll, 69 to 81 percent would continue to use the tunnel with a toll rather than take city streets or I-5, which are congested during morning and evening commutes.
- During off-peak periods, drivers are more likely to divert. Of the off-peak period traffic that would use the tunnel if there were no toll, 54 and 58 percent would continue to use the tunnel with a toll.
- Many drivers who avoid the toll would choose to take an improved Alaskan Way, rather than other city streets or I-5, with the greatest percentage increase during off-peak periods. Approximately 12,700 vehicles would use Alaskan Way during off-peak periods if no toll were charged; between 18,550 and 19,050 would use it if there were a medium or high tunnel toll rate.
- As some drivers choose to take city streets or I-5 to avoid the tunnel toll during peak periods, trips from Ballard to West Seattle on Alaskan Way would take two to four minutes longer due to increased volumes; the same trip using Mercer Street and the tunnel would be up to two minutes faster than if there was no toll.
- Volumes on I-5 would increase the most during off-peak periods if the proposed bored tunnel is tolled. An expected vehicle volume of six percent would not significantly change travel times because there is some capacity on I-5 during off-peak periods.

What are the upcoming funding needs for the SR 99 Alaskan Way Viaduct replacement?

The 2009 Washington State Legislature committed $2.8 billion toward the replacement of the Alaskan Way Viaduct, including up to $400 million in funding from tolls. With this funding commitment, WSDOT has the needed authorization for construction of the south end viaduct replacement and to initiate the design-build contracting process for the proposed bored tunnel. Subsequent tolling and bonding authority will be necessary. The current project schedule assumes that bond authorization would be provided in 2011 and that bonds would be issued starting in mid-2012 (fiscal year 2013). The financial graphic in Exhibit 10 assumes that funding from the Port of Seattle will be received in 2016 and 2017. If this funding is received earlier in the replacement program, the financial plan will be updated accordingly. When the Port of Seattle funding is received, the project will need authorization to spend an additional $300 million.

Chapter 1.
How much will the replacement of the SR 99 Alaskan Way Viaduct cost?

The governor, WSDOT and the legislature are committed to delivering the SR 99 Alaskan Way Viaduct replacement within the $3.1 billion budget. The budget is based on the $2.8 billion funding commitment from the state legislature and a $300 million contribution from the Port of Seattle.

WSDOT updated the cost estimates for the Alaskan Way Viaduct replacement projects. The team assessed costs by using an enhanced CEVP® process that included extensive cost and risk workshops and iterative value engineering processes. The efficiencies and improvements developed from the value engineering process are used to not only improve function, but are also used to keep the replacement program within budget if cost increases were to occur in other areas.

The 2010 cost estimate for the overall Alaskan Way Viaduct replacement remained unchanged from late year's estimate of $3.1 billion. The cost estimate for the proposed bored tunnel project increased by approximately $60 million over the 2009 estimate. However, cost savings realized on the S. Holgate Street to S. King Street Viaduct Replacement Project (one of the Moving Forward projects) kept the total cost of the viaduct replacement projects within the $3.1 billion budget. The 2010 cost estimate is broken out by project or element and is summarized in Exhibit 3.

Exhibit 3 – Updated 2010 Alaskan Way Viaduct Replacement Projects Cost Estimate by Element

Project Element	Most Likely Cost (millions)[1]
S. Holgate Street to S. King Street viaduct replacement	$483
Other Moving Forward projects and prior expenditures	$345
SR 99 proposed bored tunnel and systems	$1,960
Alaskan Way surface street and viaduct removal[2]	$290
Central waterfront construction mitigation[2]	$30
Total Replacement Cost Estimate	**$3,108**

[1]All costs are rounded in year of expenditure dollars.
[2]The cost estimates for the Alaskan Way surface street, viaduct removal, and construction mitigation have not been updated. Additional design work and construction planning for these project elements will inform future cost estimate updates.

What was the previous cost estimate to replace the SR 99 Alaskan Way Viaduct?

When Governor Gregoire, former King County Executive Sims, and former Seattle Mayor Nickels were evaluating potential options for replacing the Alaskan Way Viaduct along the central waterfront, a preliminary cost estimate for the bored tunnel was prepared in December 2008/January 2009. The executives also relied on previously prepared estimates that established the costs of replacing the south mile of the viaduct,

demolishing the structure along the waterfront, and re-constructing Alaskan Way. The updated estimates are based on more advanced engineering plans.

Exhibit 4 – 2009 Alaskan Way Viaduct Replacement Projects Cost Estimate by Element (Dec 2008/Jan 2009)

Project Element	Most Likely Cost (millions)*
S. Holgate Street to S. King Street viaduct replacement	$537
Other Moving Forward projects and prior expenditures	$363
SR 99 proposed bored tunnel and systems	$1,900
Alaskan Way surface street and viaduct removal	$290
Central waterfront construction mitigation	$30
Total Replacement Cost Estimate	**$3,120**

*All costs are rounded in year of expenditure dollars.

What is the cost estimate for the SR 99 S. Holgate Street to S. King Street Viaduct Replacement Project?

The S. Holgate Street to S. King Street Viaduct Replacement Project will replace the south mile of the viaduct, near Seattle's sport stadiums, with a side-by-side road with three lanes in each direction and new access into and out of downtown Seattle. This project is one of the Moving Forward projects, which were agreed to by the state, county and city in early 2007.

Since the S. Holgate Street to S. King Street Viaduct Replacement Project is currently being advertised to potential contractors, the updated cost estimate for this portion of the Alaskan Way Viaduct replacement reflects the final project design. The reduction in the estimate is largely due to the redesign of the crossing at S. Atlantic Street, which is now designed to be an above-grade rather than a below-grade crossing. Like the previous design, the overcrossing will improve freight mobility and reliability by providing an alternate route over train tracks located on S. Atlantic Street. The new design is less complex to build, and the components are less expensive to construct. In addition, this new design allows for an integrated roadway connection between Alaskan Way and E. Marginal Way, a connection that the old design did not allow.

Exhibit 5 – S. Holgate Street to S. King Street Viaduct Replacement Project Cost Elements

	2009 Cost Estimate (millions)	2010 Updated Cost Estimate (millions)*
Construction	$385	$330
Right of way costs	$75	$63
Preliminary and final design	$77	$90
Total	**$537**	**$483**

*All costs are rounded in year of expenditure dollars.

What is the cost estimate for the proposed SR 99 bored tunnel?

The 2010 cost estimate for the proposed bored tunnel is $1.96 billion, an approximately $60 million increase from the 2009 cost estimate. Though the cost estimate for the proposed tunnel increased, changes to the design have and will mitigate several significant risks that were identified during the estimating process.

Changes have been made to the proposed bored tunnel and portals, including the following:

- Moving the alignment of the tunnel's south end to Alaskan Way instead of through Pioneer Square on First Avenue. This change would avoid impacts to the historic Pioneer Square Historic District, as well as impacts to individual historic buildings, reduce the total number of buildings affected, reduce construction difficulty and reduce traffic disruptions during construction.
- Moving the tunnel's north portal under Sixth Avenue instead of Aurora Avenue. This change would allow WSDOT to avoid complex and costly staging to keep traffic moving on SR 99 during construction, reduce contractor conflicts, reduce the right of way needs, and reduce the impacts to businesses along the affected roadway.
- Changing the overall tunnel alignment. Shifting the north and south portals allowed curves in the tunnel to be lessened, which would create a safer environment for drivers.

The net rise in the tunnel cost is due primarily to the lengthening of the tunnel. The new portal configurations resulted in an overall increase in length of 640 feet.

Exhibit 6 – 2010 Proposed Bored Tunnel Alignment

Exhibit 7 – 2009 SR 99 Bored Tunnel Cost Estimate (Dec. 2008/Jan. 2009)

	2009 Cost Estimate (millions)*
Construction (including construction management)	$1,062
Right of way	$149
Preliminary and final design	$118
Risk and escalation	$571
Total	**$1,900**

*Estimates reflect year of expenditure dollars.

Exhibit 8 – 2010 SR 99 Bored Tunnel Cost Estimate

	2010 Cost Estimate (millions)*
Construction (including construction management)	$1,224
Right of way	$152
Preliminary and final design	$169
Risk and escalation	$415
Total	**$1,960**

*Estimates reflect year of expenditure dollars.

How was the bored tunnel cost estimate prepared?

An extensive and iterative six-month cost and risk assessment was undertaken to identify the probable cost and schedule for the proposed SR 99 bored tunnel, north and south access facilities and systems components. Both the base cost and the risk register were continuously revised and updated during the six-month process. The assessment involved a number of independent, highly-qualified subject-matter experts and cost estimators experienced in tunnels, underground construction and megaproject delivery. Additionally, as required by the legislature, independent tunnel engineering experts were consulted and their comments considered in the development of the cost and risk assessment.

How will the costs for the proposed bored tunnel be managed?

By engaging in a thorough cost assessment process, using independent experts, and quantifying risk and risk-mitigation actions, WSDOT has a higher level of confidence that the significant project costs and risks have been indentified. Since these risks are better understood, they can be effectively and proactively managed. Strategies have been developed to manage each of the identified risks, and as design advances, we will continue to indentify, address, and retire risks, supplemented by the pre-qualified design-build contractors. In addition, WSDOT will continue to make improvements in design, and conduct additional value engineering workshops, allowing for more advanced management of risks.

What prior funds have already been expended?

WSDOT initiated work to replace the Alaskan Way Viaduct in 2001, including the environmental process. Program expenditures, through June 30, 2009, total approximately $325 million. This includes Moving Forward projects as well as the following activities:

- Preliminary engineering, right of way purchases and construction of the first phases of the S. Holgate to S. King Street Viaduct Replacement Project.
- Contributions to the City of Seattle's Spokane Street Viaduct Project and a new Fourth Avenue off-ramp on the structure.
- Environmental review, including publication of a draft environmental impact statement (EIS) in 2004, supplemental draft EIS in 2006, and preparation of a second supplemental draft EIS to be published in fall 2010.
- Engineering and design for previously considered alternatives, such as an elevated structure, cut-and-cover tunnel and integrated elevated structure.
- Right of way purchases for property that would be required along the corridor, regardless of the preferred alternative.
- Other improvements to minimize construction impacts.

What is the project schedule?

The following milestones were assumed in the 2010 cost estimate:

- Completion of column safety repairs and electrical line relocation projects
- Issue draft bored tunnel request for proposals to pre-qualified design-build teams – February 2010
- Begin bridge and roadway construction on the S. Holgate Street to S. King Street Viaduct Replacement Project – Summer 2010
- Announce apparent best value for SR 99 bored tunnel design-build contract – January 2011
- Receive Record of Decision from the Federal Highways Administration (FHWA) – mid- 2011
- S. Holgate Street to S. King Street Viaduct Replacement Project, including a grade-separated crossing at S. Atlantic Street, open to traffic – Late 2014
- Open SR 99 bored tunnel to drivers – December 2015

Chapter 2.
How much funding has been committed to replace the SR 99 Alaskan Way Viaduct?

What funding has been provided by the state and federal government?

The cost to replace the Alaskan Way Viaduct has been estimated at $3.1 billion. As outlined in ESSB 5768, the state's contribution to the replacement program is capped at $2.8 billion, with $2.4 billion already committed through existing state and federal funding sources and up to $400 million assumed to be provided through tolling. The committed federal and state funding sources include:

Exhibit 9 – Program Funding from State, Federal and Local Sources

State Sources	**Funding (millions)**
2003 Gas Tax (Nickel Funding)	$253.1
2005 Gas Tax (Transportation Partnership Program)	$1,558.7
Multi-modal Transportation Funding	$200.0
Motor Vehicle Fund Special C Account	$47.4
Total State Committed Sources	**$2,059.2**
Federal Sources	**Funding (millions)**
National Highway of Significance *	$7.5
Bridge Replacement (FY 2014-2017)	$72.6
Emergency Relief	$48.3
SAFETEA-LU "Project of Regional and National Significance"	$199.3
SAFETEA-LU High Priority Project	$10.1
Federal Demonstration Project (Prior)	$4.0
Total Federal Committed Sources	**$341.8**
Local Sources	**Funding (millions)**
All Local Sources**	$6.5
Total Local Committed Sources	**$6.5**
Total State, Federal, and Local Committed Sources	**$2,407.5**

*Funding from the National Highway of Significance Program is paying for the installation of automated closure gates on the Alaskan Way Viaduct.
**Local sources include: City of Seattle and Private Utilities (betterments)

What funding has been committed by the Port of Seattle?

In January 2009 the Port of Seattle stated its intent to contribute $300 million in funding toward the replacement of the Alaskan Way Viaduct. The port made this commitment based on its support for options that maintain capacity in the SR 99 corridor. In addition, the S. Holgate to S. King Street Viaduct Replacement Project will provide more reliable connections between the port's container terminals by building a grade-separated crossing of SR 99 and the railroad tracks. The project will also improve connections between the nearby interstate freeways and the port's container terminals.

The Port of Seattle is working with WSDOT to develop a memorandum of agreement that outlines the benefits of the Alaskan Way Viaduct replacement projects to freight mobility, the commitment of funding, and each agency's responsibilities. The port commission is expected to consider this memorandum of agreement for approval in February 2010. It is expected that the majority of the port's funding would become available toward the end of the replacement program.

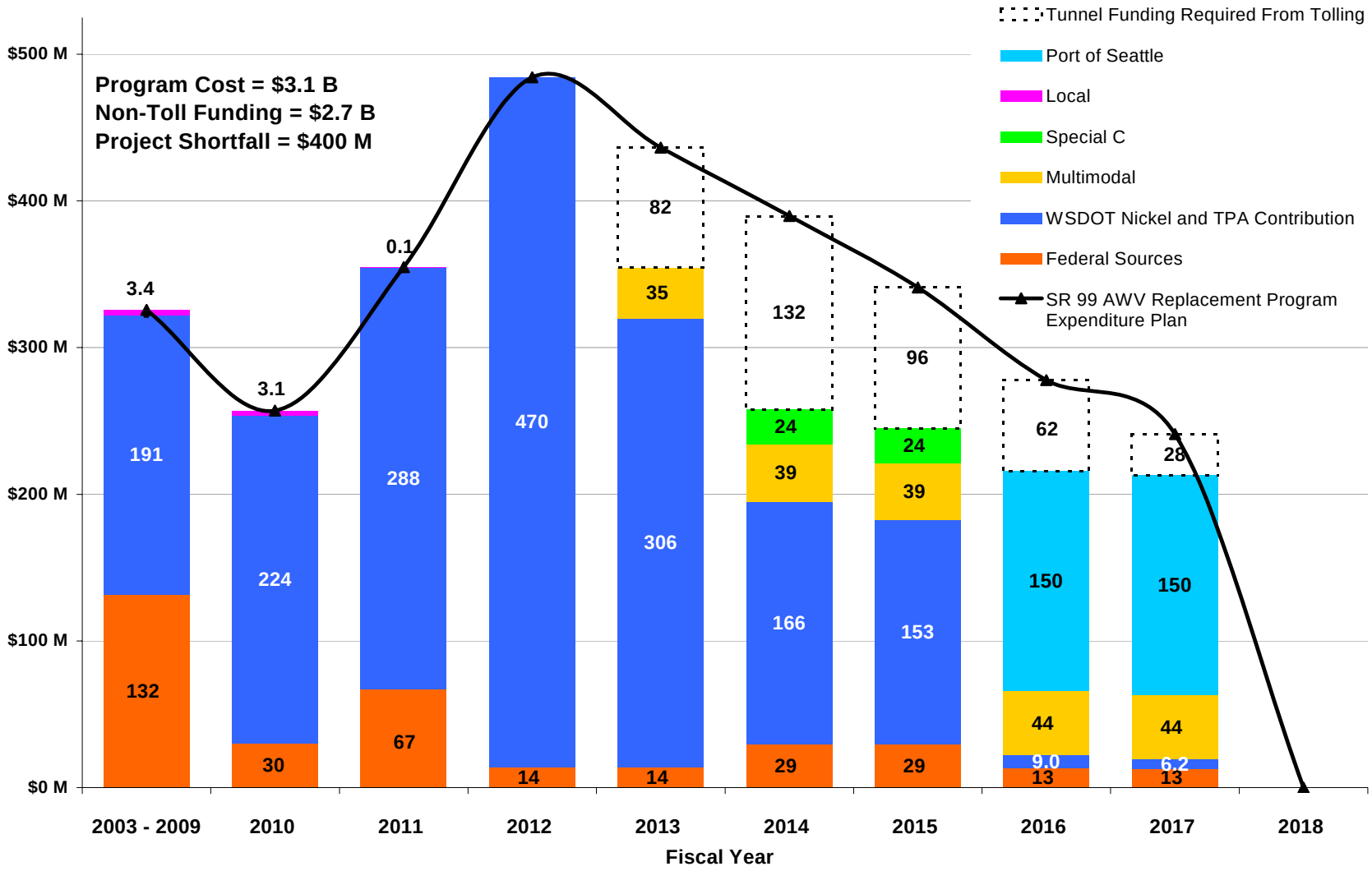
What is the remaining funding gap?

After the federal, state and Port of Seattle funded commitments to replace the Alaskan Way Viaduct, there remains a $400 million funding gap. The 2009 Washington State Legislature assumed that up to $400 million of the state's $2.8 billion funding commitment could be raised through tolls.

Both the amounts and timing of funds are important in determining a project's financial feasibility. It is necessary not only for the total funding to match the overall capital expenditures, but also to ensure that timing of those sources of funds coincides with the construction expenditure schedule. As part of this aging process, funding sources with certain restrictions need to be matched with their appropriate uses.

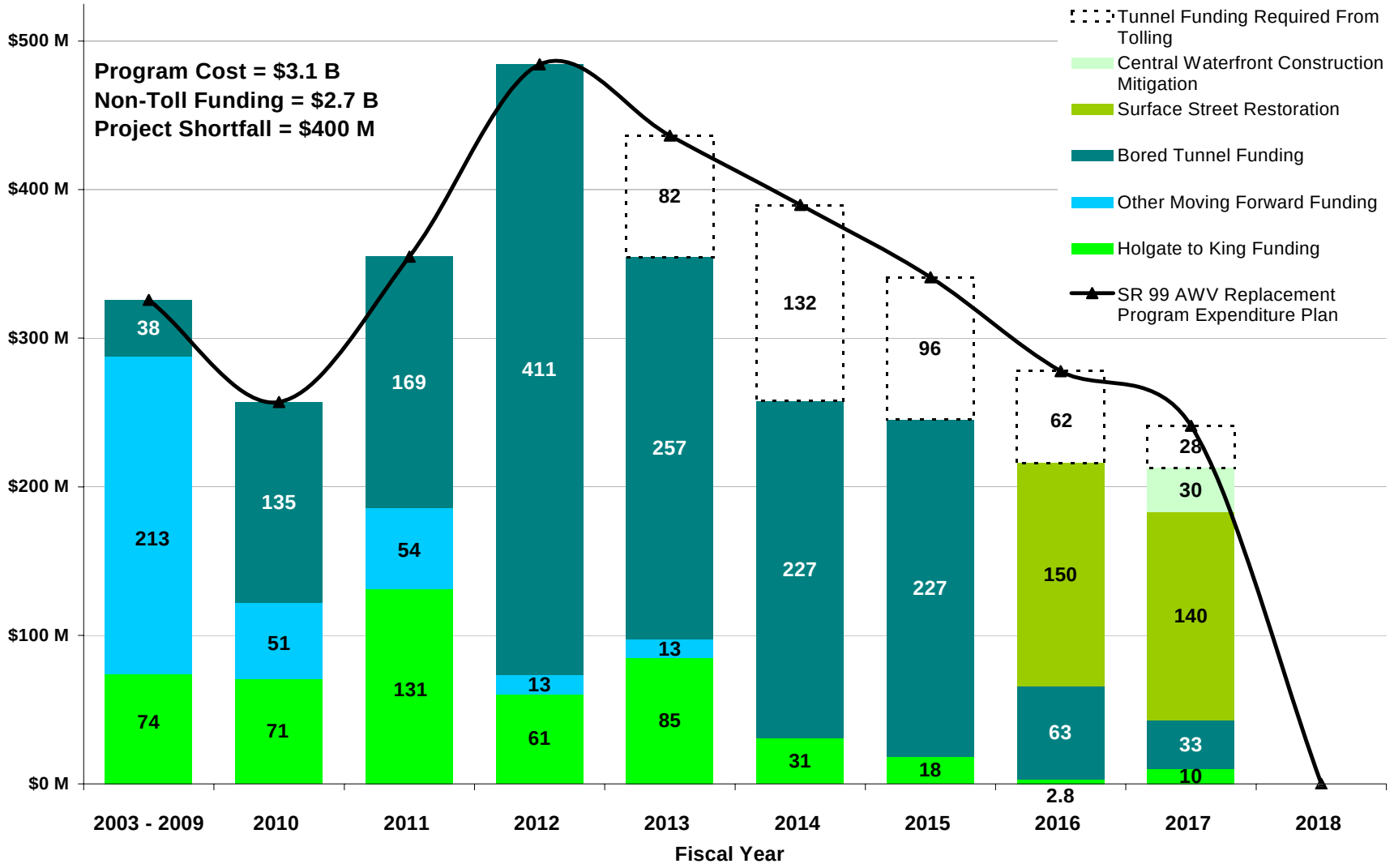
Exhibit 10 illustrates the estimated timing of capital expenditures (black line) and the timing of existing sources of funds (stacked bars) excluding tolls. The gap between the black line and the stacked bars represents the funding gap for which the toll funding contribution is targeted. Bonding authority in excess of $400 million will be required in order to deliver $400 million in construction funding, pay for capitalized interest during construction, and cover bond sale expenses.

Exhibit 10 – Program Expenditures and Funding by Source



Note: If funding from the Port of Seattle is received earlier than shown above, the financial plan and uses of those funds will be updated accordingly.

Exhibit 11 – Program Expenditures and Funding by Use

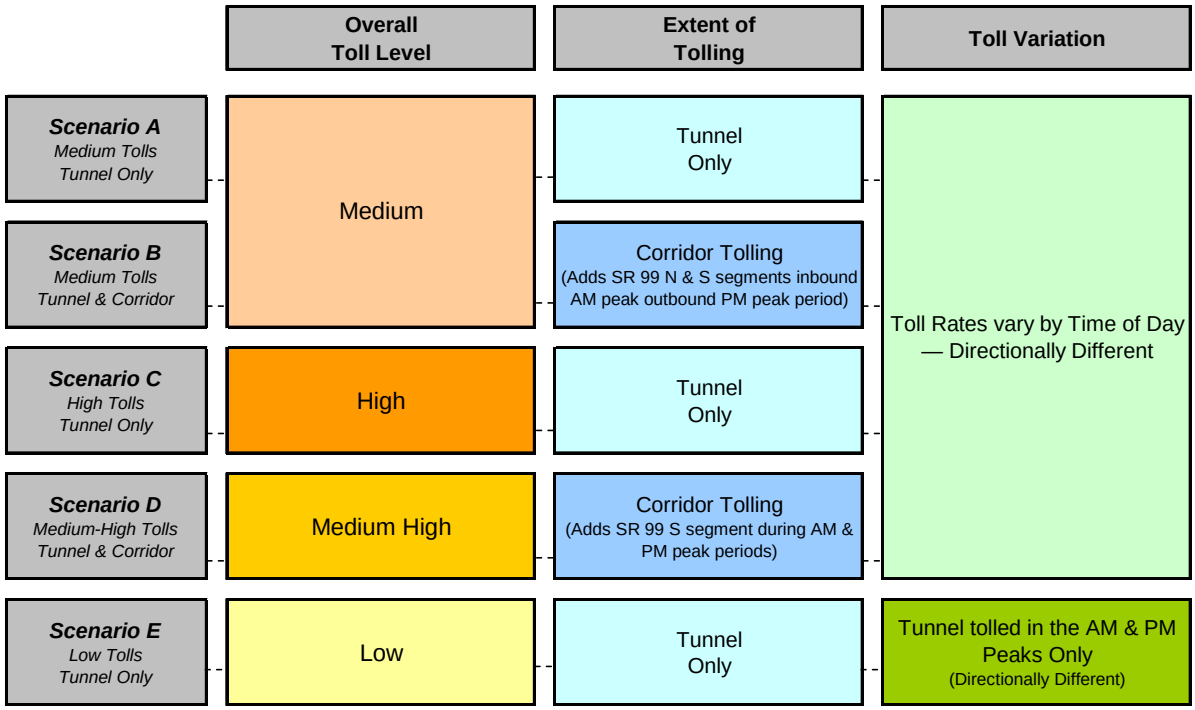


Note: If funding from the Port of Seattle is received earlier than shown above, the financial plan and uses of those funds will be updated accordingly.

Chapter 3.
What tolling scenarios were analyzed?

Five toll scenarios were evaluated to determine if they could contribute up to $400 million in funding for the SR 99 Alaskan Way Viaduct replacement, while at the same time encouraging through trips to use the proposed bored tunnel, especially during peak travel times. These scenarios include several variables, which are shown in Exhibit 12:

Exhibit 12 – SR 99 Bored Tunnel Toll Scenarios Analyzed



*All scenarios assume full AWV Program improvements and a tunnel open date of Jan 1, 2016

- **Geographic boundary.** Some scenarios evaluated tolls charged only in the tunnel while others also charged a toll to drivers who used the segments of the corridor north and south of the tunnel to get to or from downtown Seattle.
- **Toll rate.** A range of toll rates were evaluated based on the time of day, direction of travel, and a high, medium, or low toll rate approach.

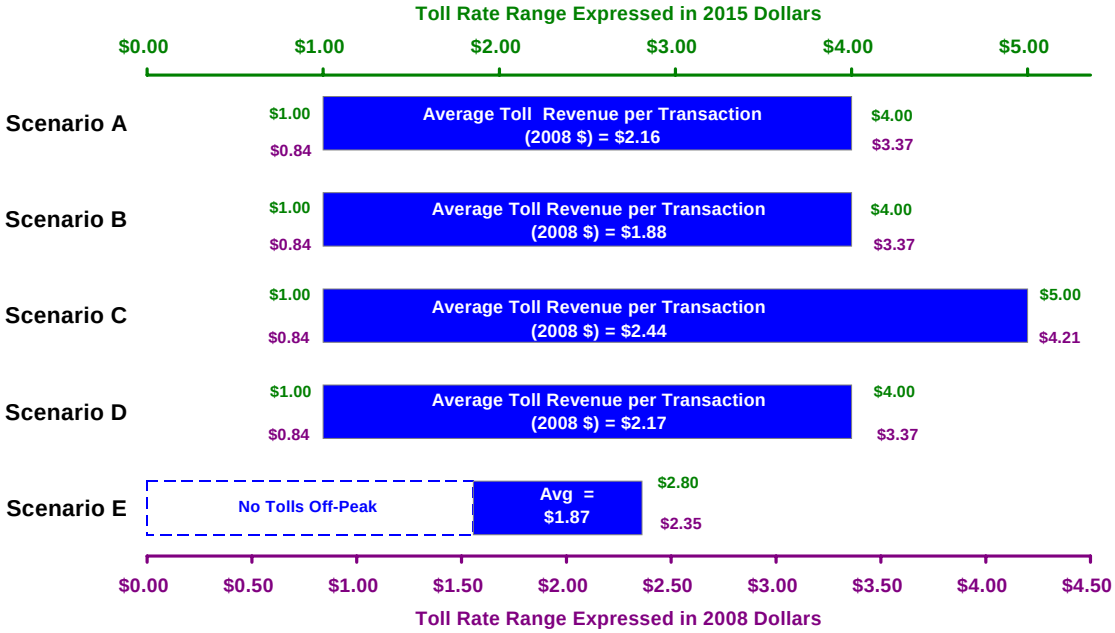
Key observations from previous traffic and tolling analysis conducted for the SR 99 corridor as well for the SR 520 bridge replacement informed the development of the scenarios:

- **Direction of traffic.** Traffic demand on SR 99 varies significantly by direction of travel. This finding suggests that tolls should be tailored to these variations.

- **Time of day.** There are several alternate routes to the proposed bored tunnel and those alternatives are most viable during off-peak times when they are not congested. This suggests that variable tolling should be employed so that tolls would be lower during off-peak times to keep traffic in the tunnel and discourage diversion. Also, tolls can be used most effectively to manage traffic and optimize revenue when they vary by time of day.
- **Price sensitivity.** Drivers begin to divert even at relatively low toll rates.
- **Toll optimization.** After a certain point, higher toll rates do not generate more revenue. Every facility has an optimal toll rate that balances revenue generated by each trip with the number of trips taken. If toll rates are set higher, revenue will begin to decline.
- **Inflation.** Toll rates need to generally keep pace with inflation. If toll rates are not adjusted for inflation, the buying power would decline over time, which would eventually lead to growth in demand sufficient to degrade facility performance.

Exhibit 13 shows the range and average of the weekday toll rates for each of the five scenarios analyzed in this report. The lowest toll rate would generally be for the overnight toll rate, except for Scenario E, which would not charge drivers a toll during non-peak periods. In most cases the highest toll would be charged to drivers traveling southbound in the afternoon peak period.

Exhibit 13 – Range of Weekday Tolls for Tunnel Trips by Scenario



SR 99 tunnel toll rates are expected to vary by time of day and direction according to a set schedule so that drivers would know in advance what they can expect to pay to use the bored tunnel. Tolls also would vary by day of the week with weekend tolls being lower than tolls at the same time of day on a weekday. The average revenue per

transaction shown in Exhibit 13 is intended for comparing the weighted average toll across the scenarios, and does not reflect a specific toll that a user would pay.

What is Toll Scenario A?

Toll Scenario A would toll only the proposed bored tunnel and is based on a medium toll rate structure. Medium tolls are designed to balance revenue generation with managing traffic. The weekday toll rates tested under Toll Scenario A are:

Exhibit 14 – Weekday Toll Rates for Toll Scenario A

Weekday Toll Rates	2008 Dollars	2015 Dollars
Maximum Morning Toll Rate	$2.94	$3.50
Maximum Afternoon Toll Rate	$3.37	$4.00
Average Revenue per Transaction	$2.16	$2.57

What is Toll Scenario B?

Toll Scenario B applies the same tolls to the proposed bored tunnel as Toll Scenario A. In addition, Scenario B adds a toll to drivers who use the segments of SR 99 north and south of the tunnel to access downtown in the morning and depart from downtown in the afternoon. Known as a segment toll, drivers would be charged a toll if they used SR 99 south of the tunnel from the Spokane Street Viaduct and exited at S. King Street, or if they used the northern section of SR 99 south of the Aurora Bridge and exited before the north tunnel portal.

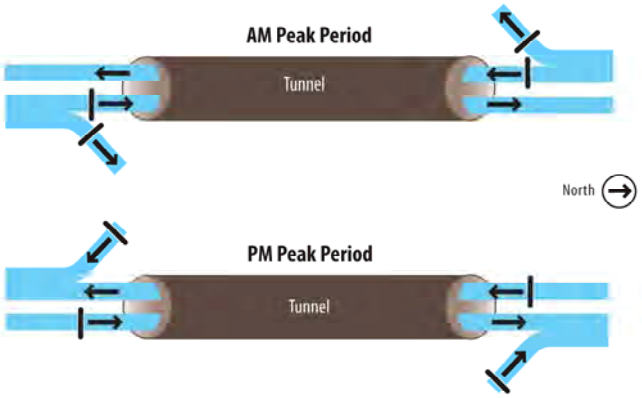


Exhibit 15 – Proposed Segment Tolls

If drivers drove through the tunnel or used the north and south segments of SR 99 during off-peak times, they would not be charged a segment toll. Trips into downtown during the morning and trips out of downtown in the afternoon would be charged a segment toll.

Exhibit 16 – Weekday Toll Rates for Toll Scenario B

Weekday Toll Rates	2008 Dollars	2015 Dollars
Maximum Morning Toll Rate	$2.94	$3.50
Maximum Afternoon Toll Rate	$3.37	$4.00
Average Revenue per Transaction	$1.88	$2.24
Peak Period, Peak Direction-only Segment Toll Rate (for non-tunnel trips)	$1.05	$1.25

What is Toll Scenario C?

Toll Scenario C tolls the tunnel with high toll rates designed to maximize gross revenues, and thus, toll funding.

Exhibit 17 – Weekday Toll Rates for Toll Scenario C

Weekday Toll Rates	2008 Dollars	2015 Dollars
Maximum Morning Toll Rate	$3.37	$4.00
Maximum Afternoon Toll Rate	$4.21	$5.00
Average Revenue per Transaction	$2.44	$2.90

What is Toll Scenario D?

Toll Scenario D analyzed a medium-high toll rate of the tunnel that would be between the rates of Toll Scenarios A and C. It also included a segment toll on the portion of SR 99 south of the tunnel to the Spokane Street Viaduct. The south-only segment toll was tested because of significant investments made in this section of the corridor. In addition this section of the corridor has limited access and fewer alternative routes available to drivers, which limits the potential for diversion. In this scenario, both directions of the south segment would be tolled during both the morning and afternoon peak travel times. If drivers stay on SR 99 through the tunnel, they would only pay the tunnel toll.

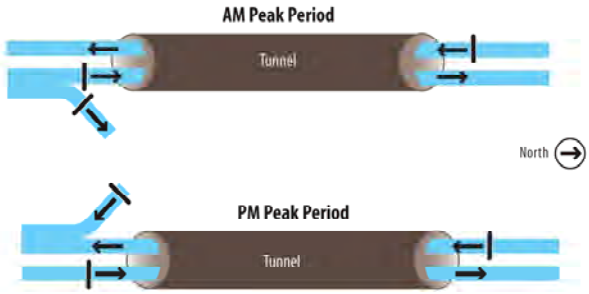


Exhibit 18 – Proposed Segment Tolls

Exhibit 19 – Weekday Toll Rates for Toll Scenario D

Weekday Toll Rates	2008 Dollars	2015 Dollars
Maximum Morning Toll Rate	$3.37	$4.00
Maximum Afternoon Toll Rate	$3.37	$4.00
Average Revenue per Transaction	$2.17	$2.58
Peak Period-only South Segment Toll Rate (for non-tunnel trips)	$1.26	$1.50

What is Toll Scenario E?

Toll Scenario E tested low toll rates sufficient to minimize congestion in the tunnel during peak travel periods only. This has the effect of minimizing toll diversion of traffic at the expense of revenue generation. The toll rates are the lowest of all the scenarios, and there are no weekend or segment tolls.

Exhibit 20 – Weekday Toll Rates for Toll Scenario E

Weekday Toll Rates	2008 Dollars	2015 Dollars
Maximum Morning Toll Rate	$1.85	$2.20
Maximum Afternoon Toll Rate	$2.36	$2.80
Average Revenue per Transaction	$1.87	$2.23

Would trucks, transit, and carpools pay a toll?

The toll rates, if any, which would be paid by trucks, transit and carpools would be determined by the Washington State Transportation Commission. It was assumed in this traffic and revenue analysis that trucks would pay a rate depending on the number of axles, similar to the Tacoma Narrows Bridge toll rate structure.

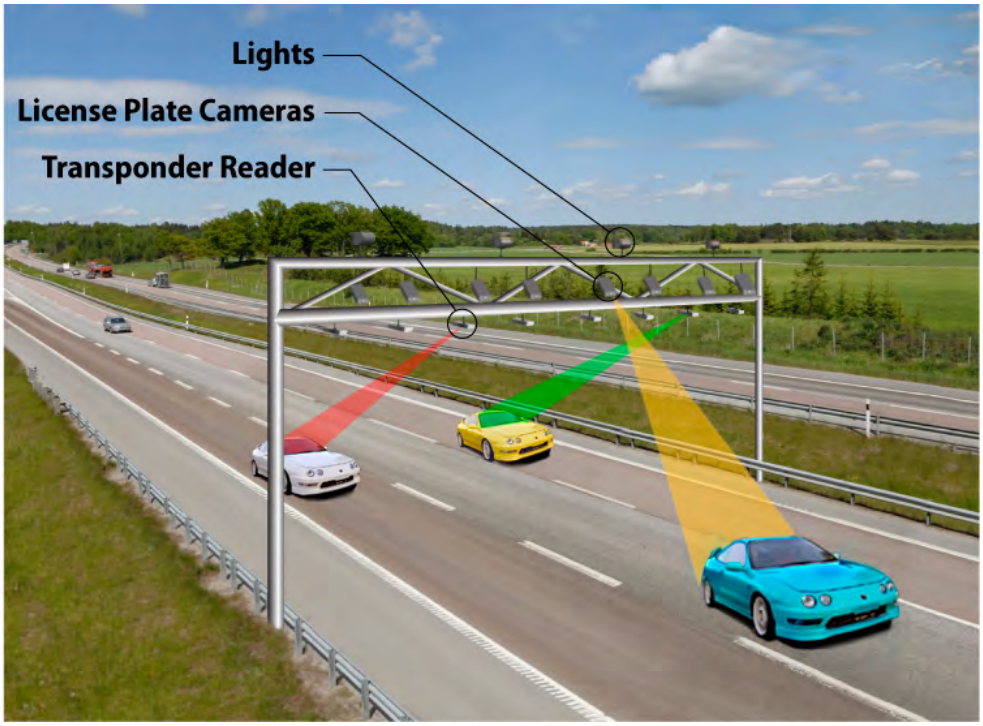
The traffic and revenue analysis did not assume that transit would be charged a toll. It also did not assume that carpools would pay a toll.

How would tolls be collected?

Tolls would be collected electronically; there would be no toll booths. Drivers would have transponders linked to prepaid accounts. License plate recognition would identify users and assess tolls accordingly. As vehicles approach the toll collection point, an overhead reader would search for a transponder. If a transponder is detected, the system would automatically identify the user's account and deduct the appropriate toll.

If the driver did not have a valid transponder, then one of the following would occur: a license plate transaction would be initiated based on license plate recognition; or a current customer would be identified from the license plate and the toll deducted from their account.

Exhibit 21 – Visual Demonstration of Electronic Toll Collection



Chapter 4.
How much funding could be generated by toll revenue?

For the purposes of this report, it was assumed that the proposed bored tunnel would open to drivers in late 2015 and that tolling would begin January 1, 2016. To fund construction of the tunnel, the State of Washington would need to borrow against future net toll revenues in order to capture the value of future toll collection. This would be done by issuing bonds for which net toll revenues would be pledged toward the bond principal and interest payments. The dollar value of the bonds sold, and thus the funding contribution from tolls, is directly related to four factors:

- When bonds must be sold;
- How the financing is structured;
- How the market perceives the traffic and revenue risk of the tunnel, and the market assessment of how that risk is shared between potential bondholders and the state; and
- The financial market conditions, including interest rates, at the time bonds are sold.

The Office of the State Treasurer completed an analysis of the five tolling scenarios. The results of this analysis show that four of the scenarios would generate close to or more than the $400 million directed by the legislature. Toll Scenario E, which assumes the lowest toll rates, would raise approximately $100 million in funding.

- Toll Scenario A would yield $384 million in toll funding for the Alaskan Way Viaduct replacement. This toll scenario could be modified to generate the required funding.
- Toll Scenario B would yield up to $460 million in toll funding for the Alaskan Way Viaduct replacement. This exceeds the level of toll funding authorized by the legislature by $60 million.
- Toll Scenario C would yield $406 million in toll funding for the Alaskan Way Viaduct replacement. This scenario most closely meets the target for toll funding.
- Toll Scenario D would yield $439 million in toll funding for the Alaskan Way Viaduct replacement. This exceeds the level of toll funding authorized by the legislature by $39 million.
- Toll Scenario E would yield approximately $100 million in toll funding for the Alaskan Way Viaduct replacement. This would result in large funding gaps beginning in 2014 and continue through the life of the construction period. In order for the replacement of the Alaskan Way Viaduct to be fully funded in this scenario, other funding sources would be required to fill the remaining gap of approximately $300 million.

Exhibit 22 – Toll Funding Contribution by Scenario

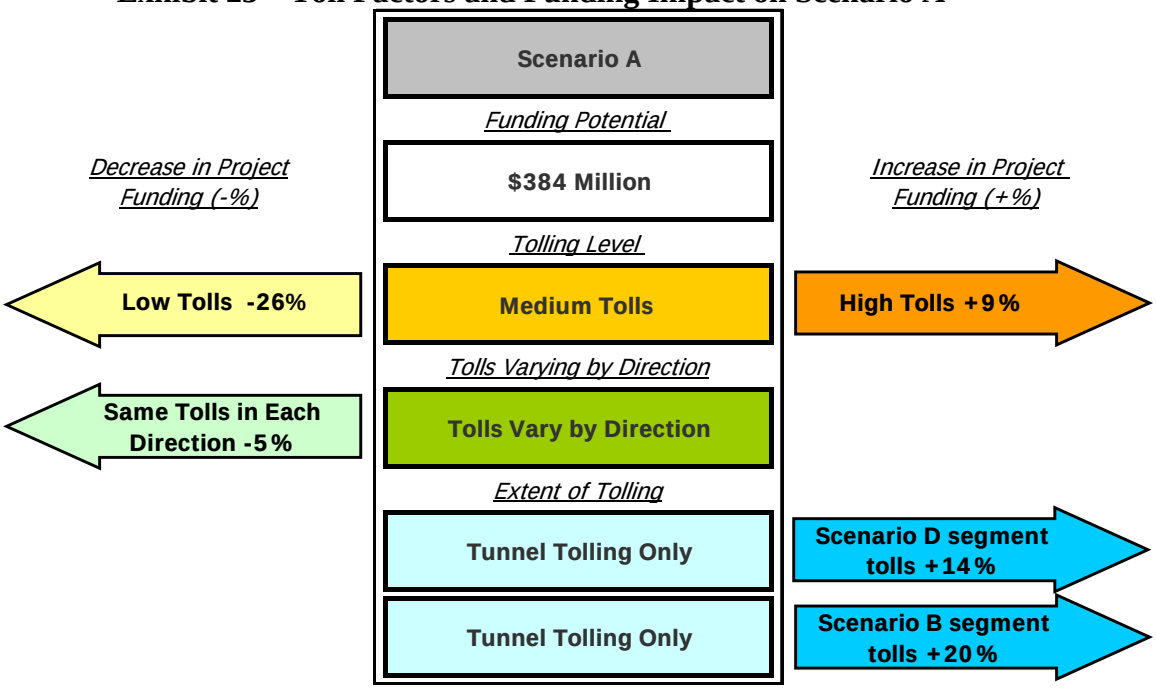
	Date Revenue Operations Begin	Program Unfunded Need = Target Toll Funding (YOE $s)	Fiscal Years with Unfunded Needs after Toll Funding Contribution	Toll Funding Contribution		Toll Funding Target Shortfall		Share of Overall Program Cost Funded
				Total Possible	% of Need	Unmet Need	% Unmet	
Scenario A *Medium Tolls Tunnel Only*	**1/1/2016** (mid FY 2016)	**$400 M**	**FY 2016-17**	**$384 M**	***96%***	**$16 M**	***4%***	***99%***
Scenario B *Medium Tolls Commuter Corridor Tolls*	**1/1/2016** (mid FY 2016)	**$400 M**	**None**	**$460 M**	***115%***	**None**		***100%***
Scenario C *High Tolls Tunnel Only*	**1/1/2016** (mid FY 2016)	**$400 M**	**None**	**$406 M**	***102%***	**None**		***100%***
Scenario D *Medium-High Tolls/Limited Access Corridor Tolls*	**1/1/2016** (mid FY 2016)	**$400 M**	**None**	**$439 M**	***110%***	**None**		***100%***
Scenario E *Low Tolls Peak Periods Only*	**1/1/2016** (mid FY 2016)	**$400 M**	**FY 2013-17**	**$100 M**	***25%***	**$300 M**	***75%***	***90%***

Notes: State Fiscal Year is from July 1 to June 30, e.g., FY 2016 = 7/1/2015 to 6/30/2016

How would different approaches to tolling affect funding?

Several factors were evaluated in this analysis, including toll rates, the geographic boundaries of tolls, and tolling of other routes. The example below shows the relative effect these factors have on how much funding can be generated from tolls.

Exhibit 23 – Toll Factors and Funding Impact on Scenario A



What assumptions were made?

In order to determine how much gross revenue would be generated from tolling the bored tunnel, the following assumptions were made about toll collection methods, collection rates and real toll rates:

- Eighty percent of toll transactions are assumed to be paid by prepaid accounts by the end of the first year of operations. Prepaid account use is expected to increase by two percent each year, eventually reaching 90 percent of all transactions. This assumption is based on WSDOT's experience with the Tacoma Narrows Bridge.
- Pay-by-plate transactions would be assessed a fee to offset the additional processing costs of reading the plate images, obtaining electronic payment by self-identified users and/or generating and issuing a collection. This fee would be added to the gross toll revenue and is estimated to be approximately $1.00 in 2009 dollars.
- Uncollected toll transactions would result in a 2.5 percent reduction in gross revenue. A ramp-up period to account for the potential of lower demand during the initial years of operation was also assumed. These two assumptions provide an

extra layer of conservatism in forecasting revenues at the beginning of toll operations.

- Tolls would increase to keep pace with inflation.

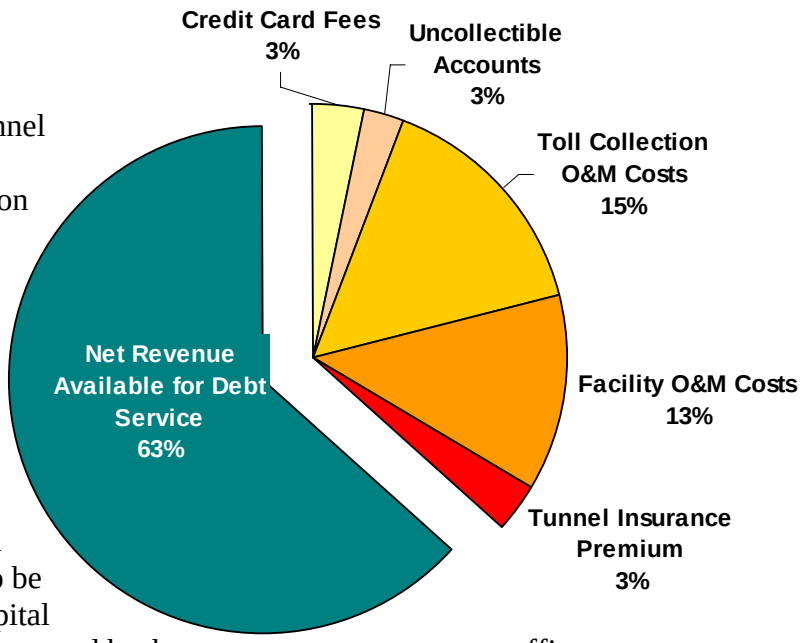
Gross revenue was calculated at a daily level by multiplying weekday and weekend traffic projections for cars and trucks by the appropriate toll rates, which vary by direction and time period. These daily revenue estimates were then multiplied by a factor of 110 for weekend days (52 Saturdays, 52 Sundays, six non-weekend holidays), with the remaining 255 days per year allocated as weekdays.

What expenses would be paid out of the gross toll revenue?

After the gross revenue from the five tolling scenarios was identified, deductions were made for credit card fees, the operation and maintenance of the toll collection system, and the operation and maintenance of the proposed bored tunnel. The net toll revenue after these deductions would be the amount available for debt service. The following assumptions are consistent with those used for the SR 520 tolling analysis prepared for the state legislature in 2009.

- **Credit card fees.** The cost of banking fees related to credit card payments for tolls were assumed to be 3.0 percent of the gross revenues. Additional gross revenue deductions of 1.5 percent in the first year, and 0.45 percent thereafter were assumed to account for additional credit card fees associated with customer account refunds.
- **Collection system.** Toll collection for the bored tunnel would be coordinated in a unified back office operation being developed for SR 520, the Tacoma Narrows Bridge, and SR 167.
- **Toll collection operation and maintenance (O&M).** The annual costs to maintain the toll collection equipment are estimated to be 15 percent of the initial capital cost for the in-road equipment and back office system hardware.

Exhibit 24 – Uses of Gross Toll Revenues (2030)



- **Tunnel operation and maintenance.** Annual operating and maintenance costs are estimated be $5 million (2009 dollars) in order to ensure the tunnel remains open and functioning for drivers.
- **Tunnel insurance.** The cost to insure the tunnel and cover both asset replacement and business interruption costs are estimated to be $2 million per year (2009 dollars), beginning in 2016.

The costs for major rehabilitation and replacement were not included in the net toll revenue forecasts because we assume these costs would be covered after debt payments have been made. Contributions to a rehabilitation and replacement reserve account could be made annually, and could be sized each year with consideration given to future significant expenditures that would be required. In lieu of a reserve account, major preservation could be paid directly.

What financing assumptions were made?

The Office of the State Treasurer established several key assumptions for how the tunnel toll bonds would be structured and sold:

- The toll bonds would be 30-year general obligation/motor vehicle fuel tax (GO/MVFT) bonds that are backed by and repaid from net toll revenues, with additional backing or credit support from the Motor Vehicle Fuel Tax Fund and, ultimately, the full faith and credit of the State of Washington. This is referred to as a "triple pledge." It would make the toll bonds essentially equivalent to the state's general obligation bonds from a financial market perspective. The triple pledge is consistent with the approach for SR 520. Triple pledge bonds have the same highly favorable cost of borrowing, issuing, and servicing as other state general obligation bonds.
- The first bond issue would occur in fiscal year 2013 when toll funding would be first needed, with subsequent bond issuances assumed every other year.
- The pledge of toll revenue to repay debt was assumed to be net of operations and maintenance expenses, which is an industry convention that ensures sufficient funding to collect toll revenues and maintain the tunnel which is generating the revenue.
- The issued bonds would have a maximum maturity of 30 years, consistent with State of Washington constitutional and statutory requirements for general obligation bonds.

How do these findings compare to previous toll analysis?

WSDOT completed a preliminary toll analysis in December 2008 to assist with the selection of options to be considered in the environmental process for the central waterfront section of the Alaskan Way Viaduct. Picking up where that preliminary analysis left off, this report provides the more detailed analysis necessary to further

decisions about funding the proposed bored tunnel based upon toll revenue. The following chart compares the 2008 work to this 2009 analysis.

Exhibit 25 – Comparison to Previous Study

2009 Study Difference from 2008	Impact on Traffic, Revenue and Funding
Construction is advanced and accelerated; tolling would now start in fiscal year 2016 instead of fiscal year 2019	– 30-year toll traffic and revenue projections are lower when tolling starts earlier, and – Higher construction spending in the early years increases interest costs
Refined toll collection operation and maintenance costs were based on higher 2009 SR 520 estimates	– Reduces net revenues available for financing, and thus, toll funding
An expanded overall program of improvements is planned for adjacent city streets	– Network improvements make alternatives more attractive, resulting in less toll paying traffic in the tunnel
Higher peak period tolls were tested	+ Increases net revenues available for financing, and thus, toll funding

The higher tolls assumed in four of the five scenarios tested in 2009 help to offset the downward impacts of the other three key revisions from the preliminary 2008 analysis, thereby maintaining a toll funding contribution in the $400 million range.

Projecting the traffic, revenue and funding from tolling the tunnel is a dynamic and evolving process. Additional refinements to the travel demand model as well as revised toll collection operations and maintenance costs based upon recent vendor bids will be considered when the investment-grade financial plan is prepared.

Chapter 5.
How would tolling affect the transportation system?

The proposed bored tunnel and other investments in city streets and transit would change who uses SR 99 regardless of whether a toll is charged. Access ramp locations would be moved further to the north and south ends of downtown Seattle, and Alaskan Way along the waterfront would have additional lanes. This would result in less traffic on SR 99 through downtown Seattle than occurs today on the existing Alaskan Way Viaduct, as many people would shift their trip to the new routes.

Charging a toll to drivers in the bored tunnel would make it more likely that longer trips would use the tunnel. For drivers making shorter trips, paying a toll would be a greater part of the total trip cost, making it more attractive for those trips to use city streets or I-5.

Thus, charging a toll would provide capacity for longer trips through downtown Seattle. When a new toll is charged on a previously toll-free road, traffic patterns are likely to change as drivers look for ways to reduce the costs of driving. These changes can take the form of one or more of the following:

- **Mode diversion.** A change in how someone makes a trip to avoid a toll or share the costs, such as choosing to take transit.
- **Time of travel changes**. A change in when a trip is taken to a time of day when a lower toll rate is charged.
- **Trip frequency or consolidation.** A reduction in the frequency that a trip is made, including eliminating the trip altogether.
- **Trip destination.** A shift in travel to a new destination to avoid a toll.
- **Route diversion.** Choosing to take another route to avoid a toll.

How does the transportation system function today?

The SR 99 Alaskan Way Viaduct provides a route to and through downtown Seattle for neighborhoods and industrial areas on the west side of the city, including West Seattle, Ballard, Greenwood, Queen Anne, Magnolia, Interbay and Duwamish. It is an important north-south route that serves as an alternate to I-5 for Seattle drivers, as well as drivers from Tukwila, Burien and other west side cities. In addition to I-5 and SR 99, there are several city arterials that run parallel to the Alaskan Way Viaduct including Alaskan Way, Second Avenue and Fourth Avenue.

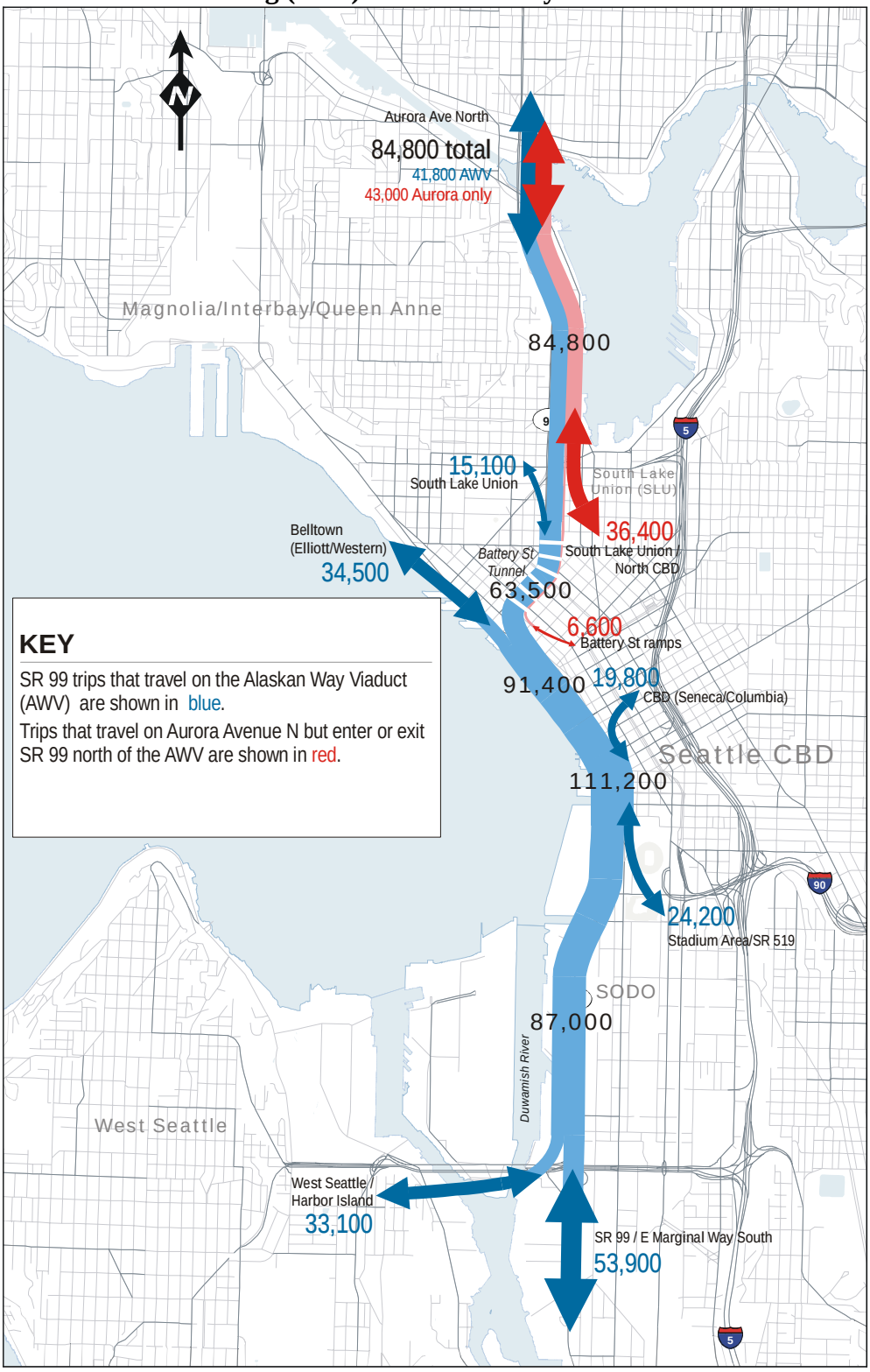
In the morning, the highest concentration of trips that use the viaduct begin in the downtown, Queen Anne, Fremont, Ballard and West Seattle neighborhoods. Most of these trips are destined to work or other activities in downtown Seattle, the Ballard/Fremont/Interbay areas northwest of downtown, or the SODO and Duwamish areas south of downtown.

Vehicle volumes on SR 99 are highest during the morning and afternoon commute times, when they total nearly twice the mid-day volumes in both directions. In the morning, volumes are heavier entering downtown. In the afternoon, volumes are heavier in the directions leaving downtown. Volumes are fairly balanced in the Battery Street Tunnel, which connects the north end of the Alaskan Way Viaduct to Aurora Avenue N. Exhibit 26, on the following page, shows the existing (2005) SR 99 weekday traffic patterns.

There are no sharp peaks in vehicle volumes on SR 99 during the weekend, but rather one flat peak that runs from mid-morning to early evening. The peak volumes on the weekends are slightly higher than the midday peak volumes seen during the week.

SR 99 currently provides transit access into downtown from north and south neighborhoods. Buses carry an estimated 11,900 transit riders in each direction per day north of downtown (entering/exiting at the Denny Way ramps), and 14,300 riders in each direction per day south of downtown. This accounts for about 25 percent of transit riders entering or leaving downtown from the south. There are currently no transit routes that use SR 99 to bypass downtown.

Exhibit 26 – Existing (2005) SR 99 Weekday Traffic Patterns



What improvements to the transportation system were assumed?

The program of investments agreed to by the governor, King County executive, and Seattle mayor in January 2009 was assumed to have been implemented by 2030, which is the traffic analysis' forecast year. The list of investments includes:

- A bored tunnel from approximately S. King Street to Republican Street with two lanes in each direction.
- New east-west surface streets reconnecting the grid across SR 99 at the tunnel's north portal, and new east-west streets to create local circulation in the south portal area.
- A new connection from Alaskan Way south of S. King Street to East Marginal Way south of S. Atlantic Street.
- A rebuilt Alaskan Way surface street with a connection from Battery Street to Pike Street, four lanes from Pike Street to Yesler Way, and six lanes from Yesler Way to S. King Street.
- A new public space along the central waterfront.
- Improvements to Mercer Street from Fifth Avenue N. to Elliott Avenue.
- Enhanced transit service, per the executives' recommendation, such as (1) a new Delridge RapidRide bus rapid transit line, (2) additional service hours on the planned West Seattle and Ballard RapidRide lines, (3) peak-hour express routes added to South Lake Union and Uptown from the north, and (4) local bus changes to several West Seattle and northwest Seattle routes.

In addition, it was assumed that the Alaskan Way Viaduct has been removed, the seawall along the central waterfront rebuilt, and the Battery Street Tunnel decommissioned.

How would volumes and travel times in the tunnel and on Alaskan Way change if the tunnel is tolled?

If drivers in the proposed bored tunnel are not charged a toll, the traffic model forecasts that 94,300 vehicles would use the tunnel each day in 2030. Daily volumes would decrease the most if drivers are charged a high toll, and would decrease the least if they are charged a low toll:

- Daily volumes would decrease by 36,900 or 39 percent if drivers are charged a high toll (Toll Scenario C).
- Daily volumes would decrease by 32,700 or 35 percent if drivers are charged a medium toll (Toll Scenario A).
- Daily volumes would decrease by 6,700 or 7 percent if drivers are charged a low toll (Toll Scenario E).

Exhibit 27 – Toll Rates, Configuration and Weekday Traffic Volumes by Scenario

	Test	Test Elements[1]		Maximum Peak Period, Peak Direction Toll (2015 $s)		2030 Weekday Traffic Volumes		
		Toll Configuration	Tunnel Toll Strategy	AM Peak (NB / SB)	PM Peak (NB / SB)	*Total Vehicles in both directions* AM Peak	PM Peak	Daily
	Toll Free	n/a	n/a	n/a	n/a	19,300	22,600	94,200
Anaylzed Toll Scenarios	A	AWV Bored Tunnel	Medium Tolls: Variable by Time of Day and direction of travel	$3.50 / $2.75	$3.25 / $4.00	13,700	17,500	61,700
	B	AWV Bored Tunnel	Medium Tolls: Variable by Time of Day and direction of travel	$3.50 / $2.75	$3.25 / $4.00	15,200	18,400	64,100
		SR 99 Segments: AM Peak Inbound & PM Peak Outbound Only		$1.25 / $1.25	$1.25 / $1.25	6,800*	9,800*	n/a
	C	AWV Bored Tunnel	High Tolls: Variable by Time of Day and direction of travel	$4.00 / $3.00	$4.00 / $5.00	13,100	16,000	57,400
	D	AWV Bored Tunnel	Medium - High Tolls: Variable by Time of Day and direction of travel	$4.00 / $3.00	$4.00 / $4.00	13,700	17,000	59,000
		SR 99 Segments: South, Peak Period Only		$1.50 / $1.50	$1.50 / $1.50	3,800*	5,300*	n/a
	E	AWV Bored Tunnel	Low Tolls: Peak Only and direction of travel	$2.20 / $1.85	$2.10 / $2.80	15,700	19,100	87,500

Volumes in the tunnel would be higher if drivers on the segments of SR 99 north and/or south of the bored tunnel are also charged a toll. Tolling the segments diverts some non-tunnel trips to other routes, which would improve the traffic flow on SR 99. The improvements to travel times in the corridor would make the tunnel more attractive to some through-trip drivers who otherwise would have used a different route. For example, results for Toll Scenario B show tunnel volumes could be 2,400 or four percent greater than under Toll Scenario A.

During peak periods, when alternate north-south routes are more congested, the percentage of vehicles that divert from the tunnel would be lower.

- Volumes would decrease by 6,300 or 32 percent in the morning and 6,600 or 29 percent in the afternoon if drivers are charged a high toll (Toll Scenario C).
- Volumes would decrease by 5,600 or 29 percent in the morning and 5,100 or 23 percent in the afternoon if drivers are charged a medium toll (Toll Scenario A).
- Volumes would decrease by 3,600 or 19 percent in the morning and 3,500 or 15 percent in the afternoon if drivers are charged a low toll (Toll Scenario E).

When the viaduct is taken down, Alaskan Way is proposed to become a four-lane city street that includes a connection over nearby rail lines to Elliott and Western avenues. This new connection would serve trips coming to and from northwest Seattle neighborhoods and industrial areas.

Vehicle volumes on Alaskan Way would be affected by whether the tunnel is tolled or not. If drivers in the proposed bored tunnel are not charged a toll, the traffic model forecasts that 26,300 vehicles would use Alaskan Way each day in 2030. This would change if the tunnel is tolled:

- Daily volumes on Alaskan Way would increase between 8,000 and 10,000 vehicles or between 31 and 38 percent if drivers are charged a medium or high toll to use the bored tunnel.
- Daily volumes on Alaskan Way would increase by 2,000 vehicles or eight percent if drivers are charged a low toll to use the bored tunnel.

Exhibits 28 and 29 show the toll impact on travel volumes for north-south facilities through downtown for both weekday and peak period trips.

Changes in volumes would affect travel times on Alaskan Way and through the bored tunnel.

- For drivers traveling in the a.m. peak hour from Ballard to the West Seattle Bridge using Alaskan Way, their trip would take 16 minutes if no toll is charged or would take one to two minutes longer if the tunnel is tolled. This longer travel time is because of the added volumes on Alaskan Way.
- For drivers making the same trip in the a.m. peak hour from Ballard to the West Seattle Bridge using the bored tunnel, their trip would take 15 minutes if no toll is charged and would stay the same if the tunnel is tolled. This is because there would be fewer trips in the tunnel.

Exhibit 28 – 2030 Weekday North-South Traffic Through Downtown (at Seneca Street)

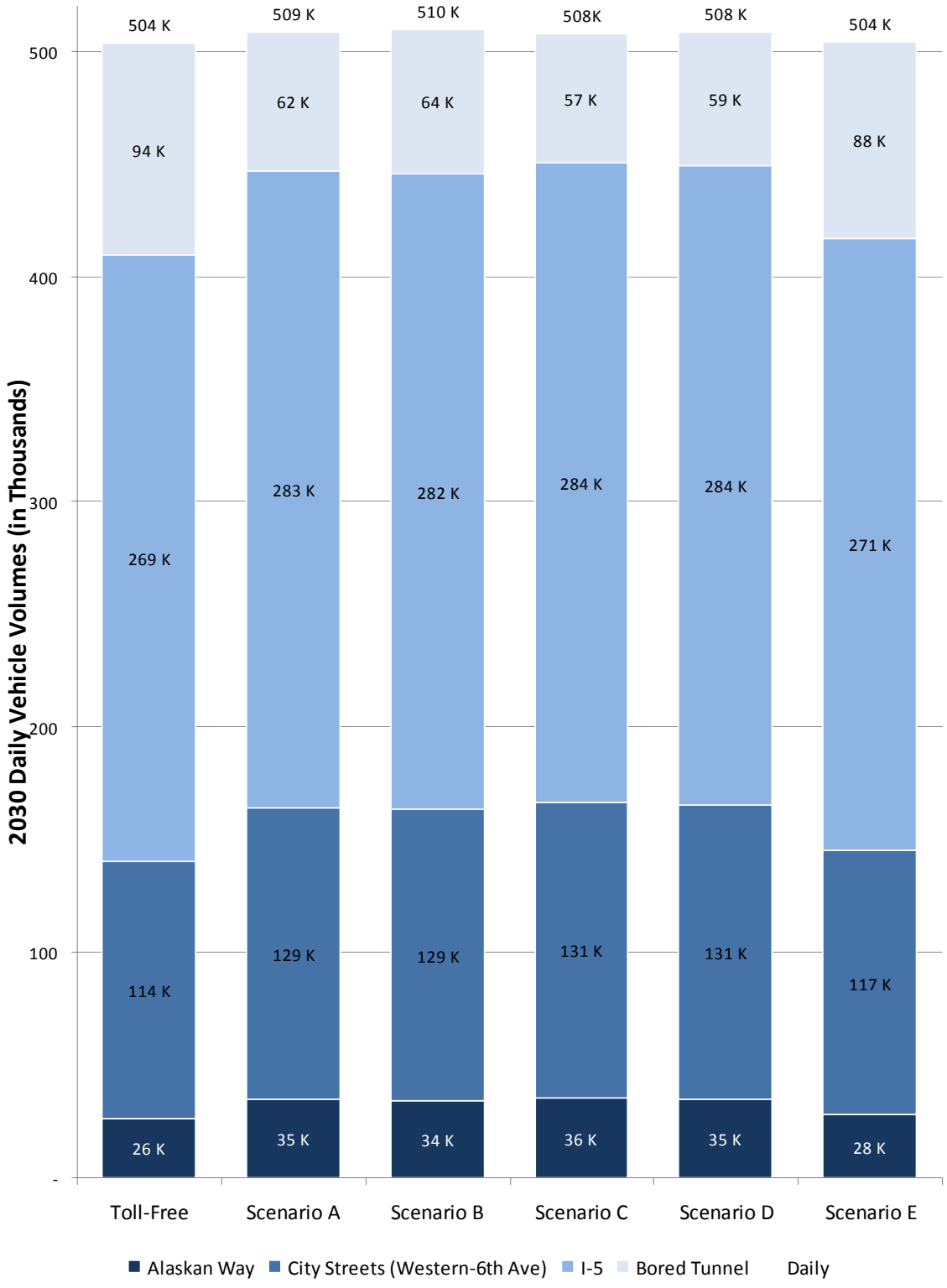
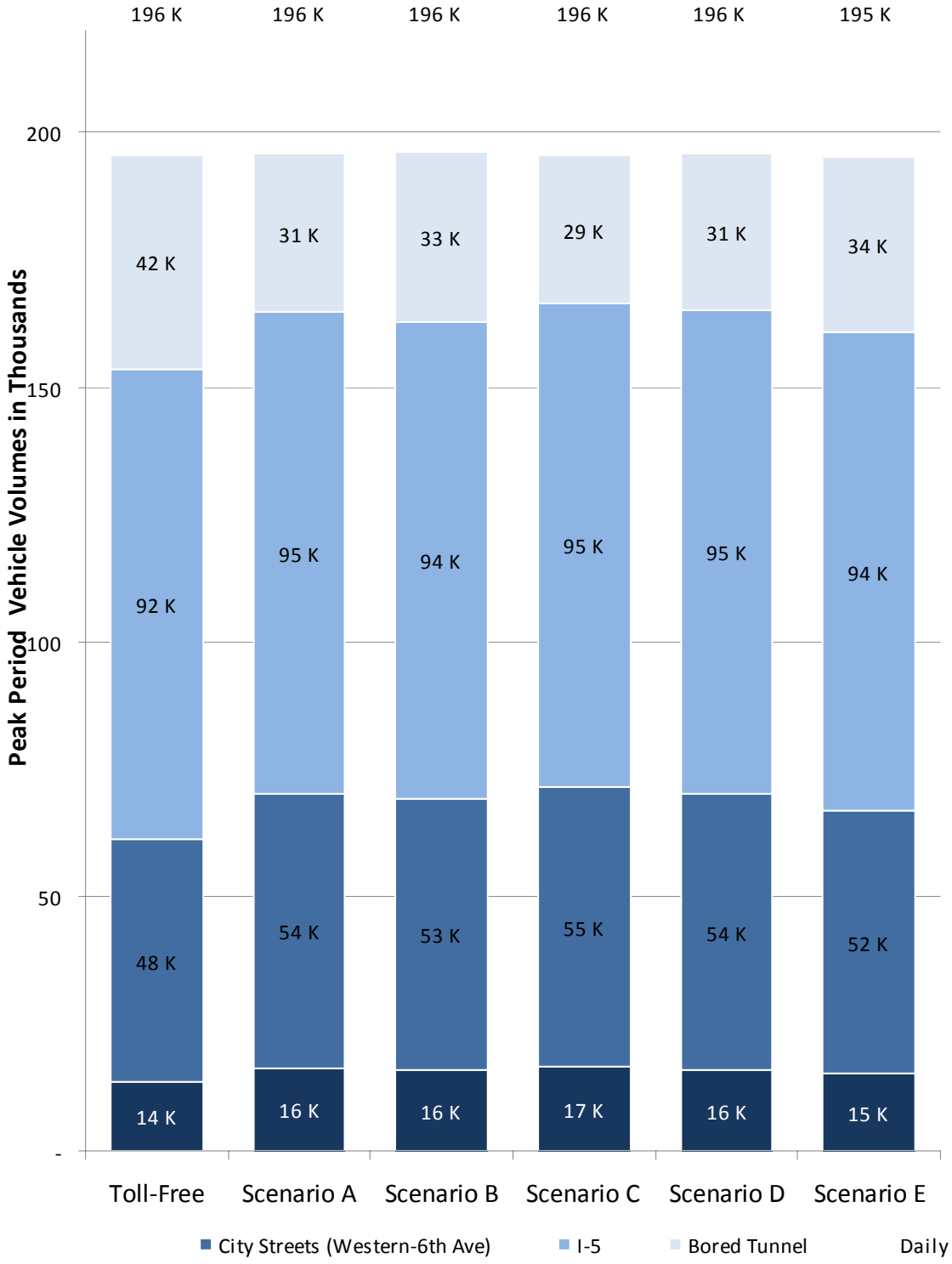


Exhibit 29 – 2030 Peak Period* North-South Traffic Through Downtown (at Seneca Street)



Travel times for longer trips that use the bored tunnel would stay the same or get faster if the tunnel is tolled.

- Trips from the West Seattle Bridge to Woodland Park in the a.m. peak would take 12 minutes if the tunnel is not tolled, but would take 11 minutes if the tunnel is tolled.
- A trip from the West Seattle Bridge to the Aurora Bridge in the a.m. peak would take nine minutes if the tunnel is not tolled, but between seven and eight minutes if the tunnel is tolled.

How would volumes and travel times on downtown streets change if the tunnel is tolled?

Some drivers choosing to avoid paying a toll on the bored tunnel would choose to take city streets through downtown Seattle. Traffic analysis shows that few would choose to take city streets during peak travel times, when those streets are already at capacity. If the bored tunnel is toll free, approximately 48,000 vehicles would use downtown city streets between Western Avenue and Sixth Avenue during peak travel times. These volumes would increase by eight to 14 percent during the peak period if a toll is charged in the proposed bored tunnel.

Daily vehicle volumes on downtown city streets would be approximately 114,000 if the tunnel is not tolled. These daily volumes would increase by 11 to 13 percent if a medium or high toll rate is charged and would increase by three percent if a low toll rate is charged.

Exhibit 30 – 2030 Peak Hour Representative Trips and Travel Times for Selected Toll Scenarios

Travel Time in Minutes	Year 2030					
	AM Peak Hour			PM Peak Hour		
	Scenario A	Scenario E	Toll-Free	Scenario A	Scenario E	Toll-Free
Woodland Park to West Seattle Bridge (via SR 99 Bored Tunnel)						
Southbound	14	14	14	12	13	13
Northbound	11	11	12	13	14	14
South of Aurora Bridge to West Seattle Bridge (via SR 99 Bored Tunnel)						
Southbound	8	8	8	7	8	8
Northbound	7	8	9	8	8	10
Ballard to West Seattle Bridge (via Mercer Street, Bored Tunnel)						
Southbound	15	15	15	25	26	26
Northbound	17	18	19	24	24	25
Ballard to West Seattle Bridge (via Alaskan Way)						
Southbound	18	17	16	28	26	24
Northbound	21	19	18	31	30	28
West Seattle to Downtown Seattle						
Inbound	25	24	23	21	20	19
Outbound	18	19	16	32	30	29

How would volumes and travel times on I-5 change if the tunnel is tolled?

Volumes on I-5 would increase slightly if a medium or high toll is charged to use the proposed SR 99 bored tunnel. Most of the shift would occur during non-peak travel times when there is some capacity left for the trips to be absorbed on I-5. If the bored tunnel is not tolled, I-5 daily vehicle volumes in 2030 would be 269,350, with 177,150 occurring during non-peak travel times and 92,250 occurring during the morning and afternoon commute periods.

If either Toll Scenarios A, B, C, or D were implemented, daily volumes on I-5 would increase five percent; non-peak volumes would increase by six or seven percent; and peak volumes would increase by two or three percent. If a low toll is charged to drivers, daily vehicle volumes would increase by one percent; non-peak volumes would stay the same as if the tunnel is not tolled; and peak volumes would increase by one percent.

This increase in volumes on I-5 is not expected to significantly change travel times in 2030.

How would transit ridership change if the tunnel is tolled?

The number of transit trips to, through, and from the central downtown area would not substantially change if the proposed bored tunnel is tolled, partly because no transit routes are assumed to operate in the tunnel. The most likely category of travelers to shift

to transit would be those who travel to and from downtown Seattle, but these transit trips would not use the tunnel.

How would the length of trips on SR 99 change if the tunnel is tolled?

Tolling the proposed bored tunnel would encourage longer through trips and discourage shorter, more localized trips on SR 99. The traffic analysis showed that the largest number of trips that would choose to take other north-south routes, rather than pay a toll to use the tunnel, would be short trips such as those between West Seattle and South Lake Union or from SODO to Queen Anne.

Longer trips, such as trips through the City of Seattle, would be less likely to divert from the tunnel. In Toll Scenario A, which would charge a medium toll rate, the number of longer trips would increase by 1,800 compared to a toll-free tunnel. The average trip lengths for Scenario A would be seven to 24 percent longer than if no toll is charged.

How would vehicle miles traveled change if the bored tunnel is tolled?

The traffic analysis did not show a significant shift to alternate modes of travel when the proposed SR 99 bored tunnel is tolled. Most travelers would choose to make their trips to or through downtown Seattle in cars. Of those trips, the shorter trips would be more likely to divert to other routes, which in most cases would be slightly longer routes. This diversion would cause vehicle miles traveled to increase by one or two percent, because shorter trips that divert would take slightly longer routes.

How would the transportation system function in 2015 when the bored tunnel would open to drivers?

This study assumed that the proposed bored tunnel would open to traffic in 2015. At that time, several of the street and transit investments that are part of the overall program to replace the Alaskan Way Viaduct would not yet be in place. The most significant project is the new Alaskan Way and its connection to Elliott and Western avenues. That project would be completed by 2017 after the viaduct is taken down, since construction of the street and connection would occur in the viaduct's current location.

During the two years required to construct the Alaskan Way surface street, daily vehicle volumes in the proposed bored tunnel would be approximately three percent higher than the vehicle volumes forecast in 2030.

How would transportation system performance compare between a tolled bored tunnel and the I-5/Surface/Transit scenario?

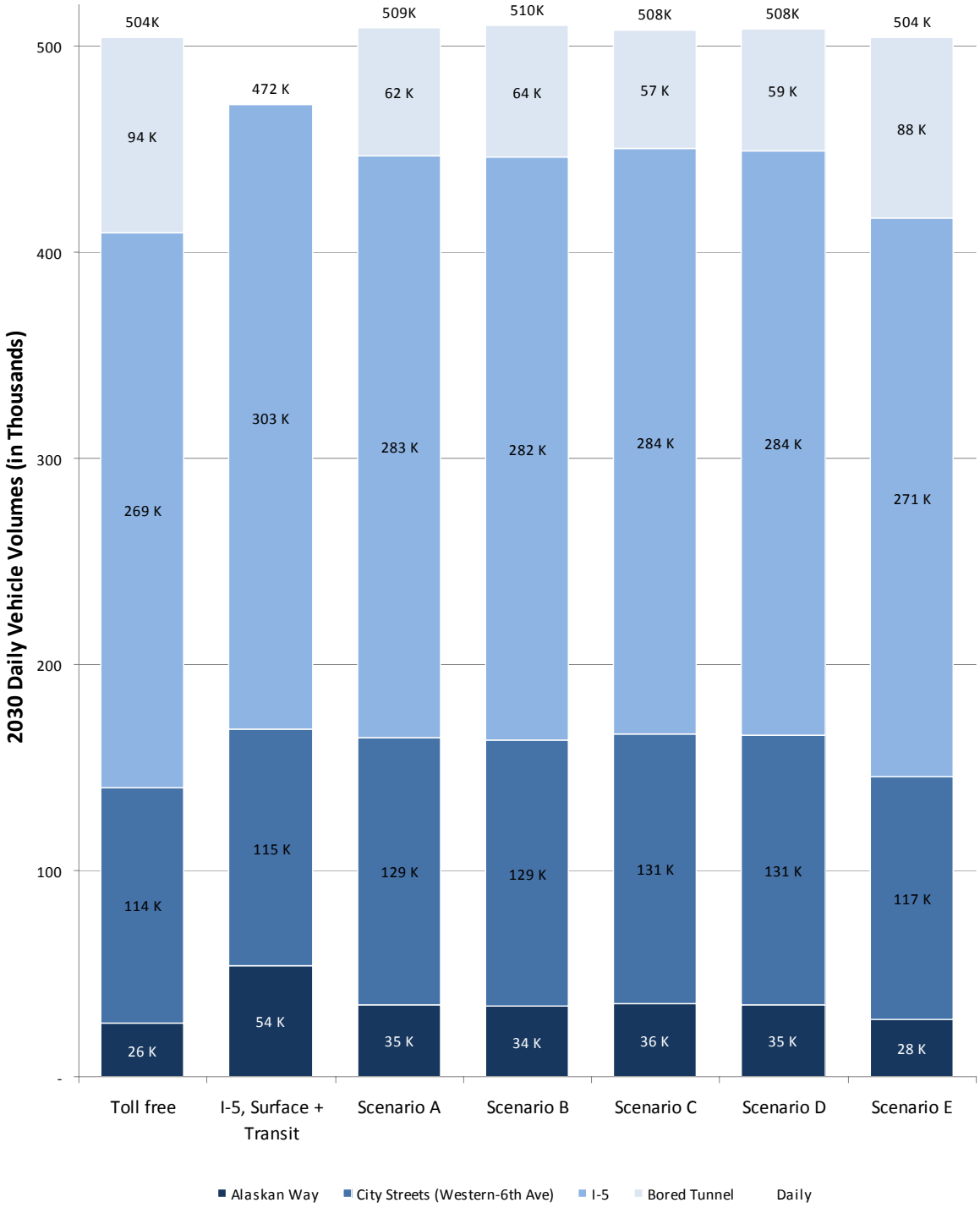
One of the options previously under consideration to replace the central waterfront section of the Alaskan Way Viaduct was the I-5/Surface/Transit scenario. That scenario included a one-way couplet along the waterfront with southbound traffic using Alaskan Way and northbound traffic using Western Avenue. Improvements on I-5 included an

additional northbound lane between Seneca Street and SR 520, and converting the southbound HOV lane at Mercer Street to a managed lane. Transit improvements included transit lanes on downtown city streets.

If the proposed bored tunnel is not implemented and the I-5/Surface/Transit scenario or similar scenario was selected, traffic analysis shows that the daily volumes of vehicle traffic on Alaskan Way could be up to 54,000. This compares to 28,000 to 36,000 daily vehicles in the bored tunnel toll scenarios.

Volumes on I-5 would be significantly higher in the I-5/Surface/Transit scenario compared to the proposed bored tunnel if it is toll free or if a low, medium, or high toll rate is charged. Daily vehicle volumes on I-5 would range between 269,000 if no toll is charged and 281,000 if a high toll rate is charged. There would be more than 303,000 daily vehicles on I-5 in the I-5/Surface/Transit scenario.

Exhibit 31 – 2030 North-South Weekday Traffic Through Downtown by Scenario including Surface Scenario (at Seneca Street)



Chapter 6.
How can the effects of tolling SR 99 be addressed?

In addition to the proposed bored tunnel, replacing the viaduct would be achieved through a program of state, local and federal investments. These include investments in Alaskan Way and other surface streets, additional transit service, and improvements to freight, bike and pedestrian pathways. ESSB 5768 requested that WSDOT include an analysis of mitigation to offset diversion, if tolls are charged in the proposed bored tunnel. The traffic analysis in the previous section factored the full program of investments into the transportation network. It showed that while drivers would choose to take other routes if a toll were charged, the overall effect to travel times would be minimal. Based on the traffic analysis completed, no significant investments in mitigation are recommended as part of this report. Additional analysis will be completed through the environmental process.

Would tolling I-5 reduce diversion from the proposed bored tunnel?

A traffic analysis sensitivity test was performed to determine if charging a toll to use I-5 between the Ship Canal and Spokane Street would reduce the number of trips diverting from the proposed bored tunnel. Vehicle volumes in the tunnel would increase by about three percent if tolls are added to I-5, since this would discourage diversion from a tolled SR 99 to a formerly toll-free I-5. Tolling I-5 may also divert some shorter distance trips from I-5 to other north-south arterials, the impact of which could also improve the travel time savings of the tunnel, thereby attracting a few more vehicles.

The toll rate tested was $1.20 during the morning and afternoon commute times, $0.60 during the midday and evening, and $0.50 during the night (2015 dollars). A higher toll rate was not tested because the objective was not to raise revenue by tolling I-5, but rather to analyze providing a deterrent to travelers diverting to I-5 in order to avoid the SR 99 toll.

Would tolling the north and south segments of the SR 99 corridor reduce diversion from the proposed bored tunnel?

Toll Scenarios B and D evaluated the potential for charging a toll to drivers using the north and south segments of SR 99 to raise revenue and manage traffic. When segment tolls are added to a medium toll rate, daily vehicle volumes increase by approximately six percent in the proposed bored tunnel. This would be primarily due to lower volumes on the north and south segments of SR 99, which means higher speeds and faster travel times through the proposed bored tunnel. As a result, the tunnel would attract more trips than it would if there were not segment tolls.

Would implementing active traffic management and intelligent transportation systems reduce diversion from the proposed bored tunnel?

An active traffic management system to help improve traffic flow during congestion and reduce collisions on I-5 is currently being developed as part of the Alaskan Way Viaduct and Seawall Replacement Program. This technology includes variable speed limits, individual lane controls, and enhanced traveler information. These investments will be able to accommodate additional vehicles expected to divert to I-5 if the proposed bored tunnel is tolled.

Implementing additional intelligent transportation systems to monitor traffic on city streets would also assist in managing diversion from the proposed bored tunnel. This would alert traffic managers to congestion on a real-time basis, so blocking incidents or other issues can be immediately addressed. This would help the transportation system work more efficiently during peak travel periods.

Chapter 7.
What are the key findings from this report?

During the 2009 session the Washington State Legislature approved Engrossed Substitute Senate Bill (ESSB) 5768, which identified a deep bored tunnel as its preferred option for replacing the SR 99 Alaskan Way Viaduct. The legislature also directed WSDOT to update cost estimates, have those estimates reviewed by independent tunnel engineering experts, and prepare a traffic and revenue study. This report documents the work done by WSDOT in response to the legislative direction.

How much will the SR 99 Alaskan Way Viaduct Replacement cost?

The 2010 cost estimate for the SR 99 Alaskan Way Viaduct replacement, including the proposed bored tunnel, is $3.1 billion. This overall cost matches WSDOT's January 2009 cost estimate for the replacement.

The 2010 cost estimate for the proposed bored tunnel is $1.96 billion. This is an increase of $60 million from WSDOT's January 2009 cost estimate.

What feedback did WSDOT receive from independent tunnel experts and cost estimators?

While risk can never be entirely avoided, the early identification of risks and the development of strategies to minimize or manage risks were seen as prudent approaches for developing cost estimates within which the project can be delivered.

WSDOT's 2010 cost estimate was prepared using a value engineering approach. The 2009 estimate was prepared using standard WSDOT estimating methods for conceptual engineering plans, (i.e., cost per square foot). Numerous national and international experts advised WSDOT on ways to reduce project risk by designing solutions to the risk items in the base cost. This value engineering effort led to the recommendation to move the alignment of the tunnel's south end to Alaskan Way instead of First Avenue through historic Pioneer Square.

The bored tunnel cost estimate increased by $60 million from the 2009 cost estimate. Increases predominantly relate to the additional length of the tunnel based on the new alignment. These increases were offset by changes in the tunnel alignment and schedule streamlining opportunities. Additionally, cost savings realized on the S. Holgate to S. King Street Viaduct Replacement Project maintain the total budget of $3.1 billion budget ($2.8 billion state commitment supplemented by $300 million commitment from the Port of Seattle).

The very thorough cost assessment process, use of independent experts, quantification of risk and initial risk mitigation actions give us a higher level of confidence that project costs and risks can be effectively managed.

Can an additional $400 million in construction funding be raised by tolls?

WSDOT and the Office of the State Treasurer found that it is feasible to toll the proposed bored tunnel at a medium toll rate and generate up to $400 million in funding for the viaduct replacement. The current project schedule assumes that bond authorization would be provided in 2011 and that bonds would be issued starting in mid-2012 (fiscal year 2013).

What would be the impacts from tolling, including diversion and performance of the facility?

Replacing the viaduct would be achieved through a program of state, local and federal investments. These include investments in Alaskan Way and other surface streets, additional transit service, and improvements to freight, bike and pedestrian pathways. If a toll is charged to use the tunnel, traffic model analysis shows that some traffic would divert from the tunnel to local streets and Interstate 5, but travel times would stay the same or increase slightly. Based on the traffic analysis completed, no significant investments in mitigation are recommended as part of this report. Additional analysis will be completed through the environmental process.

SR 99 Alaskan Way Viaduct Replacement
Updated Cost and Tolling Summary Report to the Washington State Legislature

AMERICANS WITH DISABILITIES ACT (ADA) INFORMATION Materials can be provided in alternative formats: large print, Braille, cassette tape, or on computer disk for people with disabilities by calling the Office of Equal Opportunity (OEO) at (360) 705-7097. Persons who are deaf or hard of hearing may contact OEO through the Washington Relay Service at 7-1-1.

TITLE VI NOTICE TO PUBLIC It is the Washington State Department of Transportation's (WSDOT) policy to assure that no person shall, on the grounds of race, color, national origin and sex, as provided by Title VI of the Civil Rights Act of 1964, be excluded from participation in, be denied the benefits of, or be otherwise discriminated against under any of its federally funded programs and activities. For language interpretation services, please contact the project office at (866) 396-2726. Any person who believes his/her Title VI protection has been violated, may file a complaint with WSDOT's Office of Equal Opportunity (OEO). For Title VI complaint forms and advice, please contact OEO's Title VI Coordinator at (360) 705-7098.

Appendix J

WSDOT/FHWA Toll Agreement Documentation

1. **Cover Letter from Paula Hammond to FHWA**
2. **Expression of Interest Application from WSDOT to FHWA**
3. **Draft Toll Agreement Language**

June 1, 2011

Patrick DeCorla-Souza
Office of Innovative Program Delivery
Federal Highways Administration
1200 New Jersey Avenue SE
Washington, DC 20590

Dear Mr. DeCorla-Souza:

We respectfully submit the tolling and pricing *Expression of Interest* and *Tolling Agreement* for the Washington State Department of Transportation (WSDOT) SR 99 - Alaskan Way Viaduct and Seawall Replacement project in Seattle, WA. I want to extend my sincere thanks to your team for assistance as we prepared our Federal Tolling Authorization Agreement.

Project Description

The proposed bored tunnel would be constructed under downtown Seattle between the vicinity of S. King St. and Roy St. to replace the seismically vulnerable Alaskan Way Viaduct along the central waterfront. The proposed bored tunnel would move SR 99 to a below-ground alignment under downtown Seattle and would bypass the existing Battery Street Tunnel. The project also includes removal of the existing viaduct structure and decommissioning of Battery Street Tunnel. While the Environmental Impact Statement also clears a portion of the City of Seattle Mercer West project, WSDOT is not the project sponsor and this project is therefore not included in this request.

The National Environmental Policy Act (NEPA) process is ongoing, and the Record of Decision for the project is expected on August 17, 2011.

Financial Feasibility

RCW 47.01.402 authorizes WSDOT to expend up to $2.8 billion for the Alaskan Way Viaduct Replacement program, which includes building a bored tunnel, removing the existing state route 99 Alaskan Way Viaduct, and other program elements. This funding plan consists of $2.4 billion in state appropriation funds and up to $400 million in toll financed revenue. WSDOT will seek bonding authorization in the 2012 legislative session and bond proceeds are assumed in Exhibit 1 summarizing project funding.

Partnerships

WSDOT along with the Federal Highways Administration (FHWA) and many local partners, have been planning corridor reconstruction on State Route 99 for several years.

On January 13, 2009, Governor Gregoire, former City of Seattle Mayor Nickels, and former King County Executive Sims signed the Letter of Agreement recommending that the central section of the viaduct be replaced with a bored tunnel. Each project partner committed to elements in the overall corridor program to replace the viaduct including transit investments, local roadway improvements, bicycle and pedestrian improvements and freight mobility improvements.

On October 24, 2009, WSDOT and the City of Seattle executed GCA 6366, which identified the bored tunnel as the City's preferred alternative for the replacement of the viaduct and outlined the responsibilities of both organizations for delivery of the project.

On April 12, 2010, WSDOT and the Port of Seattle entered into GCA 6444 restating support for the project and stating the Port's intent to contribute $300 million to the project.

On February 7, 2011, the Seattle City Council approved C.B. 117101, accepting negotiated agreements that implement the October 2009 agreement between the City of Seattle and WSDOT. The three administrative agreements are between WSDOT and Seattle DOT (GCA 6486), Seattle City Light (UT 1476) and Seattle Public Utilities (UT 1474). These agreements set out the procedures to be followed during design and construction of the bored tunnel alternative.

Proposed Tolling Agreement

To enhance safety, mobility, and reliability on SR 99, WSDOT has been studying and designing improvements to reconstruct the corridor. A critical component of the funding for improvements to SR 99 is tolling. The reconstruction of SR 99 through this project is consistent with the provisions of Title 23 USC. Funding for investments in transit operations for corridor improvements are being sought by project partners.

To that end, we request approval of the proposed Tolling Agreement under Program 129 to operate a toll collection system on the reconstructed SR 99 corridor. We agree that the toll revenues from the operation of the tolled facility will be used first for debt service, and proper operations and maintenance of the tolled facility. WSDOT agrees to annually certify that the toll facility is maintained. Any excess toll revenue, while not anticipated, will be used in accordance with Title 23, USC.

Transit service is important component to a strong infrastructure network. The state may pursue additional tolling projects in the corridor that consider transit operations should federal law change allowing this use of toll revenue. Until that time, WSDOT will work with other states, the Administration and Congress to consider revisions to Title 23 to enable integrated transportation solutions through innovation and public partnerships.

We appreciate your expedited review of our request for Federal Tolling Authorization. Please feel free to contact me or Craig Stone at 206-464-1222 if you have questions or need additional information.

Sincerely,

Paula J. Hammond, P.E.
Secretary of Transportation

PJH:tg:tm

Attachment: Tolling and Pricing Express of Interest

cc: Daniel M. Mathis, FHWA, Washington Division
Greg Wolf, FHWA, Office of Program Administration
Ron Paananen, WSDOT Alaskan Way Viaduct Replacement Program

Exhibit 3: Financial Feasibility

AWV Central Waterfront Project - Sources

Funding Source	Amount
Federal (ER)	$45,002,000
Federal (HP)	$8,064,000
Federal (PNRS)	$4,203,000
Federal (BR)	$120,000,000
State (Nic)	$90,492,000
State (TPA)	$1,077,469,000
Federal (STP)	$51,337,000
State (MMA)	$129,105,000
State (MVA)	$34,702,000
State (toll funding contribution)	$400,000,000
Local (MVA)	$307,000
Subtotal	$1,960,681,000
Local (Viaduct demo and BST decomm.)	$50,000,000
Local (City Reimbursement for Utilities)	$50,000,000
TOTAL	**$2,060,681,000**

AWV Central Waterfront Project - Uses

Funding Use	Amount
Bored Tunnel*	$1,656,381,000
North and South Access	$121,700,000
Right of Way Acquisition	$126,900,000
Preliminary Engineering	$105,700,000
Viaduct Demo & BST Decomm**	$50,000,000
Total	**$2,060,681,000**

*Note: Bored Tunnel Project Includes City Utility Work

**Note: City of Seattle Mercer Street West Project not included

If you have any questions completing this form, please contact Patrick DeCorla-Souza at (202) 366-4076. Please complete all applicable information and attach this request via email to TollingandPricingTeam@fhwa.dot.gov or via U.S. mail to:

Tolling and Pricing Team
Federal Highway Administration
Office of Innovative Program Delivery, Attn: Patrick DeCorla-Souza
1200 New Jersey Avenue, SE, Mail Stop E84-320
Washington, DC, 20590

Please copy your respective FHWA State Division Office

A) What is the requesting agency, authority, or public company? What is the lead office within the requesting agency, authority, or private company?

Name(s):
Washington State Department of Transportation, Toll Division

Project Website (if applicable) or Your Agency/Company Website: SR 99 - Alaskan Way Viaduct and Seawall Replacement: http://www.wsdot.wa.gov/projects/viaduct

B) Contact Information

Name: Craig Stone, P.E.
Title: Director, WSDOT Toll Division
Address: 401 2nd Ave S, Suite 300, Seattle, WA
Phone: 206-464-1222
E-mail: stonec@wsdot.wa.gov

C) What is the requesting agency seeking? (Please mark appropriate box)

☐ *Funding ONLY* for this project or study (Federal authority already granted or not necessary).

X *Federal Tolling Authority ONLY* for this project or study (no funds requested).

☐ *Funding AND tolling authority* for this project or study.

☐ *Other, not listed.*

Please briefly elaborate: WSDOT is seeking Federal Tolling Authority to operate a toll collection system on the reconstructed SR 99 corridor.

D) Please provide a brief description of the tolling or pricing project or study. Please identify and describe the subject facility or general area to be tolled, priced or studied (i.e. name of project/study, location, length, level of service, problem to be addressed, etc.)?

The SR 99 corridor is critical north-south corridor in Seattle. This corridor plays a major role in sustaining the economy and maintaining connections to and through Seattle. The existing SR 99 viaduct through central Seattle is at risk of failure from earthquakes as well as irreversible loss of use from age and deterioration. The SR 99 project is replacing the viaduct from approximately S. King Street to Roy Street and removes the existing viaduct from Seattle's downtown waterfront. RCW 47.01.402 directs the state to expend up to $2.8 billion with $2.4 billion in state appropriation and up to $400 million in toll financed revenue. When the new roadway opens to traffic, tolls will be collected from vehicles to help finance the construction of the new facility and operations of the facility.

E) Which type of facility is proposed to be tolled or studied?

☐ *Interstate*
X *Non-Interstate*
☐ *Project contains both types of facilities*
☐ *Project is not specific to any type of facility*

F) Does the toll project involve ANY construction?

☐ *No* X *Yes (if so, please mark all that apply)* ☐ *Not applicable*

☐ *New construction* ☐ *Expansion* ☐ *Rehabilitation* X *Reconstruction*
☐ *HOV to HOT Conversion* ☐ *Other not listed.*

Please briefly elaborate: The SR 99 - Alaskan Way Viaduct and Seawall Replacement project will enhance safety by replacing the aging viaduct with a new roadway facility and completing other improvements throughout the corridor. Improvements include transit, city street and waterfront enhancements, improved roadway geometrics and greater seismic capacity.

G) Does an HOV lane(s) currently exist on the facility?

X *No* ☐ *Yes* ☐ *Not applicable*

H) What is the timetable to enact the tolling or pricing project or study?

Construction is scheduled to begin on SR 99 through central Seattle in 2012 with the new facility opening to traffic in 2016. Construction on the approaches to the central Seattle segment will begin in September 2011. It is anticipated that tolls will start once construction is completed.

I) Are there expressions of support from public officials or the public? Have any public meetings been held? If no public meetings or expressions of support are available, please indicate the agency's plans for ensuring adequate public involvement and seeking public support for the toll project or study.

Expressions of Support:
As part of the ongoing design and environmental review process, WSDOT has worked in conjunction with FHWA, City of Seattle, King County, the Port of Seattle and other regional and local agencies. Communities and organizations along the SR 99 corridor have continued to show support for the project.

Public Involvement:
WSDOT has completed extensive public involvement as part of the SR 99 - Alaskan Way Viaduct and Seawall Replacement project. This has included 29 open house-style public meetings, 430 community briefings, Stakeholder Advisory Committee, project tours for 900, 150 fairs and festivals with 16,800 attendees, 20 DBE and WBE meetings, extensive Tribal coordination, 200 informational boards, 3,929 news stories and blogs, 76 news releases, 2,500 email inquiries and other stakeholder engagement.

J) Where known (and if applicable), what is plan for implementing tolls or prices and the strategies to vary toll rates or prices (i.e., the formulae for variable pricing)?

Tolls on the SR 99 - Alaskan Way Viaduct and Seawall Replacement project may vary by time-of-day. The state and City of Seattle agreed to establish an advisory committee to assess and make recommendations to mitigate traffic changes caused by tolling. The toll rates would be set to generate the funding necessary to support the funding gap in the budget for the capital improvements. Decisions on the final toll schedule will be made by the Washington State Transportation Commission closer to the facility's opening in 2015 at the earliest. The sale of toll revenue bonds is not forecast until fiscal year 2014.

K) What is the reason(s) of the toll project or study? Please mark all that apply.

X *Financing construction*

☐ *Reducing congestion*

☐ *Improving air quality*

X *Other not listed. SAFETY*

Please briefly elaborate: Tolls on the SR 99 - Alaskan Way Viaduct and Seawall Replacement project will generate the additional funding to support the planned capital improvements. The replacement facility will greatly improve safety with roadway enhancements and decreased seismic event risk.

L) Please provide a description of the public and/or private agency that will be responsible for operation, maintenance, and/or enforcement for the toll project or study?

The operations and maintenance of on the SR 99 - Alaskan Way Viaduct and Seawall Replacement project toll collection system will be the responsibility of the Washington State Department of Transportation (WSDOT). The WSDOT Toll Division will be responsible for the enforcement of tolls on the SR 99 - Alaskan Way Viaduct and Seawall Replacement project.

M) Please provide a description of how, if at all, any private entities are involved in the up-front costs, or will share in project responsibilities, debt retirement, or revenues?

The SR 99 - Alaskan Way Viaduct and Seawall Replacement project will leverage future toll financed funds to sell bonds to fill the funding gap in the planned capital improvements. The project's financial plan forecasts the sale of toll revenue bonds no earlier than fiscal year 2014.

N) Please provide any additional information you feel is necessary.

None

No. ____ of _____ Executed
Original Counterparts

AGREEMENT
By and between
FEDERAL HIGHWAY ADMINISTRATION
UNITED STATES DEPARTMENT OF TRANSPORTATION

AND

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

THIS AGREEMENT, made and entered into this ____ day of _____ , by and between the WASHINGTON STATE DEPARTMENT OF TRANSPORTATION, an agency of the State of Washington, (hereinafter referred to as "WSDOT"), and the FEDERAL HIGHWAY ADMINISTRATION, UNITED STATES DEPARTMENT OF TRANSPORTATION, (hereinafter referred to as "FHWA"):

WITNESSETH:

WHEREAS, the WSDOT desires to reconstruct a highway, designated as "State Route 99" and located in King County, which currently operates as a free facility and convert it into a toll facility (hereinafter referred to as the "toll facility") pursuant to RCW 47.01.402; and

WHEREAS, Section 129(a)(1)(D) of Title 23, United States Code, as amended, permits Federal participation in the reconstruction of a toll free highway (other than a highway on the Interstate System) and conversion of that highway into a toll facility; and

WHEREAS, the WSDOT and FHWA have agreed to be bound by and to comply with provisions of Section 129(a) of Title 23, United States Code, as amended, for the toll facility; and

WHEREAS, Paragraph 3 of Section 129(a) of Title 23, United States Code, as amended, restricts the use of revenues:

> "(3) Limitation on Use of Revenues … all toll revenues received from operation of the toll facility will be used first for debt service, for reasonable return on investment of any private person financing the project, and for the costs necessary for the proper operation and maintenance of the toll facility, including reconstruction, resurfacing, restoration, and rehabilitation. If the State certifies

annually that the tolled facility is being adequately maintained, the State may use any toll revenues in excess of amounts required under the preceding sentence for any purpose for which Federal funds may be obligated by a State under this title."

NOW THEREFORE, the WSDOT and FHWA hereby agree as follows:

1. The WSDOT agree that the toll revenues from the operation of the toll facility will be used first for debt service, for reasonable return on investment of any private person financing the project, and for the costs necessary for the proper operation and maintenance of the toll facility, including reconstruction, resurfacing, restoration, and rehabilitation, as provided in paragraph 3 of Section 129(a) of Title 23, United States Code, as amended.

2. In accordance with Section 129(a) of Title 23, United States Code, as amended, the WSDOT hereby certify that they can and will comply with the following requirements provided in paragraph 3 of Section 129(a), Title 23, United States Code, as amended:

> The WSDOT agree to certify annually that the toll facility is being adequately maintained. Upon such certification, the WSDOT is entitled to use any toll revenues in excess of amounts required under paragraph 3 of Section 129(a), as amended, for any purpose for which Federal funds may be obligated by a State under Title 23, United States Code.

3. The WSDOT agree, upon reasonable notice, to make all its records pertaining to the toll facility subject to audit by the FHWA. The WSDOT agree to annually audit the records of the toll facility for compliance with the provisions of this agreement and report the results thereof to the FHWA. In lieu of the WSDOT performing said audit, a report of an independent auditor furnished to the FHWA, the WSDOT may satisfy the requirements of this section.

4. That this Agreement will be prepared in duplicate originals so that each signatory will have an original Agreement.

IN WITNESS THEREOF, the parties hereto have caused this instrument to be duly executed, the day and year first written above.

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

BY: _____,
Paula J. Hammond
Secretary

FEDERAL HIGHWAY ADMINISTRATION
UNITED STATES DEPARTMENT OF TRANSPORTATION

BY: _____
King W. Gee
Associate Administrator for Infrastructure

Approved As to Form:

_____

Appendix K

Alaskan Way Viaduct Replacement Project,
2010 Supplemental Draft Environmental Impact Statement and Draft Section 4(f) Evaluation,
Section 6, Construction Mitigation excerpt, September 24, 2010,
pages 154-159

would be necessary to select and design the best ground treatment approaches.

35 How would fish, aquatic, and wildlife species and habitat be affected during construction?

Construction effects on fish, wildlife, and vegetation in the project area would most likely be associated with construction noise and potential temporary and localized sedimentation and turbidity in Elliott Bay. Increased turbidity could occur due to erosion; spoils handling, stockpiling, and dewatering; and potential spills. Potential effects would be avoided, minimized, and mitigated by implementing appropriate BMPs.

Construction materials staging and storage areas near the shoreline could include Terminals 25 and 106. The upland portion of Pier 48 may be used for contractor parking. While most deliveries and construction material transport would be land-based, some materials may be transported by water. These activities would likely occur at Pier 46 at the northern edge of Terminal 46 to support construction activities for both the south portal and the bored tunnel. The use of Pier 46 would not require new overwater structures or in-water construction activities. Barge movement at this location would be similar to existing navigation movements along the shoreline and would not represent a new or different effect. The number of barges would be insignificant in the context of Elliott Bay shipping activities. There are no eelgrass beds in the areas where barge moorage would occur, and shallow draft barges or existing loading facilities would prevent the grounding of barges in the subtidal or intertidal habitat.

36 Would construction have indirect effects?

An indirect effect is a reasonably foreseeable effect that may be caused by a project but would occur in the future or outside of the project area. Construction of the Bored Tunnel Alternative would primarily have direct effects on local and regional traffic during construction. As people adjust their travel patterns during construction, there may be indirect effects as people may change where they shop, where they eat out, or what services they use. These changes could benefit businesses outside of the project area during construction, but these effects would not be significant.

CONSTRUCTION MITIGATION

37 What construction mitigation plans and measures are proposed for this project?

This Supplemental Draft EIS presents potential measures that could be used to mitigate negative project effects of the Bored Tunnel Alternative during construction. After reviewing public, tribe, and agency comments on this Supplemental Draft EIS, as well as the 2004 Draft EIS and the 2006 Supplemental Draft EIS, the project team will develop more specific mitigation measures to address identified construction effects. Opportunities for public, tribe, and agency review of many mitigation elements will be provided. The project will finalize the list of mitigation measures and commit to their implementation in the Final EIS and the ROD issued by FHWA.

Mitigation measures and plans will be developed by considering effects on adjacent and nearby properties in terms of intensity and duration. Mitigation measures and plans will be tailored to the various construction stages and varying effects as appropriate. The following paragraphs discuss the proposed mitigation plans in more detail.

Transportation

WSDOT will be required to prepare a traffic management plan that must be accepted by the City of Seattle. The plan will ensure that construction effects on local streets, property owners, and businesses are minimized. The traffic management plan will include the following components:

- Descriptions of traffic phasing plans.
- Provisions to maintain existing access to all properties.
- Provisions for maintaining continuous access to established truck routes, hazardous material routes, transit routes, and school bus routes.
- Procedures to identify and incorporate the needs of transit operators, utility owners, ferry traffic, event traffic, Port of Seattle traffic, and business owners in the area.
- Procedures to identify and incorporate measures to facilitate pedestrian and bicycle flow, including mitigation for sidewalk closures and requirements related to the Americans with Disabilities Act (ADA).
- Procedures to identify and incorporate the needs of emergency service providers, the fire department, law enforcement entities, and other related corridor users, as well as procedures to ensure that all information required by these agencies to protect the public is made available.
- Descriptions of contact methods and personnel available 24 hours a day to make decisions and ensure that issues are addressed in a timely and appropriate manner.
- Procedures to communicate construction traffic plans to the public.
- Procedures to accommodate adjacent projects' plans to maintain traffic flow, if applicable.
- Identification of haul routes.

Soil and Contaminated Materials

Temporary erosion and sediment control plans would be prepared for approval in accordance with BMPs included in the current City of Seattle Stormwater, Grading, and Drainage Control Code (Ordinance 119965) and the WSDOT Highway Runoff Manual. Construction BMPs would include barrier berms, filter fabric fences, temporary sediment detention basins, and slope coverings to contain sediment on site. These BMPs would be

Appendix N, Wildlife, Fish, and Vegetation Discipline Report

Additional information about construction effects on wildlife, fish, and vegetation is provided in *Appendix N*.

Transportation Improvements to Minimize Traffic Effects During Construction

In addition to the traffic mitigation measures discussed in **Question 37** in this chapter, WSDOT, King County, and the City of Seattle have developed Transportation Improvements to Minimize Traffic Effects During Construction to keep people and goods moving during construction of the Alaskan Way Viaduct and Seawall Replacement Program (the Program). These specific improvements are discussed in **Chapter 7, Question 17**.

Appendix Q, Hazardous Materials Discipline Report

Additional information on hazardous materials handling and disposal is provided in *Appendix Q*, Section 6.5.

effective in protecting water resources and reducing soil erosion from the construction areas. Erosion control measures suitable to the site conditions would be included as part of the design. Stockpiles should be covered when not in use to prevent erosion from surface water and rain.

Additional investigations to determine whether contamination or other hazardous materials are present at a site are standard mitigation measures. These investigations may include environmental site assessments, an asbestos survey, a lead survey, and a geophysical survey.

Contamination will be encountered. If soil contains more than 5 percent wood debris, it would need to be transported to a solid waste landfill that is permitted to accept wood debris, including creosote-treated piles. Soils that are considered hazardous waste will require appropriate handling and disposal according to the type and concentration of contaminants. Before construction, coordinating with waste disposal companies to prepare for the disposal of contaminated materials would mitigate the issue.

Measures relating to soils and contaminated materials would also be included in the development of mitigation measures for effects on water quality and air quality.

Noise

Daytime construction noise will meet the City of Seattle noise ordinance. Construction of the Bored Tunnel Alternative would also require nighttime construction activities at the portals, including excavation of the TBM assembly pit, construction of cut-and-cover portions of the structure, and construction of the tunnel operations buildings. Therefore, a nighttime noise variance would be required from the City. Because of the magnitude of the project, a Major Public Project Construction Noise Variance would most likely be required. Mitigation requirements for construction noise would be developed in coordination with the City and specified in the noise variance. The mitigation requirements would be implemented by WSDOT. To reduce construction noise at nearby receptors, mitigation measures could be incorporated into construction plans, specifications, and variance requirements. Possible mitigation measures include the following:

- Develop a construction noise management and monitoring plan that establishes specific noise levels that may not be exceeded for various activities during specific times. This would establish a set of noise limits that could be met during construction while still protecting the public from excessive noise effects.
- Crush and recycle concrete off site, away from noise-sensitive uses.
- Construct temporary noise barriers or curtains around stationary equipment and long-term work areas located close to residences. This could reduce equipment noise by 5 to 10 dBA.
- Limit the noisiest construction activities to between 7:00 a.m. and 10:00 p.m. on weekdays and between 9:00 a.m. and 10:00 p.m. on weekends and holidays to reduce construction noise levels during sensitive nighttime hours.

Mitigation for nighttime construction noise would be developed in coordination with the City of Seattle's noise variance process and specified in the noise management and mitigation plan. WSDOT will prepare a draft noise variance application that will contain specific mitigation measures. The draft application will then go through a public input and review process. WSDOT will revise the application based on this input and formally submit the application to the City of Seattle. The mitigation measures will be included in the ROD.

Vibration

Pile driving, if necessary, would be the main source of vibration during construction. Potential measures to reduce vibration impacts from pile driving could include using other methods such as jetting, predrilling, and pile cushioning, or other types of piles such as cast-in-place or auger piles.

Vibration from other construction and demolition activities could be reduced by restricting operation to a distance away from historic structures or using alternative construction equipment or methods. Vibration monitoring will be required at the nearest historic structure or sensitive receiver (such as sensitive utilities) within 300 feet of construction activities. The monitored data will be compared to the project's vibration criteria to ensure that ground vibration levels are not exceeding the damage risk criteria for historic and non-historic buildings and sensitive utilities.

Views

Construction mitigation for views is generally limited. The most effective construction mitigation is to restore the areas where construction has been completed in intermediate stages rather than waiting until the entire project is completed.

Relocations

Acquisitions and relocations would occur before construction. Where acquisitions and relocation are unavoidable, WSDOT will follow the provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. Owners of private property have federal and state constitutional guarantees that their property will not be taken or damaged for public use unless they first receive just compensation.

Temporary easement areas for tiebacks would also be needed for construction and would be removed after construction. These property owners would be given advance notice of disruptions, and construction traffic, dust, and noise would be mitigated to the extent possible.

Property owners on adjacent parcels will be given advance notice of when demolition and construction activities, utility disruptions, and lane restrictions are expected. Temporary access will be provided to local parcels during

Appendix F, Noise Discipline Report

Additional measures to mitigate noise are described in *Appendix F*, Section 6.2.

Detailed descriptions of measures to reduce vibration impacts are provided in *Appendix F*, Section 6.2.

construction activities. Impacts to business will be mitigated as required by the Uniform Relocation Assistance and Real Property Acquisition Policies Act.

Businesses and Economics
Possible mitigation measures for effects on businesses include the following:

- Create a business assistance program that will provide a single point of contact and ensure that businesses have access to project staff.
- Minimize obstructions and maintain access during important business seasons, or minimize the duration of modified or lost access.
- Provide pedestrian detour signage along affected sidewalks.

These mitigation measures are intended to counteract the diminished quality of the business environment for businesses adjacent to construction zones. These measures are not intended to guarantee business success or survival but are intended to maintain access and the setting for businesses and potential customers.

Mitigation plans for transportation would also be important to mitigate effects on businesses and the economy. WSDOT and the City will coordinate with surrounding businesses to develop mitigation strategies, develop parking strategies, create a business assistance program, and develop a construction worker parking plan. Additional potential mitigation measures for businesses during construction would be related to communicating information, maintaining pedestrian access, maintaining habitability, and other factors.

Pedestrian Access
To support pedestrian access to businesses during construction, the following mitigation measures for potential effects on pedestrian access may be applied during viaduct demolition:

- Provide obvious and relatively consistent east-west pedestrian routes from First Avenue to Pier 52 (Colman Dock), Piers 55/56 (Argosy), and Pier 59 (Seattle Aquarium). Primary pedestrian routes would have signage, directional arrows, lighting, and other amenities. All pedestrian routes would provide safe and clean access through the construction zones.
- Provide signage for pedestrians along First Avenue between S. King Street and Bell Street, showing routes and distances (in blocks) to the waterfront. These signs would be updated as the project advances during viaduct removal.
- Provide east-west pedestrian access from Western Avenue to the Alaskan Way piers (Yesler Way to Pine Street) at least every other block during viaduct demolition.
- Provide pedestrian and parking maps in advance of and during construction for businesses (at no cost to the businesses) to mail to clients and vendors.

As the beginning of construction approaches, mitigation measures will be refined to address specific effects on businesses and pedestrian access to businesses. The project will comply with the requirements of ADA.

Parking
Parking mitigation strategies during construction would be coordinated by WSDOT and the City, with input from surrounding businesses. These strategies may include the following:

- Encourage privately held parking lots to institute measures that reward short-term parking.
- Provide short-term parking (off-street), especially serving retail and commercial areas.
- Partner with private and public parking facilities to implement e-Park, an electronic guidance system displaying real-time parking availability on right-of-way signs, facility signs, and the Seattle Parking Map website. Dynamic message signs would be located on key access points to the downtown, Pioneer Square and the central waterfront.
- Launch the Seattle Parking Map, featuring on-street parking regulations and off-street parking locations, hours of operations, and short-term parking rates.

The following strategies could help minimize the use of visitor/customer parking by construction workers:

- Develop a parking plan for construction workers to identify appropriate parking options for construction workers and discourage use of short-term visitor/customer parking.
- Provide strong enforcement of short-term parking regulations in the immediate project area (two- to three-block radius).

Mitigation for construction effects on any disabled parking spaces will comply with ADA requirements, and accessible replacement parking spaces will be provided.

Section 106: Historic, Cultural, and Archaeological Resources
Section 106 of the National Historic Preservation Act requires agencies to consider the effects of federal actions on historic and cultural resources. Adverse effects on historic and cultural resources that are determined eligible for listing in the NRHP would be minimized and mitigated by means of a MOA developed in consultation with SHPO, the tribes, and the consulting parties.

Historic Structures
All mitigation work undertaken on historic structures would be performed in compliance with the Secretary of the Interior's Standards for Rehabilitation of Historic Buildings (36 CFR 67.7). A range of mitigation measures would be considered for each potentially affected building,

Appendix L, Economics Discipline Report

Additional mitigation measures for businesses are described in *Appendix L*, Section 6.4.

Appendix C, Transportation Discipline Report

Additional parking mitigation strategies are discussed in *Appendix C*, Section 7.3.4.

Appendix I, Section 106: Historic, Cultural, and Archaeological Resources Discipline Report

Additional measures to minimize effects on historic properties, as well as mitigation for the Dearborn South Tideland Site and other potential archaeological and cultural resources, are discussed in *Appendix I*, Section 6.2.

based on its current structural condition, its proximity to the tunnel alignment, and potential damage. Repair of minor damage such as minor architectural cracking, sticking windows and doors, etc. would likely be performed after the tunnel boring operation is completed and the damage appears. Preconstruction mitigation could include strengthening foundations and/or a minor structural retrofit.

A number of measures will be implemented to minimize effects on historic properties, particularly effects from vibration and settlement. These could include the following:

- Implement a monitoring program to provide early warning when building settlement thresholds may be exceeded.
- Specify requirements for the TBM design and operation.
- Use various soil improvement and grouting techniques to improve soil strength, fill voids, or compensate for settlement (Exhibit 6-14).
- Undertake structural strengthening, including strengthening existing building foundations and/or structural retrofit.
- Repair minor damage such as minor architectural cracking or sticking windows and doors.

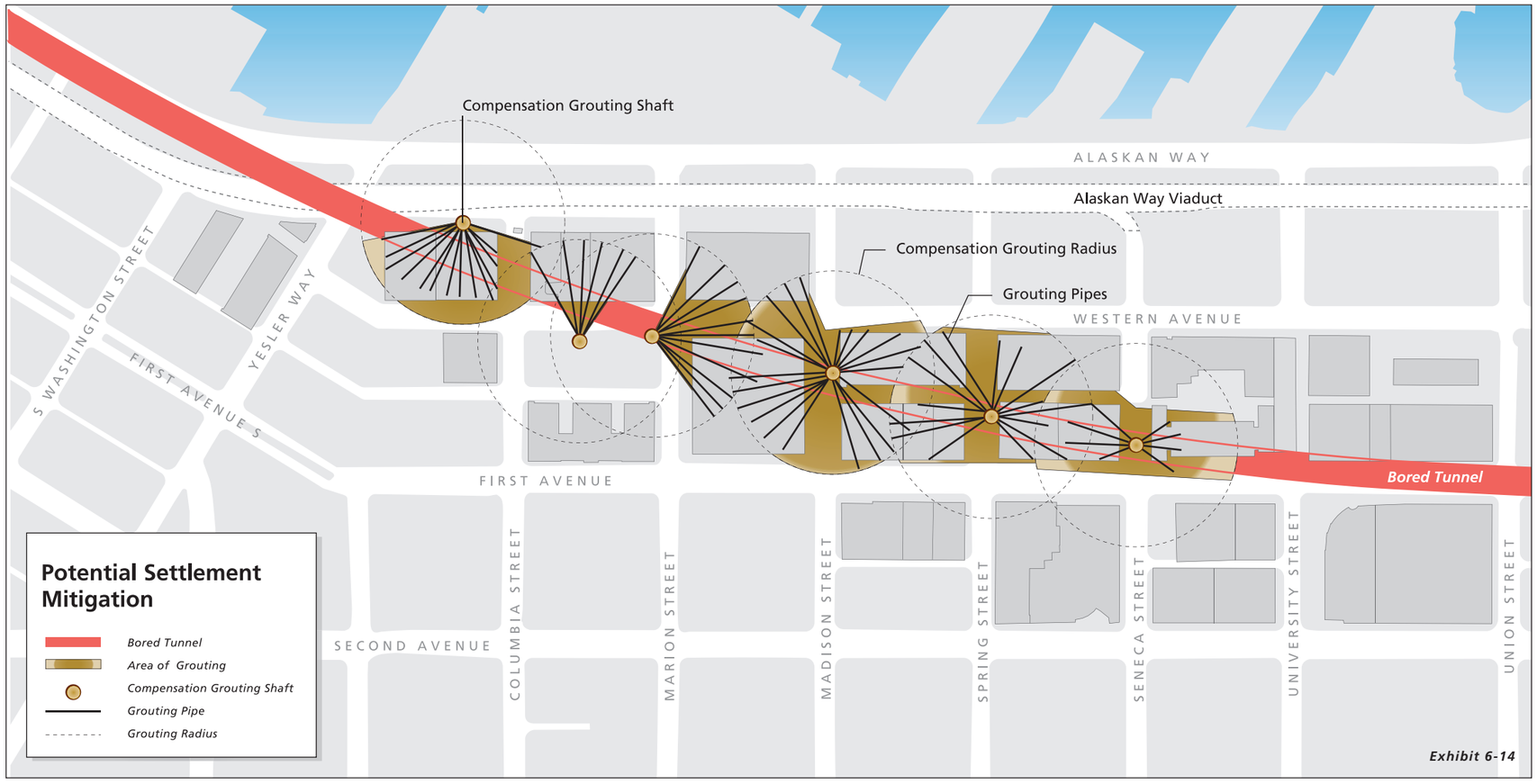


Exhibit 6-14

Settlement monitoring will be a key element of the minimization strategy. Based on the allowable settlement threshold determined in the building assessment, settlement at points on each building would be continuously measured for a period of 1 to 6 months before tunneling reaches the subject building until up to a year after the tunneling operation has passed the building. As the TBM advances, measurement of ground loss directly over the tunnel would provide an indicator of potential effects on buildings and other facilities. If settlement is detected, action would be taken to reduce the settlement by filling voids with grout created by the tunneling process.

Historic structures could also experience effects from noise, dust and mud, traffic congestion, construction traffic, loss of parking, and limited access during construction. Potential mitigation measures for these effects are described elsewhere in this section (Question 37).

FHWA and WSDOT will closely coordinate mitigation measures with SHPO, the tribes, and the consulting parties. These mitigation approaches would then be the basis for discussion leading to an MOA to ensure that historic structures are adequately protected during construction.

Archaeological Resources

FHWA and WSDOT will continue to consult with SHPO, the tribes, and the consulting parties to develop mitigation measures for effects on archaeological resources. Depending on the type of resource, mitigating adverse construction effects can involve documentation, excavation, and/or monitoring. Other appropriate measures will be developed on a case-by-case basis with SHPO, the tribes, and the consulting parties. When the parties agree on how the adverse effects will be minimized

and mitigated, an MOA will be signed and implemented. This agreement will outline mitigation measures, identify responsible parties, and bind the signatories. As a commitment within the MOA and in continuing consultation with SHPO, the tribes, and the consulting parties, the lead agencies will also develop a historic properties treatment plan for archaeological resources that will include a monitoring plan and an Unanticipated Discovery Plan. The Unanticipated Discovery Plan will provide for notification and consultation between FHWA, WSDOT, SHPO, the tribes, and the consulting parties related to discoveries of unanticipated archaeological material or human remains. The Section 106 documentation will be included in the Final EIS.

Neighborhoods and Community Services
Mitigation for effects on neighborhoods and community and social services could include the following:

- Minimize construction-related effects like noise, dust, light, and glare, especially from nighttime work.
- Coordinate with community and social services to ensure that access is maintained and to identify concerns and solutions.
- Establish a neighborhood advisory group prior to construction. Periodically during construction, meet with neighborhood representatives to communicate important information concerning construction activities and to inquire about the effectiveness of the mitigation measures.
- Communicate with neighborhood groups, residents, and providers and patrons of community and social services to ensure that they understand the extent of construction, construction scheduling, how to navigate around construction sites, and what services are offered to them as part of construction mitigation.
- Coordinate with providers of mental health, psychiatric, and drug and alcohol treatment facilities to determine whether additional special mitigation is needed.
- Provide a 24-hour project hotline for people to call with construction concerns or to obtain information about the project.

Environmental Justice
Although construction would affect minority and low-income populations, effects can be avoided, minimized, and mitigated. Mitigation could include the following:

- Identify and provide information on a safe pedestrian route between Pioneer Square/downtown and the St. Martin de Porres shelter to allow movement of people to and from the shelter throughout construction.
- Work with The Compass Center, Heritage House, Bread of Life Mission, Pike Market Senior Center, Plymouth Housing Group, Catholic Seamen's Club, and Rose of Lima House to identify concerns and solutions for potential access, parking, air quality, and noise effects.
- Ensure continuous access to buildings, properties, and loading areas used by social service providers during construction.
- Hold briefings and planning sessions with social service providers to keep them up-to-date on the project and to monitor mitigation strategies for minority and low-income populations.
- Cooperate with social service providers on emergent issues that affect minority and low-income populations.
- Secure construction sites to prevent entry and injuries (especially by homeless persons)

Parks and Recreation
Mitigation for park and recreation resources could include the following measures:

- Install signs near affected construction zones, indicating access routes to parks and recreational facilities.
- Coordinate regularly with park and recreation facility operators to ensure that changes in project activities and associated changes in access points and corridors are known in advance.
- If pedestrian bridges, trails, or other pathways need to be closed temporarily, locate replacement pathways within a reasonable distance from the current facility that are ADA compliant and accessible to persons with disabilities.

Public Services
The project will coordinate with the City of Seattle and Port of Seattle police and fire departments, regional transportation agencies, and other appropriate agencies during preliminary and final design. This coordination will develop reliable emergency access and alternative plans or routes to avoid delays in response times and to ensure that general emergency management services are not compromised.

Utilities
The project team will prepare a consolidated utility monitoring, protect-in-place, and relocation plan to address existing, temporary, and new locations for utilities; sequence and coordinate schedules for utility work; and describe service disruptions. This plan would need to be reviewed and approved by the affected utility providers before construction begins to reduce effects.

Air Quality and Energy
A Memorandum of Understanding between WSDOT and the Puget Sound Clean Air Agency is in place to help eliminate, confine, or reduce construction-related emissions for WSDOT projects. WSDOT will create a plan

Appendix H, Social Discipline Report

Additional mitigation measures for neighborhoods, community and social services, and environmental justice are identified in *Appendix H*, Section 6.2.

Additional information about mitigation of temporary effects on parks and recreation resources is provided in *Appendix H*, Section 6.2.

Appendix K, Public Services and Utilities Discipline Report

Additional mitigation measures for public services and utilities are identified in *Appendix K*, Section 6.2.

Appendix M, Air Discipline Report

Other possible measures for reducing emissions of air pollutants near construction areas are described in *Appendix M*.

Appendix R, Energy Discipline Report

Additional energy-saving strategies are described in *Appendix R*, Section 6.2. *Appendix R* also provides additional information about greenhouse gas emissions.

for controlling fugitive dust during construction. The fugitive dust control plan would reduce air pollutant emissions near the construction site, including near residences located along Battery Street adjacent to the open grates.

The project's traffic management plan would help reduce effects on air quality because it would help move traffic through the area to the extent possible. Construction areas, staging areas, and material transfer sites would be set up in a way that reduces standing wait times for equipment, engine idling, and the need to block the movement of other activities on the site. These strategies would reduce fuel consumption and minimize emissions by reducing wait times and ensuring that construction equipment operates efficiently. Due to space constraints at the work site and the benefit of additional emissions reductions, ridesharing and other commute trip reduction efforts may be promoted for employees working on the project. These strategies would reduce both energy consumption and air pollutant emissions. By reducing energy consumption, greenhouse gas emissions would also be reduced.

Greenhouse Gases

Construction mitigation to help minimize congestion, which contributes to greenhouse gas emissions, would be covered in the traffic management plan. The traffic management plan would include traffic routing and strategic construction timing (like nighttime work) to continue moving traffic through the area and reduce backups for the traveling public to the extent possible. WSDOT will seek to set up active construction areas, staging areas, and material transfer sites in a way that reduces standing wait times for equipment. WSDOT will work with its partners to promote ridesharing and other commute trip reduction efforts for employees working on the project.

Water Quality and Fish and Aquatic Resources

Construction effects to surface water would be avoided, minimized, and mitigated through the development and implementation of water quality management plans. Specifically, the project would likely develop the following plans:

- **Construction Stormwater Pollution Prevention Plan –** This plan would describe BMPs; specify methods for handling dewatering water; discuss fugitive dust control; outline flow control; address detention requirements and protocols to meet requirements and maintain the capacity of the existing conveyance system; describe temporary water quality treatment; specify storm drain protection, maintenance, and monitoring; provide a List of Certified Erosion and Sediment Control Leads who would manage BMPs; and outline requirements for water quality monitoring.

- **Temporary Erosion and Sediment Control Plan –** This plan would outline the design and construction specifications for BMPs to be used to identify, reduce, eliminate, or prevent sediment and erosion problems.

- **Spill Prevention, Control and Countermeasures Plan –** This plan would outline spill prevention, inspection protocols, equipment requirements, material containment measures, and spill response procedures.

- **Concrete Containment and Disposal Plan –** This plan would outline how concrete would be managed, contained, and disposed of. It would also discuss BMPs that would be used to reduce high pH.

Monitoring would be performed in accordance with applicable standards.

Potentially contaminated spoils will be tested and disposed of at appropriate upland facilities by implementing the Construction Stormwater Pollution Prevention Plan; Temporary Erosion and Sediment Control Plan; the Spill Prevention, Control and Countermeasures Plan; and the Concrete Containment and Disposal Plan. Stormwater runoff from active construction sites would be treated before being discharged into the combined sewer system as necessary to comply with the requirements of the King County discharge permit. Measures to control pollutants will also serve to protect fish and aquatic resources.

38 How will the lead agencies involve people in mitigation planning and implementation?

The lead agencies will coordinate with businesses, agencies, tribes, neighborhood groups, service providers, and others to identify and address concerns as the project design progresses. The lead agencies will continue to hold community briefings and meet with local businesses and service providers to address construction concerns. The lead agencies will work directly with those who are likely to be affected by bored tunnel construction on mitigation strategies to minimize effects. Mitigation measures will be refined and discussed in the Final EIS, and additional or more specific mitigation measures will be developed as needed.

39 What temporary construction effects will not be mitigated?

Although WSDOT will try to avoid or minimize effects during construction, some effects would not be possible to prevent, even with mitigation. For most of the effects described in this chapter, some residual temporary construction effects would remain. For example, mitigation measures would be in place during construction to minimize impacts due to noise and reduced pedestrian access; however, it would not be possible to avoid some effects. These effects would be relatively minor and are not expected to be substantial or long-lasting.

Appendix O, Surface Water Discipline Report

Additional information on measures to protect water quality is provided in *Appendix O*, Section 6.2.

Appendix L

WSDOT's Interpretation of 2011 – 13 Legislatively Approved Budget for AWV Program, May 2, 2011, (11DOTLFC from TEIS)

Executive TEIS - Capital Projects System
Project Detail With Fund Types

SR 99/S Massachusetts St to Union St - Electrical Line Relocation

ProjectID(PIN):	809936A	**Bond Eligible:**	N	**Percent Complete:**	93%	**Revenue Package:**	Nickel and TPA
Description:	Electrical Line Relocation						
Book Description:	Electrical utilities on the Alaskan Way Viaduct from S Massachusetts to Union St must be relocated.						

Agency:	Department of Transportation	**DOT Region:**	Alaskan Way Viaduct
Route:	State Route 99	**Begin/End Mile Posts:**	26.55 - 40.48
Program/Sub-Program:	Improvement / Mobility	**County:**	King
Sub-Category:	Urban Mobility	**Legislative Districts(s):**	11, 32, 36, 37, 43, 46
Improvement Types:	Bridge Replacement (Structural)	**Urban Area:**	Seattle-Tacoma-Everett
Major Corridor:	SR 99, Seattle - Alaskan Way Viaduct	**Location:**	Downtown Seattle

PROJECT STATUS

Phase	Start Date	End Date	Phase Status
Preliminary Engineering	02/29/2008	04/30/2009	Phase Closed
Right of Way	03/10/2008	04/17/2009	Admin Approval to meet Leg Intent
Construction	07/14/2008	01/31/2011	Admin Approval to meet Leg Intent

Milestone	Date
D - Project Definition Complete	11/14/2006
B - Begin Preliminary Engineering	02/29/2008
E - Environmental Doc Complete	05/27/2008
R - Right of Way Certification	05/20/2008
A - Advertisement Date	05/27/2008
O - Operationally Complete	11/20/2009

PROJECT COSTS

Phase/Fund Type	Prior	09 - 11	11 - 13	13 - 15	15 - 17	17 - 19	19 - 21	21 - 23	23 - 25	25 - 27	Future	Total
Preliminary Engineering	10,925,000	0	0	0	0	0	0	0	0	0	0	10,925,000
State - TPA	10,925,000	0	0	0	0	0	0	0	0	0	0	10,925,000
Right of Way	497,000	0	0	0	0	0	0	0	0	0	0	497,000
State - TPA	497,000	0	0	0	0	0	0	0	0	0	0	497,000
Construction	11,960,000	9,114,000	0	0	0	0	0	0	0	0	0	21,074,000
Local - MVA	0	316,000	0	0	0	0	0	0	0	0	0	316,000
State - TPA	11,960,000	8,798,000	0	0	0	0	0	0	0	0	0	20,758,000
Project Totals	23,382,000	9,114,000	0	0	0	0	0	0	0	0	0	32,496,000
Local - MVA	0	316,000	0	0	0	0	0	0	0	0	0	316,000
State - TPA	23,382,000	8,798,000	0	0	0	0	0	0	0	0	0	32,180,000

Executive TEIS - Capital Projects System
Project Detail With Fund Types

SR 99/Lenora St to Battery St Tunnel - Earthquake Upgrade

ProjectID(PIN): 809936B **Bond Eligible:** N **Percent Complete:** 100% **Revenue Package:** Nickel and TPA

Description: Earthquake Upgrade

Book Description: This project was established to seismically retrofit the SR 99 Alaskan Way Viaduct from Bent 34 to the abutment near the south end of the Battery Street Tunnel. This project is cancelled following the State-County-City agreement January 2009 to pursue a tunnel as the preferred alternative for the central waterfront.

Agency: Department of Transportation
DOT Region: Alaskan Way Viaduct
Route: State Route 99
Begin/End Mile Posts: 26.55 - 40.48
Program/Sub-Program: Improvement / Mobility
County: King
Sub-Category: Urban Mobility
Legislative Districts(s): 11, 32, 36, 37, 43, 46
Improvement Types: Seismic
Urban Area: Seattle-Tacoma-Everett
Major Corridor: SR 99, Seattle - Alaskan Way Viaduct
Location: Downtown Seattle

PROJECT STATUS

Phase	Start Date	End Date	Phase Status
Preliminary Engineering	03/03/2008	09/23/2009	Reportable History (Closed)

Milestone	Date
D - Project Definition Complete	11/14/2006
B - Begin Preliminary Engineering	03/03/2008
E - Environmental Doc Complete	11/24/2009

PROJECT COSTS

Phase/Fund Type	Prior	09 - 11	11 - 13	13 - 15	15 - 17	17 - 19	19 - 21	21 - 23	23 - 25	25 - 27	Future	Total
Preliminary Engineering	3,225,000	0	0	0	0	0	0	0	0	0	0	3,225,000
Ded Fed PNRS - MVA	1,916,000	0	0	0	0	0	0	0	0	0	0	1,916,000
State - TPA	1,309,000	0	0	0	0	0	0	0	0	0	0	1,309,000
Project Totals	3,225,000	0	0	0	0	0	0	0	0	0	0	3,225,000
Ded Fed PNRS - MVA	1,916,000	0	0	0	0	0	0	0	0	0	0	1,916,000
State - TPA	1,309,000	0	0	0	0	0	0	0	0	0	0	1,309,000

Executive TEIS - Capital Projects System
Project Detail With Fund Types

SR 99/Battery St Tunnel - Fire and Safety Improvement

ProjectID(PIN): 809936C **Bond Eligible:** N **Percent Complete:** 83% **Revenue Package:** Nickel and TPA

Description: Fire and Safety Improvement

Book Description: This project was established to rehabilitate the Battery Street Tunnel fire and life safety systems, including carbon monoxide ventilation, fire sprinklers, illumination, communication and controls, ITS elements, power, emergency egresses and a seismic retrofit.

Agency:	Department of Transportation	**DOT Region:**	Alaskan Way Viaduct
Route:	State Route 99	**Begin/End Mile Posts:**	26.55 - 40.48
Program/Sub-Program:	Improvement / Mobility	**County:**	King
Sub-Category:	Urban Mobility	**Legislative Districts(s):**	11, 32, 36, 37, 43, 46
Improvement Types:	Bridge Replacement (Structural)	**Urban Area:**	Seattle-Tacoma-Everett
Major Corridor:	SR 99, Seattle - Alaskan Way Viaduct	**Location:**	Downtown Seattle

PROJECT STATUS

Phase	Start Date	End Date	Phase Status
Preliminary Engineering	03/03/2008	01/03/2011	Admin Approval to meet Leg Intent
Right of Way	03/10/2008	02/26/2010	Admin Approval to meet Leg Intent
Construction	12/01/2009	01/31/2011	Admin Approval to meet Leg Intent

Milestone	Date
D - Project Definition Complete	11/14/2006
B - Begin Preliminary Engineering	03/03/2008
E - Environmental Doc Complete	09/22/2009
R - Right of Way Certification	09/30/2009
A - Advertisement Date	10/05/2009
O - Operationally Complete	10/25/2010

PROJECT COSTS

Phase/Fund Type	Prior	09 - 11	11 - 13	13 - 15	15 - 17	17 - 19	19 - 21	21 - 23	23 - 25	25 - 27	Future	Total
Preliminary Engineering	11,199,000	568,000	0	0	0	0	0	0	0	0	0	11,767,000
State - TPA	11,199,000	568,000	0	0	0	0	0	0	0	0	0	11,767,000
Right of Way	1,027,000	64,000	0	0	0	0	0	0	0	0	0	1,091,000
State - TPA	1,027,000	64,000	0	0	0	0	0	0	0	0	0	1,091,000
Construction	0	4,619,000	670,000	0	0	0	0	0	0	0	0	5,289,000
State - TPA	0	4,619,000	670,000	0	0	0	0	0	0	0	0	5,289,000
Project Totals	12,226,000	5,251,000	670,000	0	0	0	0	0	0	0	0	18,147,000
State - TPA	12,226,000	5,251,000	670,000	0	0	0	0	0	0	0	0	18,147,000

Executive TEIS - Capital Projects System
Project Detail With Fund Types

SR 99/S Holgate St to S King St - Viaduct Replacement

ProjectID(PIN): 809936D **Bond Eligible:** N **Percent Complete:** 28% **Revenue Package:** Nickel and TPA

Description: Viaduct Replacement

Book Description: A portion of the existing Alaskan Way Viaduct will be removed and replaced with a transportation facility that has improved earthquake resistance and retains or improves mobility for people and goods. Work includes a new interchange in the vicinity of Royal Brougham Way and a railway grade separation structure at South Atlantic Street. Also included are improvements to local bike/pedestrian facilities, signing, illumination, ITS, drainage, and utilities. BNSF track west of Alaskan Way will be modified and/or relocated.

Agency:	Department of Transportation	**DOT Region:**	Alaskan Way Viaduct
Route:	State Route 99	**Begin/End Mile Posts:**	26.55 - 40.48
Program/Sub-Program:	Improvement / Mobility	**County:**	King
Sub-Category:	Urban Mobility	**Legislative Districts(s):**	11, 32, 36, 37, 43, 46
Improvement Types:	Bridge Replacement (Structural)	**Urban Area:**	Seattle-Tacoma-Everett
Major Corridor:	SR 99, Seattle - Alaskan Way Viaduct	**Location:**	Downtown Seattle

PROJECT STATUS

Phase	Start Date	End Date	Phase Status
Preliminary Engineering	03/04/2008	08/31/2010	Admin Approval to meet Leg Intent
Right of Way	03/10/2008	06/30/2011	Admin Approval to meet Leg Intent
Construction	05/12/2010	03/28/2014	Admin Approval to meet Leg Intent

Milestone	Date
D - Project Definition Complete	11/14/2006
B - Begin Preliminary Engineering	03/04/2008
E - Environmental Doc Complete	02/11/2009
R - Right of Way Certification	10/21/2009
A - Advertisement Date	10/26/2009
O - Operationally Complete	09/28/2013

Executive TEIS - Capital Projects System
Project Detail With Fund Types

PROJECT COSTS

Phase/Fund Type	Prior	09 - 11	11 - 13	13 - 15	15 - 17	17 - 19	19 - 21	21 - 23	23 - 25	25 - 27	Future	Total
Preliminary Engineering	56,055,000	21,385,000	4,249,000	0	0	0	0	0	0	0	0	81,689,000
Ded Fed PNRS - MVA	30,822,000	6,713,000	0	0	0	0	0	0	0	0	0	37,535,000
Local - MVA	2,000	0	0	0	0	0	0	0	0	0	0	2,000
State - Nic	2,385,000	0	0	0	0	0	0	0	0	0	0	2,385,000
State - TPA	22,846,000	14,672,000	4,249,000	0	0	0	0	0	0	0	0	41,767,000
Right of Way	14,136,000	27,439,000	3,054,000	0	0	0	0	0	0	0	0	44,629,000
State - Nic	240,000	1,156,000	0	0	0	0	0	0	0	0	0	1,396,000
State - TPA	13,896,000	26,283,000	3,054,000	0	0	0	0	0	0	0	0	43,233,000
Construction	4,096,000	86,579,000	139,115,000	38,678,000	0	0	0	0	0	0	0	268,468,000
Ded Fed PNRS - MVA	132,000	63,662,000	0	0	0	0	0	0	0	0	0	63,794,000
Federal NHS - MVA	0	0	50,000,000	0	0	0	0	0	0	0	0	50,000,000
Local - MVA	6,000	2,851,000	464,000	0	0	0	0	0	0	0	0	3,321,000
State - TPA	3,958,000	20,066,000	88,651,000	38,678,000	0	0	0	0	0	0	0	151,353,000
Project Totals	74,287,000	135,403,000	146,418,000	38,678,000	0	0	0	0	0	0	0	394,786,000
Ded Fed PNRS - MVA	30,954,000	70,375,000	0	0	0	0	0	0	0	0	0	101,329,000
Federal NHS - MVA	0	0	50,000,000	0	0	0	0	0	0	0	0	50,000,000
Local - MVA	8,000	2,851,000	464,000	0	0	0	0	0	0	0	0	3,323,000
State - Nic	2,625,000	1,156,000	0	0	0	0	0	0	0	0	0	3,781,000
State - TPA	40,700,000	61,021,000	95,954,000	38,678,000	0	0	0	0	0	0	0	236,353,000

Executive TEIS - Capital Projects System
Project Detail With Fund Types

SR 99/S King St Vic to Roy St - Viaduct Replacement

ProjectID(PIN): 809936E **Bond Eligible:** N **Percent Complete:** 9% **Revenue Package:** Nickel and TPA

Description: Central Waterfront Viaduct Replacement

Book Description: This project is for the bored tunnel alternative which would be constructed under downtown Seattle between S. King St. vicinity and Roy St. to replace the seismically vulnerable Alaskan Way Viaduct along the central waterfront. The proposed new bored tunnel would move SR 99 to a new below-ground alignment under downtown Seattle and bypass the existing Battery Street Tunnel.

Agency:	Department of Transportation	**DOT Region:**	Alaskan Way Viaduct
Route:	State Route 99	**Begin/End Mile Posts:**	26.55 - 40.48
Program/Sub-Program:	Improvement / Mobility	**County:**	King
Sub-Category:	Urban Mobility	**Legislative Districts(s):**	11, 32, 36, 37, 43, 46
Improvement Types:	Bridge Replacement (Structural)	**Urban Area:**	Seattle-Tacoma-Everett
Major Corridor:	SR 99, Seattle - Alaskan Way Viaduct	**Location:**	Downtown Seattle

PROJECT STATUS

Phase	Start Date	End Date	Phase Status
Preliminary Engineering	03/04/2008	06/30/2015	Admin Approval to meet Leg Intent
Right of Way	03/10/2008	06/30/2015	Admin Approval to meet Leg Intent
Construction	12/30/2010	06/30/2017	Admin Approval to meet Leg Intent

Milestone	Date
D - Project Definition Complete	11/14/2006
B - Begin Preliminary Engineering	03/04/2008
E - Environmental Doc Complete	06/20/2011
R - Right of Way Certification	08/01/2011
A - Advertisement Date	05/27/2010
O - Operationally Complete	12/24/2015

Executive TEIS - Capital Projects System
Project Detail With Fund Types

PROJECT COSTS

Phase/Fund Type	Prior	09 - 11	11 - 13	13 - 15	15 - 17	17 - 19	19 - 21	21 - 23	23 - 25	25 - 27	Future	Total
Preliminary Engineering	23,708,000	107,304,000	15,136,000	721,000	0	0	0	0	0	0	0	146,869,000
Ded Fed ER - MVA	2,980,000	1,521,000	0	0	0	0	0	0	0	0	0	4,501,000
Ded Fed HP - MVA	5,632,000	2,432,000	0	0	0	0	0	0	0	0	0	8,064,000
Ded Fed PNRS - MVA	4,203,000	0	0	0	0	0	0	0	0	0	0	4,203,000
Local - MVA	307,000	0	0	0	0	0	0	0	0	0	0	307,000
State - Nic	701,000	32,126,000	671,000	600,000	0	0	0	0	0	0	0	34,098,000
State - TPA	9,885,000	71,225,000	14,465,000	121,000	0	0	0	0	0	0	0	95,696,000
Right of Way	14,377,000	77,462,000	35,062,000	0	0	0	0	0	0	0	0	126,901,000
State - Nic	13,734,000	2,330,000	6,600,000	0	0	0	0	0	0	0	0	22,664,000
State - TPA	643,000	75,132,000	28,462,000	0	0	0	0	0	0	0	0	104,237,000
Construction	0	110,000,000	655,936,000	430,648,000	90,327,000	0	0	0	0	0	0	1,286,911,000
Ded Fed ER - MVA	0	0	28,033,000	12,468,000	0	0	0	0	0	0	0	40,501,000
Federal BR - MVA	0	0	0	93,700,000	26,300,000	0	0	0	0	0	0	120,000,000
Federal STP - MVA	0	0	14,700,000	30,000,000	6,637,000	0	0	0	0	0	0	51,337,000
State - MMA	0	0	0	78,049,000	51,056,000	0	0	0	0	0	0	129,105,000
State - MVA	0	0	34,702,000	0	0	0	0	0	0	0	0	34,702,000
State - Nic	0	0	9,144,000	18,252,000	6,334,000	0	0	0	0	0	0	33,730,000
State - TPA	0	110,000,000	569,357,000	198,179,000	0	0	0	0	0	0	0	877,536,000
Project Totals	38,085,000	294,766,000	706,134,000	431,369,000	90,327,000	0	0	0	0	0	0	1,560,681,000
Ded Fed ER - MVA	2,980,000	1,521,000	28,033,000	12,468,000	0	0	0	0	0	0	0	45,002,000
Ded Fed HP - MVA	5,632,000	2,432,000	0	0	0	0	0	0	0	0	0	8,064,000
Ded Fed PNRS - MVA	4,203,000	0	0	0	0	0	0	0	0	0	0	4,203,000
Federal BR - MVA	0	0	0	93,700,000	26,300,000	0	0	0	0	0	0	120,000,000
Federal STP - MVA	0	0	14,700,000	30,000,000	6,637,000	0	0	0	0	0	0	51,337,000
Local - MVA	307,000	0	0	0	0	0	0	0	0	0	0	307,000
State - MMA	0	0	0	78,049,000	51,056,000	0	0	0	0	0	0	129,105,000
State - MVA	0	0	34,702,000	0	0	0	0	0	0	0	0	34,702,000
State - Nic	14,435,000	34,456,000	16,415,000	18,852,000	6,334,000	0	0	0	0	0	0	90,492,000
State - TPA	10,528,000	256,357,000	612,284,000	198,300,000	0	0	0	0	0	0	0	1,077,469,000

Executive TEIS - Capital Projects System
Project Detail With Fund Types

SR 99/Viaduct Project - Transit Enhancements and Other Improvements

ProjectID(PIN): 809936F **Bond Eligible:** N **Percent Complete:** 27% **Revenue Package:** Nickel and TPA

Description: Transit Enhancements and Local Improvements

Book Description: Construction of the "Moving Forward" projects on the Alaskan Way Viaduct and Seawall Replacement Program will impact the movement of people and goods. Transit enhancements and other improvements will be implemented to mitigate these impacts.

Agency:	Department of Transportation	**DOT Region:**	Alaskan Way Viaduct
Route:	State Route 99	**Begin/End Mile Posts:**	0.01 - 0.02
Program/Sub-Program:	Improvement / Mobility	**County:**	King
Sub-Category:	Urban Mobility	**Legislative Districts(s):**	11, 32, 34, 36, 37, 43, 46
Improvement Types:	Bridge Replacement (Structural)	**Urban Area:**	Seattle-Tacoma-Everett
Major Corridor:	SR 99, Seattle - Alaskan Way Viaduct	**Location:**	Downtown Seattle

PROJECT STATUS

Phase	Start Date	End Date	Phase Status
Preliminary Engineering	03/04/2008	06/30/2013	Admin Approval to meet Leg Intent
Construction	11/26/2008	06/30/2015	Admin Approval to meet Leg Intent

Milestone	Date
D - Project Definition Complete	11/14/2006
B - Begin Preliminary Engineering	03/04/2008
E - Environmental Doc Complete	09/29/2008

PROJECT COSTS

Phase/Fund Type	Prior	09 - 11	11 - 13	13 - 15	15 - 17	17 - 19	19 - 21	21 - 23	23 - 25	25 - 27	Future	Total
Preliminary Engineering	4,293,000	761,000	1,234,000	7,000	0	0	0	0	0	0	0	6,295,000
Ded Fed PNRS - MVA	1,052,000	1,000	0	0	0	0	0	0	0	0	0	1,053,000
State - Nic	1,380,000	0	0	0	0	0	0	0	0	0	0	1,380,000
State - TPA	1,861,000	760,000	1,234,000	7,000	0	0	0	0	0	0	0	3,862,000
Construction	2,772,000	61,244,000	35,484,000	7,377,000	0	0	0	0	0	0	0	106,877,000
Ded Fed PNRS - MVA	1,243,000	2,667,000	0	0	0	0	0	0	0	0	0	3,910,000
State - Nic	0	18,580,000	3,264,000	300,000	0	0	0	0	0	0	0	22,144,000
State - TPA	1,529,000	39,997,000	32,220,000	7,077,000	0	0	0	0	0	0	0	80,823,000
Project Totals	7,065,000	62,005,000	36,718,000	7,384,000	0	0	0	0	0	0	0	113,172,000
Ded Fed PNRS - MVA	2,295,000	2,668,000	0	0	0	0	0	0	0	0	0	4,963,000
State - Nic	1,380,000	18,580,000	3,264,000	300,000	0	0	0	0	0	0	0	23,524,000
State - TPA	3,390,000	40,757,000	33,454,000	7,084,000	0	0	0	0	0	0	0	84,685,000

Executive TEIS - Capital Projects System
Project Detail With Fund Types

SR 99/Alaskan Way Viaduct and Seawall - Replacement EIS

ProjectID(PIN):	809936K	**Bond Eligible:**	Y	**Percent Complete:**	100%	**Revenue Package:**	03 Nickel
Description:	EIS						
Book Description:	This will complete the environmental review of the project.						
Agency:	Department of Transportation			**DOT Region:**	Alaskan Way Viaduct		
Route:	State Route 99			**Begin/End Mile Posts:**	29.20 - 32.02		
Program/Sub-Program:	Improvement / Mobility			**County:**	King		
Sub-Category:	Urban Mobility			**Legislative Districts(s):**	11, 36, 37, 43		
Improvement Types:	Bridge Replacement (Structural)			**Urban Area:**	Seattle-Tacoma-Everett		
Major Corridor:	SR 99, Seattle - Alaskan Way Viaduct			**Location:**	Seattle		

PROJECT STATUS

Phase	Start Date	End Date	Phase Status
Preliminary Engineering	07/29/2003	12/29/2008	Reportable History (Closed)

Milestone	Date
D - Project Definition Complete	11/14/2006
B - Begin Preliminary Engineering	07/29/2003
E - Environmental Doc Complete	06/02/2008

PROJECT COSTS

Phase/Fund Type	Prior	09 - 11	11 - 13	13 - 15	15 - 17	17 - 19	19 - 21	21 - 23	23 - 25	25 - 27	Future	Total
Preliminary Engineering	17,731,000	0	0	0	0	0	0	0	0	0	0	17,731,000
Ded Fed Demo - MVA	1,987,000	0	0	0	0	0	0	0	0	0	0	1,987,000
Ded Fed PNRS - MVA	5,742,000	0	0	0	0	0	0	0	0	0	0	5,742,000
State - Nic	10,002,000	0	0	0	0	0	0	0	0	0	0	10,002,000
Project Totals	17,731,000	0	0	0	0	0	0	0	0	0	0	17,731,000
Ded Fed Demo - MVA	1,987,000	0	0	0	0	0	0	0	0	0	0	1,987,000
Ded Fed PNRS - MVA	5,742,000	0	0	0	0	0	0	0	0	0	0	5,742,000
State - Nic	10,002,000	0	0	0	0	0	0	0	0	0	0	10,002,000

Executive TEIS - Capital Projects System
Project Detail With Fund Types

SR 99/Alaskan Way Viaduct and Seawall - Replacement R/W

ProjectID(PIN):	809936L	**Bond Eligible:**	Y	**Percent Complete:**	100%	**Revenue Package:**	Nickel and TPA
Description:	Right of way						
Book Description:	Provides for early purchase of property.						
Agency:	Department of Transportation			**DOT Region:**	Alaskan Way Viaduct		
Route:	State Route 99			**Begin/End Mile Posts:**	29.20 - 32.02		
Program/Sub-Program:	Improvement / Mobility			**County:**	King		
Sub-Category:	Urban Mobility			**Legislative Districts(s):**	11, 36, 37, 43		
Improvement Types:	Bridge Replacement (Structural)			**Urban Area:**	Seattle-Tacoma-Everett		
Major Corridor:	SR 99, Seattle - Alaskan Way Viaduct			**Location:**	Seattle		

PROJECT STATUS

Phase	Start Date	End Date	Phase Status	Milestone	Date
Right of Way	11/24/2003	06/02/2009	Reportable History (Closed)		

PROJECT COSTS

Phase/Fund Type	Prior	09 - 11	11 - 13	13 - 15	15 - 17	17 - 19	19 - 21	21 - 23	23 - 25	25 - 27	Future	Total
Right of Way	48,505,000	0	0	0	0	0	0	0	0	0	0	48,505,000
State - Nic	48,505,000	0	0	0	0	0	0	0	0	0	0	48,505,000
Project Totals	48,505,000	0	0	0	0	0	0	0	0	0	0	48,505,000
State - Nic	48,505,000	0	0	0	0	0	0	0	0	0	0	48,505,000

Executive TEIS - Capital Projects System
Project Detail With Fund Types

SR 99/Alaskan Way Viaduct and Seawall - Replacement Corridor Design

ProjectID(PIN): 809936M **Bond Eligible:** Y **Percent Complete:** 100% **Revenue Package:** 03 Nickel
Description: Design
Book Description: This work completes design of the first stage of the overall project to replace the viaduct and seawall.
Agency: Department of Transportation **DOT Region:** Alaskan Way Viaduct
Route: State Route 99 **Begin/End Mile Posts:** 29.20 - 32.02
Program/Sub-Program: Improvement / Mobility **County:** King
Sub-Category: Urban Mobility **Legislative Districts(s):** 11, 36, 37, 43
Improvement Types: Bridge Replacement (Structural) **Urban Area:** Seattle-Tacoma-Everett
Major Corridor: SR 99, Seattle - Alaskan Way Viaduct **Location:** Seattle

PROJECT STATUS

Phase	Start Date	End Date	Phase Status
Preliminary Engineering	01/07/2004	06/10/2010	Leg Dir with Secretary Approval

Milestone	Date
D - Project Definition Complete	11/14/2006
B - Begin Preliminary Engineering	01/07/2004

PROJECT COSTS

Phase/Fund Type	Prior	09 - 11	11 - 13	13 - 15	15 - 17	17 - 19	19 - 21	21 - 23	23 - 25	25 - 27	Future	Total
Preliminary Engineering	97,302,000	192,000	0	0	0	0	0	0	0	0	0	97,494,000
Ded Fed Demo - MVA	1,984,000	0	0	0	0	0	0	0	0	0	0	1,984,000
Ded Fed HP - MVA	2,017,000	0	0	0	0	0	0	0	0	0	0	2,017,000
Ded Fed PNRS - MVA	68,492,000	0	0	0	0	0	0	0	0	0	0	68,492,000
Local - MVA	3,073,000	192,000	0	0	0	0	0	0	0	0	0	3,265,000
State - Nic	21,736,000	0	0	0	0	0	0	0	0	0	0	21,736,000
Project Totals	97,302,000	192,000	0	0	0	0	0	0	0	0	0	97,494,000
Ded Fed Demo - MVA	1,984,000	0	0	0	0	0	0	0	0	0	0	1,984,000
Ded Fed HP - MVA	2,017,000	0	0	0	0	0	0	0	0	0	0	2,017,000
Ded Fed PNRS - MVA	68,492,000	0	0	0	0	0	0	0	0	0	0	68,492,000
Local - MVA	3,073,000	192,000	0	0	0	0	0	0	0	0	0	3,265,000
State - Nic	21,736,000	0	0	0	0	0	0	0	0	0	0	21,736,000

Executive TEIS - Capital Projects System
Project Detail With Fund Types

SR 99/Alaskan Way Viaduct Yesler Way Vicinity - Stabilize Foundation

ProjectID(PIN): 809936P **Bond Eligible:** N **Percent Complete:** 100% **Revenue Package:** Nickel and TPA

Description: Stabilize Foundation

Book Description: The Alaskan Way Viaduct was damaged during the Nisqually earthquake on February 28, 2001. This work will stablize the foundations of Bents 93 and 94. Further damage to this section of the Alaskan Way Viaduct foundation will be prevented.

Agency:	Department of Transportation	**DOT Region:**	Alaskan Way Viaduct
Route:	State Route 99	**Begin/End Mile Posts:**	31.05 - 31.06
Program/Sub-Program:	Improvement / Mobility	**County:**	King
Sub-Category:	Urban Mobility	**Legislative Districts(s):**	37, 43
Improvement Types:	Seismic	**Urban Area:**	Seattle-Tacoma-Everett
Major Corridor:	SR 99, Seattle - Alaskan Way Viaduct	**Location:**	SEATTLE

PROJECT STATUS

Phase	Start Date	End Date	Phase Status
Preliminary Engineering	06/29/2007	04/17/2009	Reportable History (Closed)
Right of Way	08/21/2007	12/29/2008	Reportable History (Closed)
Construction	09/17/2007	09/21/2009	Reportable History (Closed)

Milestone	Date
D - Project Definition Complete	05/21/2007
B - Begin Preliminary Engineering	06/29/2007
E - Environmental Doc Complete	06/26/2007
R - Right of Way Certification	08/06/2007
A - Advertisement Date	08/06/2007
O - Operationally Complete	04/30/2008

PROJECT COSTS

Phase/Fund Type	Prior	09 - 11	11 - 13	13 - 15	15 - 17	17 - 19	19 - 21	21 - 23	23 - 25	25 - 27	Future	Total
Preliminary Engineering	258,000	0	0	0	0	0	0	0	0	0	0	258,000
Ded Fed ER - MVA	222,000	0	0	0	0	0	0	0	0	0	0	222,000
State - Nic	36,000	0	0	0	0	0	0	0	0	0	0	36,000
Right of Way	72,000	0	0	0	0	0	0	0	0	0	0	72,000
Ded Fed ER - MVA	52,000	0	0	0	0	0	0	0	0	0	0	52,000
State - Nic	20,000	0	0	0	0	0	0	0	0	0	0	20,000
Construction	3,540,000	0	0	0	0	0	0	0	0	0	0	3,540,000
Ded Fed ER - MVA	3,034,000	0	0	0	0	0	0	0	0	0	0	3,034,000
State - TPA	506,000	0	0	0	0	0	0	0	0	0	0	506,000
Project Totals	3,870,000	0	0	0	0	0	0	0	0	0	0	3,870,000

Ded Fed ER - MVA	3,308,000	0	0	0	0	0	0	0	0	0	0	3,308,000
State - Nic	56,000	0	0	0	0	0	0	0	0	0	0	56,000
State - TPA	506,000	0	0	0	0	0	0	0	0	0	0	506,000

Executive TEIS - Capital Projects System
Project Detail With Fund Types

SR 99/Central Waterfront Construction Mitigation

ProjectID(PIN):	809936S	**Bond Eligible:** N	**Percent Complete:** 0%	**Revenue Package:**	PEF
Description:	Mitigate Construction Impacts due to construction				
Book Description:	Mitigate Construction Impacts due to construction.				
Agency:	Department of Transportation		**DOT Region:**	Alaskan Way Viaduct	
Route:	State Route 99		**Begin/End Mile Posts:**	26.55 - 40.48	
Program/Sub-Program:	Improvement / Mobility		**County:**	King	
Sub-Category:	Urban Mobility		**Legislative Districts(s):**	11, 32, 36, 37, 43, 46	
Improvement Types:	Structure, New HISTORY		**Urban Area:**	Seattle-Tacoma-Everett	
Major Corridor:	Unassigned		**Location:**	City of Seattle	

PROJECT STATUS

Phase	Start Date	End Date	Phase Status
Construction	07/01/2015	06/30/2017	Admin Approval to meet Leg Intent

Milestone	Date
A - Advertisement Date	05/04/2015
O - Operationally Complete	04/30/2017

PROJECT COSTS

Phase/Fund Type	Prior	09 - 11	11 - 13	13 - 15	15 - 17	17 - 19	19 - 21	21 - 23	23 - 25	25 - 27	Future	Total
Construction	0	0	0	0	20,000,000	0	0	0	0	0	0	20,000,000
State - MMA	0	0	0	0	20,000,000	0	0	0	0	0	0	20,000,000
Project Totals	0	0	0	0	20,000,000	0	0	0	0	0	0	20,000,000
State - MMA	0	0	0	0	20,000,000	0	0	0	0	0	0	20,000,000

Executive TEIS - Capital Projects System
Project Detail With Fund Types

SR 99/Alaskan Way Viaduct Replacement - Program and Project Support

ProjectID(PIN): 809936V **Bond Eligible:** Y **Percent Complete:** 0% **Revenue Package:** PEF

Description: Program and Project Support

Book Description: Provide program-level support to the Alaskan Way Viaduct Replacement Program/Region and assumption of cost responsibility for specific items sourced from higher-level WSDOT offices.

Agency: Department of Transportation
DOT Region: Alaskan Way Viaduct
Route: State Route 99
Begin/End Mile Posts: 26.55 - 40.48
Program/Sub-Program: Improvement / Mobility
County: King
Sub-Category: Urban Mobility
Legislative Districts(s): 11, 32, 36, 37, 43, 46
Improvement Types: Bridge Replacement (Structural)
Urban Area: Seattle-Tacoma-Everett
Major Corridor: SR 99, Seattle - Alaskan Way Viaduct
Location: Downtown Seattle

PROJECT STATUS

Phase	Start Date	End Date	Phase Status	Milestone	Date
Construction	07/01/2011	06/30/2017	Admin Approval to meet Leg Intent		

PROJECT COSTS

Phase/Fund Type	Prior	09 - 11	11 - 13	13 - 15	15 - 17	17 - 19	19 - 21	21 - 23	23 - 25	25 - 27	Future	Total
Construction	0	0	28,000,000	28,000,000	19,001,000	0	0	0	0	0	0	75,001,000
State - MMA	0	0	0	0	16,195,000	0	0	0	0	0	0	16,195,000
State - TPA	0	0	28,000,000	28,000,000	2,806,000	0	0	0	0	0	0	58,806,000
Project Totals	0	0	28,000,000	28,000,000	19,001,000	0	0	0	0	0	0	75,001,000
State - MMA	0	0	0	0	16,195,000	0	0	0	0	0	0	16,195,000
State - TPA	0	0	28,000,000	28,000,000	2,806,000	0	0	0	0	0	0	58,806,000

Executive TEIS - Capital Projects System
Project Detail With Fund Types

SR 99/Viaduct Project - I-5 ATM

ProjectID(PIN): 809936W **Bond Eligible:** N **Percent Complete:** 80% **Revenue Package:** Nickel and TPA

Description: ATM on I-5 in Seattle

Book Description: This project will provide Active Traffic Management (ATM) dynamic message signs including lane control and variable speed limits on I-5, ITS, electrical and communication systems to alert drivers during construction of Alaskan Way Viaduct projects. This project will be delivered by a design build team.

Agency:	Department of Transportation	**DOT Region:**	Alaskan Way Viaduct
Route:	State Route 99	**Begin/End Mile Posts:**	157.23 - 164.46
Program/Sub-Program:	Improvement / Mobility	**County:**	King
Sub-Category:	Urban Mobility	**Legislative Districts(s):**	11, 37
Improvement Types:	ITS System Planning	**Urban Area:**	Seattle-Tacoma-Everett
Major Corridor:	SR 99, Seattle - Alaskan Way Viaduct	**Location:**	Seattle

PROJECT STATUS

Phase	Start Date	End Date	Phase Status
Construction	06/22/2009	10/31/2011	Admin Approval to meet Leg Intent

Milestone	Date
D - Project Definition Complete	11/13/2007
A - Advertisement Date	05/04/2009
O - Operationally Complete	06/30/2011

PROJECT COSTS

Phase/Fund Type	Prior	09 - 11	11 - 13	13 - 15	15 - 17	17 - 19	19 - 21	21 - 23	23 - 25	25 - 27	Future	Total
Construction	0	16,285,000	0	0	0	0	0	0	0	0	0	16,285,000
Ded Fed PNRS - MVA	0	12,656,000	0	0	0	0	0	0	0	0	0	12,656,000
State - TPA	0	3,629,000	0	0	0	0	0	0	0	0	0	3,629,000
Project Totals	0	16,285,000	0	0	0	0	0	0	0	0	0	16,285,000
Ded Fed PNRS - MVA	0	12,656,000	0	0	0	0	0	0	0	0	0	12,656,000
State - TPA	0	3,629,000	0	0	0	0	0	0	0	0	0	3,629,000

Appendix M

Letter commemorating conditional approval for construction of Bored Tunnel from Puget Sound Regional Council, June 23, 2011.

MEMORANDUM June 23, 2011

To: Theresa Greco Director, Program Management - WSDOT Alaskan Way Viaduct Replacement Program

From: Kimberly Scrivner, Puget Sound Regional Council

Subject: Transportation 2040 'Conditionally Approved' Status for: "SR 99: S. King Street to Roy Street – Central Waterfront Viaduct Replacement" (Transportation 2040 Project ID 4281, TIP Project ID WDUC-33)

The Puget Sound Regional Council (PSRC) is pleased to advise you that the project entitled "SR 99: S. King Street to Roy Street – Central Waterfront Viaduct Replacement" (Transportation 2040 Project ID 4281, TIP Project ID WDUC-33) has been given 'Conditionally Approved' status under Transportation 2040, the region's Metropolitan Transportation Plan. This action was taken by the Executive Board at its meeting held on June 23, 2011. Your project's new MTP status will be reflected in the TIP database on PSRC's Web site at the following address: http://www.psrc.org/transportation/tip/current.

The Executive Board placed the following conditions on your project's approval:

> *"Condition (1) is expected to be satisfied with issuance of the Alaskan Way Viaduct Replacement Program EIS Record of Decision (ROD) in August 2011. Sponsor will provide the environmental documentation to PSRC as soon as it is received, but are requesting early approval in order to coordinate within a condensed schedule and issuance of a Notice to Proceed 2 in August 2011."*

As you may be aware, this action is consistent with federal planning regulations and adopted Transportation 2040 policy. The policy gives the Executive Board the authority to change the status of regionally significant projects in Transportation 2040 from 'Candidate' to 'Conditionally Approved' after certain criteria have been met. For 'Conditionally Approved' projects, specific conditions must still be met before sponsors may obligate funds for construction phases of implementation. PSRC staff may contact you periodically to monitor your project status and advise you on meeting the conditions placed on your project. If you have questions on this matter please contact me at (206) 971-3281 or kscrivner@psrc.org.

CC: Candidate to approved files
Process checklist file

Appendix N

WSDOT Design-Build Methodology Summary

WSDOT Design-Build Methodology

To speed delivery, promote innovative approaches, and secure early price certainty, the Washington State Department of Transportation (WSDOT) can employ a design-build approach to design and construct a project. This process is described in WSDOT's guidebook for design-build projects.[1]

In design-build methodology, WSDOT focuses on describing performance rather than on how to obtain that performance. WSDOT identifies a conceptual plan and completes the design to approximately a 15 percent level. This conceptual plan is put out for development of a design-build proposal. Each design-build team evaluates the conceptual plan and develops a proposal. Each proposal includes a technical proposal and price proposal that reflects the product that the design-builder commits to deliver to meet WSDOT's objectives. WSDOT then chooses the design-builder with the best combination of technical proposal and price.

The contract is a single contract between WSDOT and the design-builder for design and construction services to provide a finished product. The design-builder completes the design, with WSDOT's involvement in the design process. Because each bidder will have a different design approach to address the identified project need, this Initial Financial Plan will not discuss the cost of specific design components.

After selection of a design-builder and execution of the contract, WSDOT performs administrative functions and the design-builder performs design, construction, quality control (QC), and quality assurance (QA) functions. WSDOT's quality verification (QV) role during contract execution ensures that the products being developed by the design-builder are in conformance with contract requirements.

The QC/QA Program is a critical component of the design and construction of the project. The focus of WSDOT's QA program is on product compliance with contract documents, verification of the design-builder's QC measures, and meeting Federal quality requirements. QA activities focus on monitoring contract execution with respect to a negotiated Quality Control Plan. WSDOT provides the quality verification and independent testing. Contract Provisions require that the QC/QA Program submitted with the proposal be brought into conformance prior to execution of the contract.

[1] http://www.wsdot.wa.gov/NR/rdonlyres/46196EB8-F9D0-4290-8F55-68786B1DA556/0/DesignBuild_GuidebookJun2004.pdf

Appendix O

WSDOT Design-Bid-Build Methodology Summary

WSDOT Design-Bid-Build Methodology

The design-bid-build project development process and contracting format used by the Washington State Department of Transportation can result in lower risk ranges than design-build projects because design engineering (Plans, Specifications, and Estimates (PS&E)), environmental clearances and permitting work is complete prior to award of the construction contract.

To reduce risk as part of the process WSDOT conducts Value Engineering (VE) studies at appropriate stages of design, as required by the Federal Highway Administration, and incorporates the results of those studies in the design process when possible. In order to lower risk for design choices and project costs, WSDOT employs a process called Cost Estimate Validation Process® (CEVP®) or Cost Risk Assessment (CRA) as part of its program and project level cost risk assessments between the 15 to 90 percent design levels. This process is identified in WSDOT project management and cost risk documents.

For more information on the WSDOT design process, see the WSDOT Design Manual at the following link:

http://www.wsdot.wa.gov/Publications/Manuals/M22-01.htm

Appendix P

Memorandum of Agreement, funding commitment between WSDOT and Port of Seattle (GCA 6444)

MEMORANDUM OF AGREEMENT
NO. GCA 6444
ALASKAN WAY VIADUCT AND
SEAWALL REPLACEMENT PROGRAM
BORED TUNNEL ALTERNATIVE

This agreement ("Agreement") for the Alaskan Way Viaduct and Seawall Replacement Program ("AWVSRP") is made and entered into between the State of Washington ("State") and the Port of Seattle ("Port"), collectively the "Parties" and individually the "Party."

WHEREAS, in the 1950s, the City of Seattle ("City") and the Washington State Department of Transportation jointly designed and built the Alaskan Way Viaduct ("Viaduct") to accommodate passenger and freight mobility into the foreseeable future; and

WHEREAS, the central waterfront section of the Viaduct is a critical north-south transportation facility of regional, state and national significance, one of two limited access routes through Seattle's urban core carrying more than 100,000 vehicles daily; and

WHEREAS, the Duwamish and Interbay industrial areas in Seattle are served by the SR 99 corridor and constitute a significant portion of Seattle's maritime and industrial sector which accounts for more than 120,000 jobs and an estimated $28.5 billion in annual revenue city-wide; and

WHEREAS, in 2001 the Nisqually earthquake damaged the Viaduct and Seawall; and

WHEREAS, the Viaduct and Seawall are at risk of sudden and catastrophic failure in an earthquake and are nearing the end of their useful lives; and

WHEREAS, a failure to maintain the Viaduct capacity would result in unacceptable congestion for freight and other traffic within the harbor and industrial areas; and

WHEREAS, in March 2007, the Washington State Governor, the King County Executive, and the Mayor of Seattle pledged to advance a series of key SR 99 projects (Moving Forward Projects) that will facilitate the removal and/or repair of key portions of SR 99, which are Yesler Way Vicinity Stabilization Project, Electrical Line Relocation, Battery Street Tunnel Fire and Life Safety Upgrades, SR 99 Lenora to Battery Street Tunnel Improvements, the SR 99 South Holgate Street to South King Street Viaduct Replacement Project, and Transit Enhancements and Other Improvements; and

WHEREAS, in 2008 the State and its partners agreed to guiding principles for replacing the Viaduct: improve public safety; provide efficient movement of people and goods now and in the future; maintain or improve downtown Seattle, regional, Port and state economies; enhance Seattle's waterfront, downtown and adjacent neighborhoods as a place for people; create solutions that are fiscally responsible; and improve the health of the environment; and

WHEREAS, in 2008 the State and its partners considered public comment from 16 meetings of a stakeholder advisory committee made up of representatives from business, labor, environmental,

and neighborhood interests and more than one thousand public comments collected during quarterly public meetings; and more than 50 community briefings; and

WHEREAS, on December 15, 2008 the Port of Seattle Commission (Port Commission) cited the advantages of a sub-surface option and approved a motion calling for further study of a sub-surface option coupled with surface and transit improvements; and

WHEREAS, in January 2009, the Governor of Washington state, the Mayor of Seattle and the King County Executive jointly recommended replacing the Viaduct with a bored tunnel beneath downtown Seattle in conjunction with improvements in surface streets and transit service, and Port of Seattle CEO, Tay Yoshitani, endorsed the deep-bore tunnel concept; and

WHEREAS, the Washington State Legislature passed ESSB 5768 and the Governor signed the bill into law designating and funding the Bored Tunnel Program as the replacement for the Viaduct; and

WHEREAS, in October 2009, the City and the State entered into a Memorandum of Agreement agreeing to principles to proceed with the AWVSRP; and

WHEREAS, the State and the Port are committed to a replacement for the Viaduct that will improve transportation access to and through the waterfront, including access for over eight million annual ferry riders, ensure connectivity between the Interbay, Ballard and Duwamish industrial areas and Seattle-Tacoma International Airport, including a corridor for oversized vehicles, provide access to port cargo, fishing and cruise facilities, minimize construction disruption, and increase opportunities for the public and freight to access the shoreline and waterfront; and

WHEREAS the Port's international trade, aviation, economic development, tourism and passenger terminal activities are vital to the economic growth of the region and the state, supporting nearly 194,000 jobs in the region, and the State and the Port support infrastructure improvements necessary to achieve growth in trade and jobs and increase our region's competitiveness in global markets; and

WHEREAS the Viaduct corridor is crucial to the region's freight mobility because it provides for 1.5 million freight trips annually by grade-separation of through traffic, rail lines and industrial corridors near the Port's marine terminals, which support the movement of $30 billion in international and domestic cargo through the Port each year; and

WHEREAS the improvements to the surface street system in the vicinity of the corridor segment from S. Holgate Street to King Street are designed to increase access to Terminal 46 and other port waterfront facilities; and

WHEREAS the Port is funding projects that are part of or complement the AWVSRP and which will provide capacity for future growth and improved safety, including the East Marginal Way Overpass, Spokane Street widening, Duwamish Intelligent Transportation System (ITS) and the SR 519 South Seattle Intermodal Access Project Phase 2; and

WHEREAS, the parties recognize the uniqueness of the City's Mercer Corridor West Project (Mercer Corridor West) in providing access for freight, cruise buses and public transit, and the need to sustain north-south mobility in the period following completion of the tunnel and during construction of waterfront street improvements.

NOW, THEREFORE, the Parties agree to the following principles to proceed with the AWVSRP:

I. GENERAL PRINCIPLES:

A. The Port supports the proposed AWVSRP with the bored tunnel alternative and related system improvements, as the design which affords essential transportation capacity, significant environmental benefits, and minimizes construction-related disruption on the waterfront.

B. The Port recognizes the economic importance of an efficient SR 99 roadway network with complementary system improvements for the effective movement of freight and goods locally, nationally and internationally.

C. The Port and State will continue to work collaboratively toward the successful completion of the AWVSRP.

D. Complementary system upgrades to the transportation system will be completed, including SR 519, Spokane Street Widening, Mercer Corridor from Interstate 5 to Elliott Avenue, East Marginal Way Overpass, North Argo Access, Duwamish Intelligent Transportation Systems, Seawall Replacement (or rehabilitation), and transit enhancements, to support the priorities of the efficient movement of freight, cruise-related traffic and public transit.

E. The State and the Port will work together to review funding plans by the City and King County for their implementation of the aforementioned complementary elements of the AWVSRP.

II. RESPONSIBILITIES:

A. STATE:

1. The State shall endeavor to open the bored tunnel for operation by the end of 2015.

2. The AWVSRP will be designed to provide functionality equal to or better than what is available today to facilitate efficient movement of freight and other traffic on the west side corridors of the Seattle transportation system from the Duwamish neighborhood to Ballard-Interbay and protect access to fishing, cruise and other Port facilities. Of critical importance is the ability of the 15th/Elliott and Mercer corridors to provide sufficient capacity for the purposes listed above.

3. The design of the north and south portals and their connection to the street system shall be designed to accommodate freight movements and provide access for buses serving the port's cruise facilities. The State will coordinate with the Port prior to making any changes to the design elements reviewed by the Port under II B below.

4. The State shall work to minimize and mitigate its construction impacts on Port activities, customers and tenants, and will coordinate with the Port and its tenants to ensure productive operations during construction.

5. The central waterfront segment from Pine Street to Colman Dock will have two lanes in each direction plus a turning lane; the segment south of Colman Dock will have three lanes in each direction plus a turning lane.

B. PORT:

1. Port staff shall participate in timely review and comment of the State's design elements of the tunnel and north and south portals and the Central Waterfront surface street to ensure adequate connection to freight and cruise facilities.

2. Port staff shall participate in the State's planning for construction mitigation and maintenance of traffic.

III. FUNDING:

A. STATE: As defined by ESSB 5768, the total state contribution for AWVSRP is $2.4 billion in state funds and no more than $400 million in toll revenue for a total state contribution of $2.8 billion toward the following state program elements:

1. The proposed bored tunnel from north of S. Royal Brougham Way to Harrison Street; and

2. Surface street connection from S. King Street along Alaskan Way to Elliott and Western avenues, ending at Battery Street, including replacement of the Marion Street pedestrian overpass; viaduct removal; Battery Street Tunnel decommissioning; and

3. Completion of the Moving Forward Projects; and

4. Central Waterfront Construction Mitigation.

B. PORT: To the extent feasible and authorized by the Port Commission, the Port shall fund or procure funding within the life of the project not to exceed $300 million toward the state's program elements, except as described in Section 4 below:

1. Funding must be for elements that will improve transportation access to and through the waterfront; ensure connectivity for freight and cruise-related vehicles between Interbay, Ballard and Duwamish industrial areas, Interstate 5 and Interstate 90 and Seattle-Tacoma International Airport; provide access for port cargo, fishing and cruise facilities; minimize construction disruption; and increase opportunities for the public and freight to access the shoreline and waterfront.

2. The Port will take steps to obtain funding as described herein while retaining at all times the strategic financial capability to meet its overarching public obligations: maintaining current assets; responding to emerging customer or market demands; continuing significant environmental remediation and restoration projects; and maintaining sufficient transportation access in and around its facilities.

3. The Port and State acknowledge that contributions will be made during the life of the AWVSRP but no funds are being authorized by the Port Commission upon approval of this Agreement. The Parties intend to request authorization from the Port Commission for a portion of the Port's contribution to AWVSRP as early as possible in 2010.

4. The sum of $25 million will be counted toward the Port's $300 million contribution to the AWVSRP as follows:

a. Up to $19 million for existing or recently completed Port funding commitments on transportation projects related to the SR 99 system (such as the East Marginal Way Overpass, SR 519 Phase 2, the Spokane Street Viaduct, and the Duwamish ITS).

b. The remaining $6 million will be allocated to those projects complementary to the AWVSRP, such as Mercer Corridor West, as negotiated by the Parties. Allocation of the $6 million under this subsection will be based upon valid data and traffic analysis agreed to by the Parties.

5. A funding plan describing the specific timing and amounts of the Port's contribution over the life of the AWVSRP will be developed by the Parties. It is understood that the majority of the Port's contribution will occur in the years 2016-2018.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement as of the last day and year written below.

PORT OF SEATTLE

By: _____

Print: William Bryant

Title: President, Seattle Port Comm.

Date: 4-12-2010

STATE OF WASHINGTON

By: _____

Print: CHRISTINE GREGOIRE

Title: GOVERNOR

Date: 4-12-2010

PORT OF SEATTLE

By: _____

Print: T. YOSHITANI

Title: CEO

Date: 4-12-2010

APPROVED AS TO FORM:

Elizabeth Lagerberg

By (print)

_____

Signature

Assistant Attorney General

Date: 4-5-2010

Appendix Q

Memorandum of Agreement
Property, Environmental Remediation, Design Review, Permitting, and Construction Coordination Agreement between the State of Washington and the City of Seattle

(GCA 6486)

May 23, 2011

MEMORANDUM OF AGREEMENT
NO. GCA 6486
SR 99 ALASKAN WAY VIADUCT
PROPERTY, ENVIRONMENTAL REMEDIATION, DESIGN REVIEW, PERMITTING, AND CONSTRUCTION COORDINATION AGREEMENT
FOR SR 99 BORED TUNNEL PROJECT

THIS Property, Environmental Remediation, Design Review, Permitting, and Construction Coordination Agreement, No. GCA 6486 for the SR 99 Bored Tunnel Project ("Agreement" or "SDOT Agreement" or "GCA 6486 Agreement") is made and entered into, as provided in RCW 39.34.080, RCW 47.12.040 and other applicable law, between the Washington State Department of Transportation, hereinafter the "STATE," and the City of Seattle hereinafter the "CITY" (managed by the Seattle Department of Transportation, hereinafter "SDOT"), collectively the "PARTIES" and individually the "PARTY."

WHEREAS, the Alaskan Way Viaduct (AWV) and seawall are at risk of sudden and catastrophic failure in an earthquake and are nearing the end of their useful lives; and

WHEREAS, the STATE and the Federal Highway Administration (FHWA), in consultation with the CITY, are proposing improvements to State Route 99 (SR 99), currently a non-limited access highway that includes the AWV; and

WHEREAS, in March 2007, the Governor, the King County Executive and the Mayor of Seattle pledged to advance a series of key SR 99 projects (Moving Forward Projects) that will facilitate the removal and/or repair of key portions of SR 99, which are: Yesler Way Vicinity Stabilization Project, Electrical Line Relocation (formerly known as Electrical Utility Relocation Phase 1 under agreement No. GCA 5680), Battery Street Tunnel Fire and Life Safety Upgrades, SR 99 Lenora to Battery Street Tunnel Improvements, the SR 99 South Holgate Street to South King Street Viaduct Replacement Project, and Transit Enhancements and Other Improvements; and

WHEREAS, in January 2009, the Governor, the King County Executive and the Mayor of Seattle recommended replacement of the existing AWV structure in the central waterfront area with a bored tunnel; and

WHEREAS, in October 2009 the Governor and the Mayor executed a Memorandum of Agreement, GCA 6366, which described the basic roles and responsibilities for the implementation of the Alaskan Way Viaduct and Seawall Replacement (AWVSR) Program; and

WHEREAS, the AWVSR Program (PROGRAM) consists of a four-lane bored tunnel and improvements to City streets, the City waterfront and transit; and the Moving Forward Projects; and

WHEREAS, the PARTIES are entering into this Agreement on the assumption that the PROGRAM can and will be completed at or below the current WSDOT PROGRAM budget; and

WHEREAS, the PROJECT, the subject of this Agreement, is the part of the PROGRAM that replaces SR 99 from South Royal Brougham Street to Roy Street that consists of designing and constructing a four-lane bored tunnel from South King Street to Thomas Street, north and south tunnel portals and access streets; re-establishment of the City street grid in the vicinity of the portals and associated utility relocations; and

WHEREAS, Battery Street Tunnel decommissioning and Alaskan Way Viaduct demolition will be addressed in a future agreement; and

WHEREAS, the CITY and STATE agree to work collaboratively toward the successful completion of the PROJECT and endeavor to open the tunnel by the end of 2015 and demolish the AWV in 2016; and

WHEREAS, the PROJECT is consistent with the City of Seattle's adopted Comprehensive Plan; and

WHEREAS, review of the PROJECT pursuant to the State and City environmental policy laws is currently underway and the PARTIES recognize that changes in the alternative chosen would require a new agreement; and

WHEREAS, the CITY and the STATE will deliver the PROJECT within the financial commitments made in the Memorandum of Agreement, GCA 6366, executed by the PARTIES on October 24, 2009; and

WHEREAS, concurrently with this GCA 6486 Agreement, the STATE and CITY, through Seattle City Light (SCL), are entering into an agreement, UT 01476; and

WHEREAS, concurrently with this GCA 6486 Agreement, the STATE and CITY, through its Seattle Public Utilities Department (SPU), are entering into an agreement, UT 01474; and

WHEREAS, the PROJECT will in some instances require the use of existing CITY Street Right-of-Way; and

WHEREAS, the CITY will own and/or maintain significant infrastructure to be constructed as part of the PROJECT; and

WHEREAS, some portion of SR 99 is within the PROJECT and is a City street serving as part of a State Highway under RCW 47.24.010; and

WHEREAS, the PARTIES wish to establish protocols and procedures for property acquisition, environmental remediation, design review, permitting, and construction coordination to govern their relationship during the course of the PROJECT; and

WHEREAS, some or all of the work covered by this Agreement may be accomplished by executed "Task Order" documents.

NOW, THEREFORE, in consideration of the terms, conditions, covenants, and performances contained herein, or attached and incorporated and made a part hereto,

IT IS MUTUALLY AGREED AS FOLLOWS:

1. DEFINITIONS

Words not otherwise defined, which have well-known technical or construction industry meanings, are used in accordance with such recognized meanings.

1.1 Approved Plans means the construction plans and provisions that evidence the CITY's determinations, made through the processes described in Sections 6 and 7 and Exhibit B of this Agreement, that the plans conform to the criteria established in this Agreement, UT 01474 and UT 01476; Approved Plans are included in the contract documents evidencing the agreement between the STATE and its contractors for construction of a given element of the PROJECT.

1.2 AWV means the Alaskan Way Viaduct structure on State Route 99, currently a non-limited-access highway over a portion of CITY Street Right-of-Way.

1.3 Business Days means Monday through Friday, inclusive, except for official City of Seattle and state holidays.

1.4 CITY means the City of Seattle, a Washington municipal corporation.

1.5 City Construction Project Engineer means the person designated by SDOT to act as the City's coordinator and primary representative in matters arising during the course of construction as set forth in this Agreement.

1.6 CITY Designated Representative means the CITY official listed in Section 25 of this Agreement.

1.7 CITY Facilities means SCL Facilities, SDOT Facilities, SPU Facilities and facilities impacted by, or constructed as part of, the PROJECT that are owned or will be owned by any other CITY agency.

1.8 CITY Infrastructure means the portions of SPU Facilities, SCL Facilities and City Street Right-of-Way improvements constructed or modified as part of the PROJECT to be owned, operated and maintained by the CITY.

1.9 CITY Interest Property means CITY Street Right-of-Way plus all other real property that the CITY owns or in which the CITY has a real property interest on the effective date of this Agreement, or in connection with the PROGRAM is to acquire ownership of or an interest in real property or a different utility-related right from the STATE, which includes, but is not limited to, Program Transfer Property. CITY Interest Property does not include real property acquired or to be acquired by the STATE for planned limited access facilities such as the bored tunnel, portals and access for which no real property interest or different utility-related right will be transferred to the CITY.

1.10 City of Seattle means CITY.

1.11 City Standards means all City of Seattle laws, rules, regulations and standards and all applicable federal and state laws, rules, regulations and standards, including but not limited to the following, except as otherwise provided in this Agreement, UT 01474 and UT 01476:

1.11.1 The Seattle Municipal Code;

1.11.2 The City of Seattle Standard Specifications for Road, Bridge and Municipal Construction;

1.11.3 The City of Seattle Standard Plans for Municipal Construction;

1.11.4 SDOT, SCL, DPD and SPU Director's Rules, including the City of Seattle Right of Way Improvements Manual, 2005-22and any revisions to the Manual;

1.11.5 SCL Material Standards; and

1.11.6 SCL Construction Guidelines.

1.12 CITY Street Right-of-Way means public street right-of-way under the jurisdiction of SDOT pursuant to Title 15 of the Seattle Municipal Code.

1.13 Conflicting Facilities means all SCL Facilities and all SPU Facilities identified by the STATE that have alignments intersecting or that directly conflict with the final configuration of the proposed SR 99 bored tunnel portals and tunnel portal excavations. Conflicting Facilities do not include any SPU Facilities or SCL Facilities that have been relocated to or installed or reconstructed in their present location by the STATE or by order of the STATE as part of the Moving Forward projects of the Program south of Dearborn Street.

1.14 Contract Award means the STATE's written decision accepting a bid for construction of a Project.

1.15 Defective Work means design or construction work or materials that fail to comply with the Approved Plans, or CITY-approved modifications to the Approved Plans, or the laws, rules, regulations or standards as specified in this Agreement.

1.16 Deformation means any 3-dimensional displacement or combination of displacements. This definition includes but is not limited to the terms "tilt," "strain," "settlement," "heave," "lateral movement," and related terminology that are common industry terminology for deformation in specific situations. Where such industry terminology is used for convenience herein, it does not imply that the broad definition of deformation has been limited.

1.17 Design-Bid-Build Contract means a project delivery method in which the STATE provides a complete design, advertises for bids, and awards a contract to the lowest responsive bidder who is responsible for completing the construction of the project.

1.18 Design-Build Contract means a project delivery method in which the STATE develops a conceptual design and requests proposals from pre-qualified contractors. The contract is awarded to the contractor with the best value responsive proposal. The contractor is responsible to complete the design and construct the project.

1.19 Design Builder means the entity with whom the STATE enters into a Design-Build Contract and who is responsible to complete the design and construct the project.

1.20 Design Submittal means plans, specifications, and design documentation representing design of a given project element in a Design-Build Contract.

1.21 DPD means the City of Seattle Department of Planning and Development.

1.22 Engineer of Record means the engineer licensed in the State of Washington who has been commissioned by the STATE as the prime engineer of the PROJECT, having overall responsibility for the adequacy of the design and the coordination of the design work of other engineers and whose professional seal is on the Approved Plans.

1.23 Environmental Compliance Assurance Procedure (ECAP) means procedures incorporated into the then-current WSDOT *Construction Manual* M41-01.05 (Section 1-2.2k(1)) and WSDOT *Environmental Procedures Manual* M31-11.05 (Sections 610 and 690), as modified by this Agreement, which provide guidance on compliance with Environmental Laws and environmental Remediation. The purpose of the ECAP is to recognize and eliminate environmental violations during the construction phase on STATE construction sites and to ensure prompt notification to STATE management and agencies. For purposes of the ECAP, violations are defined as actions that are not in compliance with environmental standards, permits, or laws.

1.24 Environmental Law(s) means any environmentally related local, state or federal law, regulation, ordinance or order (including without limitation any final order of any

court of competent jurisdiction of which the STATE has knowledge), now or hereafter in effect including, but not limited to: the Federal Clean Air Act; the Federal Water Pollution Control Act; the Federal Safe Drinking Water Act; the Federal Comprehensive Environmental Response Compensation and Liability Act, as amended by the Superfund Amendments and Reauthorization Act of 1986; the Federal Resource Conservation and Recovery Act, as amended by the Solid and Hazardous Waste Amendments of 1984; the Federal Occupational Safety and Health Act; the Federal Emergency Planning and Right-to-Know Act of 1986; the Federal Hazardous Materials Transportation Control Act of 1980; the Federal Clean Water Act of 1977; the Federal Insecticide, Fungicide and Rodenticide Act; the Federal Waste Management Recovery and Recycling Act; the Washington Hazardous Waste Management Act; the Washington Hazardous Waste Fees Act; Washington Model Toxics Control Act; the Washington Nuclear Energy and Radiation Act; the Washington Radioactive Waste Storage and Transportation Act; the Washington Underground Petroleum Storage Tanks Act; and any regulations promulgated thereunder from time to time.

1.25 Final Design Submittal means plans, specifications, and design documentation representing complete design of a given project element in a Design-Build Contract. The Final Design Submittal addresses and incorporates review comments from the Preliminary Design Submittal.

1.26 Final Plan Review Package means the Plan Review Package submitted to the CITY that comprises the STATE's contract documents including contract addenda and fully incorporates or otherwise addresses all CITY plan review comments and all applicable conditions of the Street Use Permit.

1.27 Hazardous Substance(s) means any substance, or substance containing any component, now or hereafter designated as a hazardous, dangerous, toxic or harmful substance, material or waste, subject to regulation under any federal, state or local law, regulation or ordinance relating to environmental protection, contamination or cleanup including, but not limited to, those substances, materials and wastes listed in the United States Department of Transportation Hazardous Materials Table (49 C.F.R. §172.101) or by the United States Environmental Protection Agency as hazardous substances (40 C.F.R. pt. 302 and amendments thereto) or in the Washington Hazardous Waste Management Act (Ch. 70.105 RCW) or the Washington Model Toxics Control Act (Chs. 70.105D RCW and 82.21 RCW), petroleum products and their derivatives, and such other substances, materials and wastes as become regulated or subject to cleanup authority under any Environmental Law.

1.28 Letter of Acceptance means the written document that signifies the CITY's acceptance of CITY Infrastructure to be owned by the CITY, and shall signify the STATE's transfer of CITY Infrastructure to be owned by the CITY. The Letter of Acceptance will not transfer any interest in real property. The Letter of Acceptance shall be jointly executed by the PARTIES. A Letter of Acceptance for SPU Facilities requires SPU approval and a Letter of Acceptance for SCL Facilities requires SCL approval.

1.29 Letter of Plan Approval means the letter provided to the STATE by the CITY following the completion of the plan review process, signifying that the plans and specifications identified in the letter are the Approved Plans. A Letter of Plan Approval for SPU Facilities requires SPU approval and a Letter of Plan Approval for SCL Facilities requires SCL approval as part of the Procedures outlined in Exhibit B of this Agreement.

1.30 MTCA means the Washington Model Toxics Control Act (Chs. 70.105D RCW and 82.21 RCW).

1.31 Plan Review Package means clear and complete plans, specifications, and the necessary assumptions, studies, models and calculations upon which the design was based, and corrections previously requested by the CITY with respect to design-bid-build projects.

1.32 100% Plan Review Package means the Plan Review Package submitted to the CITY concurrent with STATE's final internal review of the construction contract plans and contract provisions that shall evidence the agreement between the STATE and its contractors for construction of design-bid-build projects.

1.33 Private Utilities mean utility uses, excluding facilities owned and operated by the CITY, whether approved or not through franchise agreements and/or Street Use Permits by the CITY and governed and enforced through City Ordinance.

1.34 Procedures mean *Design Review, Construction Management, Inspection and Record Drawing Procedures*, attached as Exhibit B to GCA 6486.

1.35 PROJECT means ; the part of the PROGRAM that replaces SR 99 from South Royal Brougham Street to Roy Street and that consists of designing and constructing a four-lane bored tunnel from South King Street to Thomas Street, north and south tunnel portals and access streets, re-establishment of the City street grid in the vicinity of the portals (Battery Street Tunnel decommissioning and Alaskan Way Viaduct demolition will be addressed in a future agreement); and associated utility relocations. The PROJECT description is attached as Exhibit A.

1.36 PROGRAM means all the projects, collectively, implemented by the STATE and the CITY that remove and replace the AWV and seawall.

1.37 Program Property means all real property interests acquired and to be acquired by the STATE for the PROGRAM.

1.38 Program Transfer Property means all Program Property identified by the STATE and the CITY for transfer from the STATE to the CITY in fee simple.

1.39 Project Property means all real property interests acquired and to be acquired by the STATE and used for the PROJECT.

1.40 Released for Construction Submittal (RFC Submittal) means in a Design-Build Contract, plans and specifications for a given project element that are construction ready and have been certified by the Design-Builder as having met all contract requirements and received all approvals and permits. The Released for Construction Submittal addresses all review comments from the Preliminary and Final Design Submittals.

1.41 Relocation Work means the removal or abandonment of Conflicting Facilities maintenance of service for those facilities and the installation or reconstruction of Conflicting Facilities to their permanent and final location.

1.42 Remediation means the same as Remedy or Remedial Action defined in MTCA, which includes any action or expenditure consistent with the purposes of MTCA to identify, eliminate, or minimize any threat or potential threat posed by Hazardous Substances to human health or the environment including any investigative and monitoring activities with respect to any release or threatened release of a Hazardous Substance and any assessments to determine the risk or potential risk to human health or the environment.

1.43 Round Table Meeting means a meeting typically held five (5) weeks following the submittal of the 100% Plan Review Package to the CITY and STATE, and commonly attended by the STATE's Project team and STATE reviewers to resolve and address STATE comments on the 100% Plan Review Package.

1.44 SCL means Seattle City Light.

1.45 SCL Facilities means the electrical facilities impacted by, or constructed as part of, the PROJECT that are owned or will be owned by the CITY.

1.46 SDOT means the Seattle Department of Transportation.

1.47 SDOT Facilities means the transportation facilities impacted by, or constructed as part of, the PROJECT that are owned or will be owned by the CITY.

1.48 SPU means Seattle Public Utilities.

1.49 SPU Facilities means the water, drainage and wastewater facilities impacted by, or constructed as part of, the PROJECT that are owned or will be owned by the CITY.

1.50 STATE means the Washington State Department of Transportation.

1.51 STATE Designated Representative means the STATE official listed in Section 25 of this Agreement.

1.52 STATE Project Engineer means the person appointed by the STATE to lead the PROJECT during design and/or construction or his or her designee.

1.53 Street Use Permit means written authorization secured by the STATE from the Director of SDOT for use of the CITY Street Right-of-Way pursuant to Title 15 of the Seattle Municipal Code.

1.54 Surplus Property means Program Property, excluding Program Transfer Property and other CITY Interest Property, that upon completion of the PROJECT has not been designated as part of the limited access or non-limited access right-of-way of State Route 99.

1.55 Task Force means a group consisting of STATE, CITY, contractor, and other stakeholder staff meeting regularly to review and reach decisions relating to a particular subject, e.g., traffic, structures.

1.56 Task Order means a document executed by the PARTIES under this Agreement authorizing work by one PARTY to be done on behalf of the other PARTY and that defines the scope and the obligations of the PARTIES for the given element of work. All terms and conditions of the Agreement shall apply to each Task Order.

1.57 UTILITY means City of Seattle Utility Departments, Seattle City Light and Seattle Public Utilities.

1.58 WSDOT means Washington State Department of Transportation.

2. GENERAL RESPONSIBILITIES

2.1 The PARTIES shall manage risk, produce design and conduct construction in a manner that maximizes cumulative public benefits and minimizes cumulative public costs as mutually agreed to by the PARTIES.

2.2 This Agreement in conjunction with UT 01474 and UT 01476 is prepared by the STATE and CITY, as provided in RCW 39.34.080, RCW 47.12.040 and other applicable law, to govern relationships between the PARTIES and establish each PARTY's responsibilities regarding the PROJECT.

2.3 The PARTIES understand that environmental review of the proposed PROJECT is underway at the date of this Agreement and agree that only preliminary design work and other work outlined in 23 CFR 636.109(b)(2) may proceed under this Agreement prior to issuance of a Final SEPA/NEPA Environmental Impact Statement (FEIS) and federal Record of Decision (ROD). If an alternative other than the Proposed Bored Tunnel is selected, this Agreement will be terminated pursuant to the provisions of

Section 28 of this Agreement. If the Proposed Bored Tunnel is selected, the remaining work under this Agreement other than preliminary design work may proceed no sooner than after issuance of the ROD and only after WSDOT and the City Council each provide notice to the other that it wishes to proceed with the Agreement. WSDOT will provide Notice to Proceed 2, which authorizes final design and construction, to the Design Builder only after issuance of the ROD.

2.4 The PARTIES shall work collaboratively to resolve issues in a manner that endeavors to open the proposed bored tunnel to the public on schedule.

2.5 The design and construction of CITY Facilities, including repair, shall comply with City Standards.

2.6 Each PARTY shall provide the funding and resources necessary to fulfill the responsibility of that PARTY as established in this Agreement.

2.7 The PARTIES agree to work cooperatively with each other and make reasonable, good faith efforts to timely and expeditiously complete the PROJECT, as provided in this Agreement, including, but not limited to, the selection of a preferred SR 99 design alternative, development of preliminary engineering and final design and construction. In order to optimize design and minimize conflicts, the STATE shall coordinate design and construction of the various contracts making up the PROJECT with design of subsequent PROGRAM stages, and with construction of previous stages of the PROGRAM. The STATE shall be prepared to modify design of the contracts making up the PROJECT, the subsequent PROGRAM stage and/or previous stage if both PARTIES determine the modifications are necessary and reasonable, to minimize design conflicts.

2.8 The STATE is responsible for designing and constructing the PROJECT except for the CITY's responsibility to relocate Conflicting Facilities as provided in Section 2.10 of UT 01474 and UT 01476. The STATE is responsible for taking measures to minimize, limit, and mitigate damage to private property and CITY Facilities that may result from the PROJECT construction, including damage that may result from tunnel-induced Deformation. The STATE is responsible for remedying at its cost such damage should it occur.

2.9 The PARTIES agree that it is in the public interest for one PARTY to implement portions of the other PARTY's PROJECT responsibilities. Therefore, this SDOT Agreement establishes a Task Order process for use by a PARTY to authorize the other PARTY to conduct work on its behalf and, as may be documented through each Task Order, to agree to reimburse the other PARTY for such services.

2.10 The PARTIES agree that the STATE is responsible for funding the design and construction of a re-located surface street within the Alaskan Way right-of-way from South King Street to Pine Street, a new surface street from the intersection of Pine Street and Alaskan Way to Battery Street connecting Alaskan Way to Elliot and Western

Avenues, the demolition of the existing Alaskan Way Viaduct, and Battery Street Tunnel decommissioning. These rights-of-way and surface streets will be designed to serve all anticipated users, including automobiles, transit, freight, bicycles and pedestrians. The CITY and STATE will jointly perform the design and construction of the Viaduct demolition. Additional details regarding of the funding, design, and construction provisions for the street and Alaskan Way Viaduct demolition will be the subject of a future agreement.

2.11 The PARTIES agree that the PROGRAM will not be complete until the elements in Exhibit D are completed. The PARTIES agree that the current scope identified for certain elements of the PROGRAM is reflected in Exhibit D. Future mutual agreement of the PARTIES shall be required in order to reduce or substantially alter the scope outlined in Exhibit D. WSDOT shall provide the City with quarterly updates regarding the PROJECT and PROGRAM budget to ensure timely negotiation of scope issues.

2.12 The PARTIES recognize that the STATE proposes to toll the bored tunnel as part of the PROJECT, if the tunnel is selected as the preferred alternative. The STATE agrees to evaluate and work with the CITY (in advance of tolls being imposed, during toll implementation, and for a mutually agreeable period thereafter) to identify mitigation strategies for the effects that tolling may have with respect to diversion of vehicular traffic from the PROJECT onto CITY Streets. The STATE agrees that such evaluation and mitigation shall include effects on both vehicular traffic circulation on CITY streets as well as effects on CITY's ability to achieve its "Complete Streets" policy goals articulated in CITY's Resolution No. 30915, including but not limited to making CITY streets function well for bicycles, pedestrians, freight, transit and automobiles. Exhibit E contains the details of the Tolling Committee and is incorporated by reference herein.

3. PROPERTY ACQUISITION AND TRANSFER; SURPLUS PROPERTY

3.1 Acquisition

3.1.1 The STATE has or will acquire, at its expense, the Project Property. CITY responsibility for acquisition of real property interests or other utility-related property rights, if any, as set forth in Section 14.1 of UT 01474 and UT 01476.

3.1.2 The STATE is responsible, at its expense, for performance of all appraisals, appraisal review, title review, surveys, property investigation, relocation assistance and all other investigations and services in connection with the acquisition of the Project Property. For each parcel of Program Transfer Property, the STATE shall deliver to the CITY, as soon as practicable after a parcel is acquired and identified by the PARTIES as Program Transfer Property, all documents created, commissioned or received in connection with the STATE's acquisition of such parcel. Such documents shall include, to the extent applicable, appraisals, appraisal reviews, title reports and all documentation concerning title encumbrances, title policies, surveys, geotechnical reports, purchase agreements, term sheets, options, leases, deeds, indemnities, and all other documents and information created, commissioned or received by the STATE.

3.1.3 The STATE is responsible for identification and investigation of Hazardous Substances on Program Property following procedures set in the WSDOT *Environmental Procedures Manual M 31-11* and WSDOT *Right of Way Manual M 26-01* that are in effect on the date of property acquisition. The STATE shall provide to SDOT's Real Property and Environmental Manager, as soon as practicable after a parcel is identified by the PARTIES as Program Transfer Property, copies of all documentation of environmental investigation concerning the Program Transfer Property, remedial actions, reports, studies or other documentation, whether received by or prepared by or for the benefit of the STATE, including, but not limited to, (1) documents relating to due diligence and/or all appropriate inquiry, environmental assessments, and remedial, removal or cleanup activities related to the Program Transfer Property; (2) documents relating to allegations, orders, claims, regulatory demands, or losses relating to the alleged existence or migration of any Hazardous Substance from or on any parcel of Program Transfer Property; and (3) any alleged violation of any Environmental Law or other information relating to environmental condition of the Program Transfer Property.

3.2 Transfer.

3.2.1 Prior to the start of PROJECT construction, the STATE and the CITY agree to enter into a separate written agreement governing transfer of Program Transfer Property to the CITY. The agreement shall identify the Program Transfer Property and provide that each transfer to the CITY shall be by quit claim deed. The agreement shall also provide the following: timing of transfer, condition of title, protection for utilities in the event of future sale, the definitions of Hazardous Substance and Environmental Law contained in this SDOT Agreement, and the following release and indemnification provision:

"The STATE hereby releases and indemnifies, protects and holds harmless the City of Seattle and its officers, officials, employees, and agents working within the scope of their employment from all liability and claims (including but not limited to liability and claims for response and remediation costs, administrative costs, fines, charges, penalties, attorney fees and cost recovery or similar actions brought by a governmental or private party, including third party tort liability) arising, directly or indirectly, from any presence or release of any Hazardous Substance remaining within or transported from the real property in which an interest is transferred."

The foregoing is not an exclusive list.

3.2.2 The PARTIES shall prepare and attach to the future agreement governing transfer of Program Transfer Property and this SDOT Agreement an exhibit containing a complete list of legal descriptions of the Program Transfer Property, which may be created and amended as necessary by the PARTIES' Designated Representatives without other approval by the PARTIES. A detailed property

description with map may be substituted for any legal description not yet available at the time the PARTIES execute the future agreement governing transfer of Program Transfer Property.

3.2.3 Whether or not any separate agreement or transfer document is made, effective beginning on the date of transfer of each real property interest from the STATE to the CITY in connection with the PROGRAM, the STATE shall release and indemnify, protect and hold harmless the City of Seattle and its officers, officials, employees, and agents working within the scope of their employment from all liability and claims (including but not limited to liability and claims for response and remediation costs, administrative costs, fines charges, penalties, attorney fees and cost recovery or similar actions brought by a governmental or private party, including third party tort liability) arising, directly or indirectly, from any presence or release of any Hazardous Substance remaining within or transported from the real property in which an interest is transferred.

3.3 Surplus Property. Prior to start of PROJECT construction, the STATE will provide a preliminary list to the CITY of all properties that appear to be Surplus Properties. Within two (2) years after final completion of the PROJECT, the STATE shall initiate its disposal of all Surplus Property pursuant to the provisions of chapter 47.12 RCW and following the procedures in the WSDOT *Right of Way Manual M 26-01.02*, dated August 2009, Chapter 11, Sections 11-7.1 – 11-7.4.2. Disposal includes any of the disposal methods described in Chapter 11, Sections 11-7.1 – 11-7.4.2. The timeline for the STATE's initiation of disposal of Surplus Property may be extended, if necessary, by the PARTIES' Designated Representatives.

3.4 Survival. The obligations set forth in this Section 3 shall survive termination of this SDOT Agreement unless otherwise expressly negotiated by the PARTIES and memorialized by written amendment to this SDOT Agreement.

4. TASK ORDERS, PAYMENT AND ADMINISTRATION

4.1 Some or all of the work undertaken pursuant to this Agreement may be governed by Task Orders. Task Orders shall be subject to the provisions of this Agreement.

4.1.1 Either PARTY may initiate a Task Order which will be jointly executed by the PARTIES.

4.1.2 The PARTIES will prepare and execute Task Orders by contract package or as otherwise agreed. All Task Orders shall be signed by the Designated Representative of the initiating PARTY and deemed executed when counter-signed by the Designated Representative of the other PARTY.

4.1.3 The general terms and conditions of this Agreement shall be applicable to all Task Orders issued under this Agreement.

4.1.4 The form of each Task Order shall substantially conform to the Task Order Template attached as Exhibit C. Each Task Order shall contain a general description and scope of work, a schedule for completion, an itemized estimate of costs for the work, a cash flow projection and any provisions specific to the scope of work.

4.1.5 Each PARTY shall designate a manager for each Task Order. The designated Task Order managers are deemed to have the authority to modify the scope, schedule, and budget of the Task Order within the parameters of this Agreement.

4.2 Payment

4.2.1 The PARTIES shall not be obligated to reimburse any expenditure in excess of the maximum amount stated in each Task Order, unless the PARTIES have agreed to such additional reimbursements and the Task Order has been amended to describe the additional work in excess of the budgeted scope of work. The initiating PARTY shall promptly notify the other PARTY in writing as soon as it is known when the maximum funding obligation will be reached and shall also specify in writing its position regarding any remaining work covered by a Task Order which it believes was contained within the budgeted scope of work. Should its estimated costs on any Task Order exceed the amount authorized, the PARTY performing the work under the Task Order shall promptly notify the other PARTY in writing and shall specify in writing its position regarding why the estimated cost will be or has been exceeded.

4.2.2 The PARTIES shall negotiate the total authorized amount for each Task Order. Reimbursement will not be made for activities that are not covered in a Task Order. The PARTIES will establish a budget contingency for the estimated cost of the work covered under each Task Order as a part of the cost estimate for that Task Order.

5. ENVIRONMENTAL REMEDIATION DURING CONSTRUCTION

5.1 STATE Responsibilities. For CITY Interest Property the STATE shall be responsible for identification, investigation and Remediation of Hazardous Substances found within the limits of the PROJECT during its environmental due diligence of the Project Property and shall identify areas of known Hazardous Substances in conjunction with the Plan Review Packages and Design Submittals circulated for CITY review. In addition, the STATE shall be responsible for identification, investigation and Remediation of Hazardous Substances discovered during construction at CITY Interest Property. For CITY Interest Property, provisions for Remediation of known Hazardous Substances, approved Remediation plans, and provisions for Remediation of Hazardous Substances discovered during construction shall be included in the Plan Review Packages

and Design Submittals circulated for CITY review. Nothing in this Agreement is intended to alter the legal obligations of the STATE with respect to hazardous substances that may remain in place after completion of the PROJECT except for release and indemnity provisions of this Agreement.

5.2 Environmental Remediation will be in accordance with Environmental Law. At CITY Interest Property, the STATE shall follow the Model Toxics Control Act (MTCA) and associated procedures approved by the Washington State Department of Ecology for Remedial Action, and the STATE shall undertake Remediation using environmental professional judgment that achieves an overall effectiveness comparable to the substantial equivalent of a Washington State Department of Ecology conducted or supervised Remedial Action appropriate to the specific site conditions and contaminants with no environmental restrictions or covenants unless agreed to by the CITY in writing. For CITY Interest Property, the STATE is not obligated to implement public notification and documentation procedures common to the substantial equivalent of a Washington State Department of Ecology conducted or supervised Remedial Action.

5.3 At CITY Interest Property, the STATE shall not use soil found to exceed MTCA Method A cleanup levels or that exhibits visual and/or olfactory indications of Hazardous Substance as earth fill or trench backfill within the PROJECT. There shall be no requirements or agreements affecting the CITY Street Right-of-Way or other CITY Interest Property concerning ongoing monitoring of soil or groundwater relating to Hazardous Substances unless agreed to by the CITY in writing prior to Remedial Action.

5.4 At or adjacent to CITY Interest Property, under certain circumstances, and in consultation with the CITY, the STATE may conduct additional Remediation of contaminated areas, including areas outside the limits of the PROJECT. These circumstances may include, but are not limited to:

5.4.1 Instances in which Remediation may be necessary to prevent adverse water quality impacts and/or to comply with other State and Federal permit conditions;

5.4.2 Instances that in the judgment of the STATE Project Engineer require immediate Remediation to protect public health and safety;

5.4.3 Where regulatory agencies with jurisdiction require additional Remediation;

5.4.4 Where additional Remediation is necessary to prevent recontamination of the limits of the PROJECT, address subsurface utility facilities located or planned within or near the limits of the PROJECT or within the Project Property, or address disturbance or exacerbation of existing contamination; and

5.4.5 Where additional Remediation is necessary to meet mutually acceptable risk management standards in accordance with STATE and CITY protocols.

5.5 All work at CITY Interest Property shall comply with the then-current WSDOT *Environmental Procedures Manual M 31-11* and WSDOT *Construction Manual M 41-*

01, Environmental Law, and all applicable CITY regulations except as modified by this Agreement.

5.6 The STATE shall include the CITY in its ECAP when unanticipated contamination is found within the limits of the PROJECT at or adjacent to CITY Interest Property. Notification procedures will include notifying the CITY orally followed by written notification.

5.7 The STATE's Project Engineer shall determine, in consultation with the CITY, Remediation of known and unanticipated Hazardous Substances at or adjacent to CITY Interest Property within the limits of the PROJECT. In instances where the CITY disputes the STATE's plan(s) for Remediation in connection with CITY Interest Property, the CITY and STATE will resolve the dispute through the dispute resolution process in Section 23 of this Agreement.

5.8 The STATE shall prepare plans in consultation with the CITY for Remediation of known and unanticipated Hazardous Substances in connection with the CITY Street Right-of-Way and other CITY Interest Property, and shall obtain CITY concurrence prior to implementing Remedial Actions there. In instances where the CITY finds the STATE's plans for Remediation of these areas unacceptable, the CITY or STATE may request resolution through the dispute resolution process in Section 23 of this Agreement.

5.9 Prior to the start of construction, and after the contractor has been selected, the STATE shall initiate and host an environmental preconstruction meeting. The STATE shall invite City of Seattle staff, STATE staff and the STATE contractor to discuss known contamination, environmental procedures, environmental Remediation and permit conditions that apply to CITY Interest Property in connection with the PROJECT.

5.10 The STATE shall obtain all required permits and approvals for Remediation at CITY Interest Property, except for permits or approvals that this Agreement, UT 01474, or UT 01476 otherwise obligates SPU or SCL to obtain for SPU or SCL Relocation Work.

5.11 Remediation work at or adjacent to CITY Interest Property shall not proceed in areas outside of the limits of the PROJECT unless the STATE has obtained written permission of the property owner and appropriate permits to work on property that is not part of the PROJECT. The STATE shall make reasonable efforts to obtain permission of the property owner. The STATE may utilize the assistance of the State Department of Ecology as provided in the MTCA regulations.

5.12 The STATE shall provide the CITY with copies of environmental close-out reports for Remediation activities at CITY Interest Property.

5.13 All costs associated with testing, handling, storing, removing, transporting, disposing, or treating Hazardous Substances that are excavated in connection with the

PROJECT relating to CITY Interest Property shall be paid by the STATE, with the exception of such costs incurred during and directly caused by Relocation Work which SPU or SCL is obligated to fund under the terms of this Agreement, UT 01474, or UT 01476. In addition, STATE shall be responsible for all costs associated with Remediation of any releases that are caused or exacerbated by its own employees or contractors. The STATE shall be identified as the generator for these Hazardous Substances.

5.14 The CITY shall provide to the STATE all records regarding any known areas where Hazardous Substances may be located at CITY Interest Property within the limits of the PROJECT, including but not limited to environmental investigation reports for properties located in the PROJECT. The reports shall be provided for the STATE's information only, shall not be relied upon by the STATE, and the CITY's provision of these records shall not constitute a representation or warranty as to the accuracy of the information contained in the reports.

5.15 The STATE shall provide to the CITY all records regarding any known areas where Hazardous Substances may be located at CITY Interest Property within the limits of the PROJECT and Project Property, including but not limited to environmental investigation reports for the Project Property. In addition, the STATE shall notify and provide information to the CITY regarding any contamination encountered during construction at or adjacent to CITY Interest Property. Reports provided by the STATE are for information only, and shall not be relied upon by the CITY, and the STATE's provision of these records shall not constitute a representation or warranty as to the accuracy of the information contained in the reports.

5.16 The STATE shall release and indemnify, protect, defend and hold harmless the City of Seattle and its officers, officials, employees, and agents, while acting within the scope of their employment, from all liability and claims (including but not limited to liability and claims for response and remediation costs, administrative costs, fines, charges, penalties, attorney fees and cost recovery or similar actions brought by a governmental or private party, including third party tort liability) arising, directly or indirectly, from any of the following: (1) any presence or release of any Hazardous Substance within or from the limits of the PROJECT, except for the presence of any Hazardous Substance as of the effective date of this Agreement within the portion of real property in which the City has a real property interest on that date or in which the City later acquires a real property interest for the purposes of the Program from an entity other than the STATE, and (2) the removal, transport or disposal in connection with the PROJECT of any Hazardous Substance for which the STATE or any person, contractor or other entity working on behalf of the STATE is a generator.

6. PERMITTING AND RIGHT-OF-WAY USE

6.1 The PARTIES shall apply for and obtain all necessary federal-, state- and CITY-issued permits and approvals for the work for which they are responsible prior to commencing work that requires such permits, including but not limited to all permits,

approvals or permission for exploratory investigations, testing, site preparations, demolition and construction.

6.2 The CITY authorizes the STATE to use CITY Street Right-of-Way for the PROJECT, subject to issuance and provisions of Street Use Permits and the conditions contained in this Agreement. The STATE's use of CITY Street Right-of-Way shall comply with the Seattle Municipal Code and all other applicable laws, including but not limited to the Shoreline Management Act, the National Environmental Policy Act and the State Environmental Policy Act.

6. 3 The PARTIES agree that for the PROJECT, the PARTIES shall obtain Street Use Permits prior to undertaking work in the CITY Street Right-of-Way. The CITY shall provide for street use inspections pursuant to Title 15 of the Seattle Municipal Code, the Street Use Permit, and this Agreement.

6.4 The PARTIES agree to apply the conditions of the Street Use Permits issued for CITY Street Right-of-Way in connection with the PROJECT to PROJECT work outside CITY Street Right-of-Way if that work has a surface component and either is or will become CITY Street Right-of-Way or STATE right-of-way or Surplus Property upon completion of the PROJECT.

6.5 The PARTIES agree to abide by and comply with all requirements and conditions of the Street Use Permits. After a Street Use Permit is issued, the responsible PARTY will obtain Letters of Plan Approval for any subsequent revisions for amendments to design or to the Street Use Permit as set forth in the Procedures.

6.6 The Street Use Permits and Letters of Plan Approval are not a representation or assurance that the design or plans comply with applicable laws, regulations, ordinances or codes, nor shall the Street Use Permits or Letters of Plan Approval be construed to authorize any failure to comply with any of the foregoing.

6.7 The PARTIES will jointly order the relocation of any and all Private Utilities required for performance of the work on the PROJECT. The STATE shall manage the timely relocation of the Private Utilities. The STATE shall require its construction contractors to schedule and coordinate their activities with the relocation of Private Utilities. The PARTIES agree to perform their obligations under this provision, including, but not limited to, the CITY co-signing the relocation notices to the Private Utility owners and the CITY joining the STATE as an additional plaintiff in any litigation the STATE may need to pursue in order to require the Private Utilities to relocate. The STATE shall indemnify the CITY pursuant to Section 19 of this Agreement.

6.8 The PARTIES agree to establish alternative CITY regulatory process cost reimbursement in lieu of Use Fees as set forth in GCA 5739, Project Services Agreement and future amendments, as described in Section 10 of this Agreement.

7. DESIGN, PLAN REVIEW AND CHANGE MANAGEMENT

7.1 The PARTIES agree to work cooperatively with each other and shall make reasonable, good faith efforts to timely and expeditiously execute their respective roles and responsibilities related to the design and plan review and permitting called for in this Agreement.

7.2 This Agreement addresses design and plan review process for SDOT, SCL, and SPU and the process for issuance of SDOT Street Use Permits; it does not address plan review or permits issued by other departments of the City of Seattle.

7.3 Within the scope of this Agreement, the STATE agrees to consult with the CITY with regard to planning, design and construction of the PROJECT. The scope of the design and plan review by the CITY addressed by this Agreement is limited to the following elements:

7.3.1 CITY Infrastructure.

7.3.2 PROJECT work to the extent that it alters or impacts the configuration, condition or use of CITY property including CITY Facilities.

7.3.3 PROJECT work to the extent that it alters access to CITY Facilities.

7.3.4 PROJECT work in CITY Street Right-of-Way to the extent that it alters or impacts private property in a manner relevant to SMC Title 15.

7.3.5 PROJECT urban design as established in Section 8.

7.3.6 The temporary or permanent use or operation of CITY Street Right-of-Way for the PROJECT including maintenance of traffic.

7.3.7 Mitigation measures established by the STATE's review and determination of PROJECT environmental impacts pursuant to state and City environmental policy laws.

7.3.8 Private Utilities within CITY Street Right-of-Way.

7.3.9 Transit facilities within CITY Street Right-of-Way.

7.3.10 As provided in Section 5 of this Agreement, evidence of the STATE's environmental remediation-related commitments.

7.4 The CITY will conduct reviews of all stages of design to ascertain that the design of CITY Infrastructure and the design of PROJECT work and construction activity within CITY Street Right-of-Way comply with City Standards.

7.5 The PARTIES agree to prepare PROJECT designs, Plan Review Packages, and Design Submittals pursuant to the provisions established in this Agreement and the Procedures.

7.6 The PARTIES shall mutually prepare PROJECT schedules that afford the PARTIES adequate plan review and comment resolution periods sufficient to promote the quality of design consistent with the provisions of this Agreement.

7.7 The STATE shall address all CITY plan review comments from each stage of plan review and incorporate agreed comment resolution into subsequent plan review submittals.

7.8 The PARTIES shall provide sufficient staff and resources for timely preparation and review of the PROJECT designs.

7.9 The CITY shall not give direction to the STATE's consultants or contractors during the design and review processes set forth in this Agreement and the Procedures.

7.10 Both PARTIES shall endeavor to identify and address issues as early as possible during the design process.

7.11 The STATE shall obtain the CITY's design approval for all City Infrastructure, and regulatory approval for PROJECT work within City Street Right-of-Way prior to constructing such work.

7.12 Designs and construction provisions for CITY Infrastructure shall comply with City Standards.

7.13 The PARTIES agree that design of CITY Infrastructure shall consider long-term operation and maintenance costs and requirements, and minimize potential interruptions and disruptions to CITY UTILITY customers.

7.14 The STATE shall obtain the CITY's approval prior to incorporating any deviations from City Standards into the design or construction of all CITY Infrastructure and CITY Facilities work.

7.15 The PARTIES agree that Approved Plans or Released for Construction Submittal for each component of the PROJECT shall be stamped by an engineer of record representing the PARTY preparing the Approved Plans pursuant to the requirements of state law.

7.16 The PARTIES shall first obtain the review and concurrence of the CITY prior to making or implementing revisions or deviations from the Approved Plans for any such revisions or deviations pertaining to elements listed in Section 7.3 of this Agreement.

7.17 The PARTIES acknowledge that the STATE may request the CITY to operate and maintain certain STATE-owned PROJECT facilities as may be established by separate agreement. The CITY shall, at the request of the STATE, review the design of such facilities to determine the compatibility of the design with the CITY's existing operational capabilities, standard practices, equipment and other resources required to operate and maintain such facilities.

8. URBAN DESIGN

8.1 The STATE and CITY agree to work together to develop standards that will promote appropriate urban and architectural design of the PROJECT.

8.2 The STATE and CITY have prepared the Bored Tunnel Design Goals and Objectives which were submitted to the Seattle Design Commission on January 21, 2010, Building Design Principles, which were submitted to the Seattle Design Commission on February 18, 2010, and Project Guiding Principles for the Portal Areas, which were submitted to the Seattle Design Commission on March 18, 2010.

8.3 The STATE and CITY have developed Portal Area Design Guidelines based on these Bored Tunnel Design Goals and Objectives and Guiding Principles. The Portal Area Design Guidelines include:

8.3.1 Functional highway, surface street and development configurations,

8.3.2 Landscaping concepts,

8.3.3 Architectural and urban design concepts for walls, bridges and tunnel portals,

8.3.4 Design guidance for highway appurtenances (i.e., barrier type, light standards, sign support types, etc.),

8.3.5 Conceptual designs for city streets, including sidewalks and plazas, and bicycle/pedestrian trails.

The Portal Area Design Guidelines were submitted to the Seattle Design Commission for review and comment. The final Portal Area Design Guidelines will be subject to final approval by SDOT. The Portal Area Design Guidelines will be used as the basis for the PROJECT design. The STATE agrees to develop a final design substantially in conformance with the Portal Area Design Guidelines.

8.4 The STATE has prepared Building Architectural Design Guidelines for the tunnel operations buildings based on the Building Design Principals. The tunnel operations buildings are physically part of and integrally related to the operation of the bored tunnel. The Building Architectural Design Guidelines were submitted to the Seattle Design Commission for review and comment. The final Building Architectural Design Guidelines will be subject to final approval by the SDOT. The Building Architectural Design Guidelines will be used as the basis for the PROJECT design. The STATE agrees to develop a final design substantially in conformance with the Building Architectural Design Guidelines.

8.5 The STATE agrees to create an Urban Design Task Force for the PROGRAM. The Urban Design Task Force shall include CITY, STATE and contractor representatives. This Urban Design Task Force will endeavor to resolve urban design and architectural issues.

8.6 The following items shall be presented to the Seattle Design Commission (SDC) in accordance with Chapter 3.58 of the Seattle Municipal Code:

8.6.1 Preliminary and final tunnel operations building designs that include building blocking, stacking, façade treatments, façade materials and elevations shall be prepared in accordance with the Building Architectural Design Guidelines.

8.6.2 For areas within the design-build contract, preliminary and final portal area designs prepared in accordance with the Portal Area Design Guidelines.

8.6.3 For areas outside the design/build contract, 30%, 60% and 90% portal area design plans prepared in accordance with the Portal Area Design Guidelines.

8.7 The STATE shall endeavor to develop Tunnel Operations Building and Portal Area designs that incorporate SDC recommendations. The CITY shall verify the STATE's incorporation of SDC recommendations through the CITY review processes set forth in Section 7 in this Agreement.

8.8 Urban design issues lacking mutual agreement by the PARTIES will be referred to dispute resolution as provided in Section 23 of this Agreement.

9. SCHEDULE

9.1 The PARTIES will work together to develop schedule(s) for PROJECT work performed by the STATE or CITY.

9.2 The STATE will be responsible for developing and updating its PROJECT schedule(s) that identifies milestones for performing the work associated with the PROJECT with CITY input.

10. FUNDING AND COMPENSATION

10.1 The STATE shall provide necessary funding for all PROJECT costs as referenced in this Agreement without reimbursement from the City of Seattle, except for the CITY cost responsibilities established in this Agreement, in SCL Agreement UT01476, and in SPU Agreement UT 01474.

10.1.1 The STATE will reimburse SDOT for Project Services through the process provided for in Agreement GCA 5739, entitled Project Services Agreement for State Route 99 Alaskan Way Viaduct and Seawall Replacement Program and SR 519/I-90 Intermodal Access Project – I/C Improvements ("Project Services Agreement"), and as amended by the PARTIES to modify the process for the STATE's reimbursement of the CITY services and to extend the duration of the Project Services Agreement.

10.1.2 The categories of services that may be provided by the CITY are: project management, project controls and coordination, design review and

consultation, permit development and coordination, right of way services, and services to support construction activities.

10.2 By entering into this Agreement, the CITY is not waiving its position that the CITY and/or its citizens and property owners cannot be held responsible for any or all cost overruns related to the portions of the PROJECT for which the STATE is responsible.

11. PARTICIPATION BY DISADVANTAGED BUSINESS ENTERPRISES

11.1 The STATE and the CITY agree that it is good public policy to utilize the services of Disadvantaged Business Enterprises in the construction of public works projects, to the fullest extent permitted by law.

11.2 In furtherance of the foregoing public policy, the STATE agrees to include Disadvantaged Business Enterprise (DBE) provisions in its construction contracts to the extent required by federal law for projects associated with this Agreement.

12. MONITORING AND DEFORMATION MITIGATION

12.1 The STATE agrees to assess potential impacts of Deformation on private property and CITY Facilities. Where the CITY has established deformation criteria for its Facilities, the criteria will be used in the STATE'S analysis. Otherwise, criteria will be derived using accepted engineering practice and shall be mutually agreed upon by the CITY and STATE.

12.2 The CITY shall review the STATE's estimate of susceptibility or vulnerability of CITY Facilities to Deformation and provide comments and input. Such input shall be provided to assist the STATE only, and shall not be interpreted as waiving or limiting in any way the STATE's responsibility for Deformation Mitigation Work as defined in UT 01474 and UT 01476.

12.3 The STATE agrees to develop a preliminary plan for Deformation mitigation. PARTIES will work collaboratively to finalize and implement the Deformation Mitigation Work as defined in UT 01474 and UT 01476. The CITY's input shall be provided to assist the STATE only, and shall not be interpreted as waiving or limiting in any way the STATE's responsibility for Deformation.

12.4 The STATE agrees to design and implement a comprehensive instrumentation and monitoring program for open cut, cut-and-cover, and tunnel construction including pre- and post-construction condition surveys and development of an action plan for mitigating impacts of Deformation.

12.5 The STATE agrees to implement a construction monitoring Task Force responsible for the planning and implementation of the instrumentation and monitoring

program and processing data, evaluating results, and developing recommendations to mitigate Deformation. The construction monitoring Task Force has authority to direct rapid and effective changes in construction to achieve Deformation mitigation.

12.6 The CITY shall advise the STATE and participate in construction monitoring and Deformation management activities when these activities pertain to CITY Facilities. The CITY shall provide the STATE all necessary access to CITY Facilities for the purposes of design or implementation of mitigation measures. The CITY may perform mitigation measures on behalf of the STATE in a manner and schedule that supports the STATE's project requirements. The CITY's advice, participation, and access shall be provided to assist the STATE, and shall not be interpreted as waiving or limiting in any way the STATE's responsibility for Deformation.

13. MAINTENANCE OF TRAFFIC

13.1 The PARTIES agree that it is the goal of this PROJECT to maintain local motorized and non-motorized traffic in safe corridors through the PROJECT area while minimizing impact to the existing street system. To achieve this goal, the PARTIES shall formulate plans to maintain traffic flow during construction of the PROJECT and shall comply with Approved Plans and conditions of the Street Use Permits.

13.2 The PARTIES agree to develop an outreach plan specifically focused on maintenance-of-traffic issues. This outreach plan will provide for eliciting input from affected stakeholders in the vicinity of the PROJECT. Affected stakeholders shall be determined by the PARTIES.

13.3 The STATE agrees to create a maintenance-of-traffic (MOT) Task Force for the PROGRAM. The CITY agrees to be an active member on the MOT Task Force.

13.4 The CITY agrees be a participant in all planning for haul routes, and all haul route traffic shall be regulated pursuant to the Street Use Permit and the provisions of this Agreement. Haul routes and times shall be approved by the CITY prior to the commencement of hauling, and all haul routes shall be along arterial streets designated as major truck streets and must comply with downtown traffic control zone restrictions as defined by the Seattle Municipal Code and implementing regulations.

14. CONSTRUCTION MANAGEMENT, INSPECTION, AND CONTRACT ADMINISTRATION

14.1 It is anticipated that the STATE will develop and issue multiple construction contracts to fulfill its PROJECT responsibilities. The STATE's construction contracts will be conducted in accordance with current Washington State Department of Transportation contracting practices.

14.2 The STATE shall act as the sole authority in the administration of the STATE construction contracts. The STATE shall allow the CITY to consult with and make inquiries of the STATE Project Engineer or designee, attend meetings, and have access to all documentation concerning those portions of the PROJECT subject to CITY review as described in Section 7.3 of this Agreement. The CITY shall not provide direction, directly or indirectly, to the STATE's consultant(s) or contractors. Except in the instances listed below, the CITY shall direct all communications to the STATE's Project Engineer or designee, including communications regarding compliance with Street Use Permits, quality of construction, and contractor performance.

14.3 The STATE will manage any requests from the CITY that have contractual or scope-of-work impacts and will coordinate responses. The CITY may communicate with STATE's consultants or contractors (1) where authorized to do so by the STATE's Designated Representative; (2) to arrange for regulatory permitting and inspections made pursuant to permits issued by the CITY other than Street Use Permits, e.g. electrical permits or other permits obtained from the CITY by the consultant or contractor; and (3) for the Street Use Permits, if necessary because of a threat to health or safety.

14.4 The CITY will provide qualified staff and consultants during construction. CITY staff and consultants will communicate with the STATE Project Engineer or designee in evaluating the conformity of CITY Infrastructure with the Approved Plans or Released-for-Construction Submittal and will immediately notify the STATE Project Engineer or designee of any compliance issues. Notwithstanding any act or omission by the CITY pursuant to this subsection, the STATE shall not be relieved of any of its authority over, and responsibility for, the PROJECT, as provided for in Section 14.2 of this Agreement or elsewhere in this Agreement.

14.5 The PARTIES agree to follow the Procedures. The PARTIES may amend the Procedures by written mutual agreement executed by the PARTIES' Designated Representatives without other approval by the PARTIES.

15. FINAL INSPECTION AND PROJECT ACCEPTANCE

15.1 The PARTIES agree to follow the Procedures. The PARTIES may amend the Procedures by written mutual agreement executed by the PARTIES' Designated Representatives without other approval by the PARTIES.

15.2 Following the satisfactory completion of the pre-final and final inspection processes described in the Procedures, the CITY shall submit a written response notifying the STATE that CITY Infrastructure has been constructed in accordance with the Approved Plans or Released-for-Construction Submittal.

15.3 The CITY agrees, upon satisfactory completion of the PROJECT work successfully placing City Infrastructure into operation, transfer and acceptance of any real property on or in which CITY Infrastructure is located, and receipt from the STATE of

one color set of the Red-Line Plans, pursuant to Section 16, to deliver a Letter of Acceptance, subject to any Defective Work, damage or contractor claims caused by the negligent acts or omissions of the STATE.

15.4 The PARTIES will execute one Letter of Acceptance for each contract unless both PARTIES agree to phase CITY Infrastructure acceptance by those geographic areas or select portions of the PROJECT in which the STATE has completed all PROJECT work and has satisfied the requirements of Section 15.3. Roadway restoration will not be considered to be complete until all roadways are fully open to public vehicular and pedestrian use.

15.5 In instances where portions of CITY Infrastructure must be placed into the CITY's use and operation prior to the execution of the Letter of Acceptance, and after the CITY has determined that these portions of CITY Infrastructure meet with the minimum inspection and testing requirements necessary for placing the CITY Infrastructure into use, the CITY will notify the STATE in writing that it is assuming responsibility for and cost of the interim use and operation of the CITY Infrastructure until the terms of Section 15.3 are satisfied and the PARTIES execute the Letter of Acceptance.

16. RED-LINES AND RECORD DRAWINGS

16.1 Each PARTY is responsible for preparing construction records for the portions of PROJECT work for which it is responsible under this Agreement. Except as otherwise established in this Agreement, the STATE shall document construction in general conformance with WSDOT's *Construction Manual*, WSDOT manual M4-01 for PROJECT work that the STATE constructs including work performed on behalf of the CITY through a Task Order.

16.2 The STATE agrees to record the constructed configuration of PROJECT work that deviates from the Approved Plans as further established in the Procedures. This record shall be referred to as the red-line plans.

16.3 The STATE may choose to delegate preparation and maintenance of the red-line plans to its construction contractors. However, the STATE remains responsible for the quality, condition and completion of red-line plans. If the STATE chooses to delegate these responsibilities, the STATE's construction contracts shall require contractors to provide the STATE and the CITY access to the red-line plans during the working hours established in the STATE contract.

16.4 Each PARTY shall prepare digital drawings showing the constructed configuration of the PROJECT work for which it is responsible under this Agreement (record drawings). Each PARTY shall provide the other PARTY with the record drawings for the portions of PROJECT work for which that PARTY is responsible under this Agreement within six (6) months after the PARTIES execute a Letter of Acceptance. The PARTIES shall prepare Record Drawings in conformance with the Procedures.

17. WARRANTIES

Warranty of Work

17.1 The STATE warrants for a minimum period of twelve (12) months that all CITY Infrastructure being accepted by the CITY for ownership, operation and maintenance: (1) meets with the requirements of the Approved Plans, and all CITY-approved modifications to the Approved Plans made during the course of construction; (2) is constructed in accordance with CITY-issued permits; (3) is free of defects in material and workmanship; and (4) is free of defects in design(s). The warranty of work shall apply to any corrective work required to address non-conforming and Defective Work that is discovered and communicated by the CITY to the STATE within the warranty period. The STATE's warranty of work shall begin following the execution of the Letter of Acceptance of CITY Infrastructure or as otherwise provided in the STATE's contract, whichever occurs later.

17.2 If within the warranty of work period, the CITY discovers and gives written notice to the STATE of non-conforming or Defective Work in the accepted CITY Infrastructure, the STATE shall promptly investigate the work the CITY believes is non-conforming or defective. The STATE shall promptly remedy non-conforming or Defective Work. Disagreements between the CITY and the STATE on what constitutes non-conforming or Defective Work shall be resolved using the dispute resolution process established in Section 23 of this Agreement. The STATE shall diligently prosecute the corrective work and shall procure materials using the fastest means available as necessary to minimize the loss of use and operation of the accepted CITY Infrastructure. Corrective work shall be completed within the time frame specified by the CITY and mutually agreed upon by the STATE.

17.3 If, during construction, the CITY encounters an emergency situation caused by non-conforming or Defective Work, it must immediately notify the STATE. The STATE will take immediate corrective action. If, after the warranty period begins, the CITY encounters an emergency situation caused by non-conforming or Defective Work, it may immediately correct it. Direct and indirect costs incurred by the CITY, attributable to correcting an emergency situation associated with non-conforming or Defective Work, shall be paid by the STATE to the CITY.

Transfer of Title and Warranty of Title

17.4 All right and title to the CITY Infrastructure accepted by the CITY will be transferred by the STATE to the CITY as of the date of the STATE's signature acknowledging the CITY's Letter of Acceptance pursuant to the provisions of Section 15. Neither the STATE nor its contractors shall hold a property right in any of the CITY Infrastructure accepted by the CITY for ownership, including the materials and equipment comprising the CITY Infrastructure.

17.5 The STATE shall warrant good and merchantable title to all materials, supplies, equipment and items installed or incorporated into the accepted CITY Infrastructure. The STATE shall further warrant that all CITY Infrastructure transferred to, and accepted by, the CITY is free from claims, liens and charges.

Manufacturers' Warranties

17.6 The STATE shall provide to the CITY all manufacturers' and suppliers' guarantees and warranties furnished to the STATE's contractor as a customary trade practice in connection with the contractor's purchase of any equipment, materials, or items incorporated into the CITY Infrastructure. The STATE shall further warrant that it has the right to transfer such warranties and guarantees furnished to the STATE through its construction contract to the CITY and that such transfer shall not adversely affect such warranties and guarantees. These guarantees and warranties shall not relieve the STATE from its obligations under warranty of work.

Warranty Inspections

17.7 During the warranty period, the CITY shall have the right to inspect the accepted CITY Infrastructure for non-conforming and Defective Work, and will promptly report any such work to the STATE for remedy through corrective work. The CITY shall bear the cost of these inspections.

18. PUBLIC OUTREACH

18.1 The STATE agrees to lead and manage the public outreach effort for the PROJECT. In recognition of the CITY's experience in working with the Seattle community, the STATE will solicit CITY input and work with the CITY in public outreach activities. The STATE will not publicly distribute outreach information, planning materials and documents without first soliciting the CITY's review. However, the STATE shall be free to comply with any public records request received under Chapter 42.56 RCW for such materials, provided that prior to releasing any sensitive or confidential material, the STATE shall first provide written notice to the CITY in accordance with Section 27 of this Agreement and provisions in UT 01474 and UT 01476.

19. RISK ALLOCATION

19.1 Limits of Liability

19.1.1 No CITY Liability for Assistance, Inspection, Review, or Approvals. The review or approval of any of the STATE's PROJECT plans or specifications, or the inspection of the STATE's work, or any assistance provided to the STATE by the CITY is for the CITY's sole benefit and shall not constitute an opinion or representation by the CITY as to any compliance with any law, ordinance, rule, or regulation or any adequacy

for other than the CITY's own purposes; and such assistance, inspection, review or approval shall not create or form the basis of any liability on the part of the CITY or any of its officials, officers, employees, or agents for any injury, damage, or other liability resulting from, or relating to, any inadequacy, error, or omission therein or any failure to comply with applicable law, ordinance, rule, or regulation; and such assistance, inspection, review, or approval shall not relieve the STATE of any of its obligations under this Agreement, the SCL Agreement, UT 01476, and the SPU Agreement, UT 01474 or under applicable law.

19.1.2 No CITY Liability for Delay, Consequential, or Liquidated Damages. The CITY shall not be liable in damages for any failure to act within any time limits established by law or for any other delay to the STATE or the STATE's contractors, nor shall the CITY have any liability for consequential or liquidated damages, and, to the maximum extent allowed by law, the STATE shall protect, defend, indemnify, and save harmless the CITY, and its officials, officers, employees, and agents, from any and all costs, claims, demands, judgments, damages, or liability of any kind caused by, resulting from, relating to, or connected to delays. The PARTIES agree that this Agreement, the SCL Agreement, UT 01476, and the SPU Agreement, UT 01474, are not to be construed as being construction agreements.

19.1.3 No CITY Liability for Third Party Claims of Diminution in Value of Property. The CITY shall not be liable in damages for any third party claims alleging diminution in value of property, including, but not limited to, claims of elimination or impairment of rights to light and air and quiet enjoyment, or alleging a taking of property rights, nor shall the CITY have any liability for related consequential or liquidated damages, and, to the maximum extent allowed by law, the STATE shall protect, defend, indemnify, and save harmless the CITY, and its officials, officers, employees, and agents, from any and all costs, claims, demands, judgments, damages, or liability of any kind caused by, resulting from, relating to, or connected to the third party claims of diminution in value of property arising out of the PROJECT.

19.1.4 STATE Contractor's Bonds. The STATE shall require its construction contractors to provide performance bonds to the STATE and to maintain those bonds at all times pertinent to the respective contractor's obligations under its contracts. Such bonds shall be executed by an approved Surety that is registered with the Washington State Insurance Commissioner, and that appears on the current Authorized Insurance List in the State of Washington published by the Office of the Insurance Commissioner, and that shall be conditioned upon the faithful performance of the contract by the contractor. The STATE shall ensure faithful completion of the PROJECT by use of the STATE's contractor bonds or other means, and in the event any claim for payment is presented to the CITY for any PROJECT work, the STATE upon timely notice and investigation, resulting in STATE responsibility under this Agreement, the SCL Agreement, UT 01476, or the SPU Agreement, UT 01474 shall promptly pay such claim.

19.2 General Indemnification.

19.2.1 Indemnity. To the extent permitted by law, the STATE shall protect, defend, indemnify, and save harmless the City of Seattle and its officers, officials, employees, and agents, while acting within the scope of their employment, from any and all costs, claims, demands, judgments, damages, or liability of any kind, including injuries to persons or damages to property, that arise out of, or in any way result from, or are connected to, or are due to any acts or omissions, or intentional misconduct, of the STATE or the STATE's contractors, consultants, or agents including any and all claims and litigation arising out of, or resulting from, any state or federal environmental review process in any way relating to the PROJECT, and including any private utility relocations required for the STATE's PROJECT work. The STATE's obligations under this paragraph also extend to claims asserted by third PARTIES against the City of Seattle arising out of, or in any way resulting from NEPA or SEPA compliance related to portions of the CITY's Mercer Corridor Project West Phase reviewed in the 2010 AWV Replacement Supplemental Draft Environmental Impact Statement. The STATE's obligations under this paragraph also extend to claims asserted by third PARTIES against the City of Seattle arising out of, or in any way resulting from, any state or federal environmental review process in any way related to the PROJECT, removal of the Alaskan Way Viaduct and Battery Street Tunnel decommissioning, and all of the foregoing protection, defense, indemnity and hold harmless obligations shall extend to claims asserted by state agencies other than the Washington State Department of Transportation.

19.2.2 The STATE further agrees that the City of Seattle shall have no liability to the STATE that in any way arises out of the City of Seattle's decision making processes in agreeing to go forward with the PROJECT. The STATE shall not be required to indemnify, defend, or save harmless the City of Seattle if the claim, suit, or action for injuries, death, or damages is caused by the sole negligence of the City of Seattle. Where such claims, suits, or actions result from the concurrent negligence of the PARTIES, the indemnity provisions provided herein shall be valid and enforceable only to the extent of the STATE's own negligence. In the event of any claims, demands, actions, or lawsuits, the STATE upon notice from the City of Seattle, shall assume all costs of defense thereof, including legal fees incurred by the City of Seattle, and of all resulting judgments that may be obtained against the City of Seattle, to the extent of the STATE's liability. In the event that the City of Seattle incurs attorneys' fees, costs, or other legal expenses to enforce the indemnity provisions of this Agreement, the SCL Agreement UT 01476, or the SPU Agreement, UT 01474, all such fees, costs, and expenses shall be recoverable by the City of Seattle. Environmental protection and indemnification, as provided elsewhere in this Agreement, shall be in addition to the foregoing general indemnification.

19.2.3 Indemnity. To the extent permitted by law, the City of Seattle shall protect, defend, indemnify, and save harmless the STATE and its officers, officials, employees, and agents, while acting within the scope of their employment, from any and all costs, claims, demands, judgments, damages, or liability of any kind, including

injuries to persons or damages to property, that arise out of, or in any way result from, or are connected to, or are due to any acts or omissions, or intentional misconduct, of the City of Seattle or the City of Seattle's contractors, consultants, or agents. The City of Seattle shall not be required to indemnify, defend, or save harmless the STATE if the claim, suit, or action for injuries, death, or damages is caused by the sole negligence of the STATE. Where such claims, suits, or actions result from the concurrent negligence of the PARTIES, the indemnity provisions provided herein shall be valid and enforceable only to the extent of the City of Seattle's own negligence. In the event of any claims, demands, actions, or lawsuits, the City of Seattle upon notice from the STATE, shall assume all costs of defense thereof, including legal fees incurred by the STATE, and of all resulting judgments that may be obtained against the STATE, to the extent of the City of Seattle's liability. In the event that the STATE incurs attorneys' fees, costs, or other legal expenses to enforce the indemnity provisions of this Agreement, the SCL Agreement, UT 01476, and the SPU Agreement, UT 01474, all such fees, costs, and expenses shall be recoverable by the STATE.

19.2.4 Title 51 RCW. Solely with respect to claims for indemnification under this Agreement, including environmental indemnification, the STATE and the City of Seattle waive, as to each other only, and expressly not for the benefit of their employees or third parties, their immunity under Title 51 RCW, the Industrial Insurance Act, and acknowledge that this waiver has been mutually negotiated by the PARTIES. The STATE and the City of Seattle agree that their respective indemnity obligations extend to any claim, demand, or cause of action brought by, or on behalf of, any of their respective employees or agents. The STATE agrees that in the event that any employee or agent of the STATE's contractors, subcontractors, consultants, or agents asserts a claim against the City of Seattle, the STATE waives any right it may have to assert its Title 51 immunity as a defense against a City of Seattle claim to the STATE that otherwise would be covered by the STATE's indemnity obligations to the City of Seattle.

19.2.5 Survival of Indemnification Obligations. Any liability of the STATE or the City of Seattle arising under any indemnity provision of this Agreement shall survive termination of this Agreement, whether or not any claim giving rise to such liability shall have accrued.

20. INSURANCE

20.1 The STATE shall require in writing that the STATE's contractors, and each of their sub-contractors of any tier where not covered by contractor provided insurance, include "The City of Seattle" as an additional insured for primary and non-contributory limits of liability for Commercial General Liability, Commercial Automobile Liability and (if required) Contractor's Pollution Liability as established in the construction contract documents, including Products and Completed Operations coverage following the completion of each PROJECT stage.

20.2 Insurance specifications for the design-build portion of the PROJECT are contained in Article 20 of the Proposed Bored Tunnel Design Build Contract (Insurance).

20.3 STATE standard insurance specification in Section 1-07.18 (Public Liability and Property Damage Insurance, applicable to the design-bid-build construction contract documents protecting both the STATE and the CITY for any design-bid-build portions of the PROJECT, shall be amended for coverages, minimum limits of liability and/or terms and conditions as may be mutually agreed upon by the STATE and CITY.

20.4 The STATE's contractors and subcontractors of any tier shall cause certification of insurance meeting the requirements herein to be issued to "The City of Seattle, Risk Management Division, P.O. Box 94669, Seattle, WA 98124-4669." Such certification shall not be mailed, but shall be delivered electronically to fax number (206) 470-1279 or as an e-mail attachment in PDF format to riskmanagement@seattle.gov.

21. THIRD PARTY BENEFICIARY

21.1 The STATE shall require the STATE's contractors, consultants, and designers and each of their subcontractors to perform the STATE's work contemplated by this Agreement, the SCL Agreement, UT 01476, and the SPU Agreement, UT 01474 at no cost to the City of Seattle; and because a portion of the PROJECT will be conducted on CITY Street Right-of-Way and on or for the benefit of the City of Seattle, the contracts between the STATE and its contractors, consultants, and designers will include the following requirements:

> (1) With respect to any and all of the City of Seattle's interests, including, but not limited to, excavation, restoration, and traffic control responsibilities of the STATE, the STATE and the contractor will acknowledge that the City of Seattle is an intended third party beneficiary of the contracts; (2) the STATE and the contractor will include the City of Seattle as a named third party beneficiary of the STATE's contracts; and (3) the STATE and the contractor will include the City of Seattle in the indemnification and insurance provisions contained in the STATE's contracts. The STATE and CITY do not intend that this paragraph be interpreted to create any obligation, liability, or benefit to any third party, other than the STATE and the City of Seattle for purposes of design and construction of the PROJECT as described in this Agreement, the SCL Agreement, UT 01476, and the SPU Agreement, UT 01474.

22. LIENS

22.1 In the event that any City of Seattle-owned property interest becomes subject to any claims for mechanics', artisans' or materialmen's liens, or other encumbrances chargeable to, or through, the STATE that the STATE does not contest in good faith, the STATE shall cause such lien, claim, or encumbrance to be discharged or released of record (by payment, posting of bond, court deposit, or other appropriate means), without cost to the City of Seattle, and shall indemnify the City of Seattle against all costs and

expenses (including attorneys' fees) incurred in discharging and releasing such claim, lien, or encumbrance prior to completion of the PROJECT.

23. DISPUTE RESOLUTION

23.1 Good Faith. The CITY and the STATE shall make good faith efforts to resolve any dispute arising under or in connection with this Agreement. The dispute resolution process outlined in this Section applies to disputes arising under or in connection with the terms of this Agreement. In the event that the PARTIES cannot resolve a disagreement arising under or in connection with this Agreement, the PARTIES shall follow the dispute resolution steps set forth below.

23.2 Notice. A PARTY's Designated Representative, as defined in Section 25 below, shall notify the other PARTY's Designated Representative in writing of any problem or dispute that a PARTY believes needs resolution. The written notice shall include (a) a description of the issue to be resolved; (b) a description of the differences between the PARTIES on the issue; and (c) a summary of any steps taken to resolve the issue.

23.3 Meeting. Upon receipt of a written notice of request for dispute resolution, the project engineer/project manager for the PARTIES shall meet within ten (10) Business Days and attempt to resolve the dispute. Any resolution of the dispute requires the agreement of all Designated Representatives attending the meeting or who requested to attend the meeting.

23.4 Notice of Second Level Meeting. If the PARTIES have not resolved the dispute within five (5) Business Days after the meeting, at any time thereafter either PARTY may request that the dispute be elevated to the next level by notifying the other PARTY's Designated Representative in writing, requesting that the dispute be raised to the Second Level Meeting as described in Subsection 23.5. The written notification shall include a) a description of the remaining issues to be resolved; b) a description of the differences between the PARTIES on the issues, c) a summary of the steps already taken to resolve the issues, and d) the resolution of any issues that were initially involved in the dispute.

23.5 Second Level Meeting. Upon receiving a written request that the dispute be elevated to the next level, a meeting shall be held within ten (10) Business Days between the project director of WSDOT and the appropriate CITY program manager(s) to resolve the dispute. Any resolution of the dispute requires the agreement of all Designated Representatives attending the meeting or who requested to attend the meeting.

23.6 Notice of Third Level Meeting. If the PARTIES have not resolved the dispute within five (5) Business Days after the Second Level Meeting as described in Subsection 23.5, at any time thereafter either PARTY may request that the dispute be elevated to the next level by notifying the other PARTY's Designated Representative in writing, requesting that the dispute be raised to the Third Level Meeting as described in Subsection 23.7. The written notification shall include a) a description of the remaining

issues to be resolved; b) a description of the differences between the PARTIES on the issues, c) a summary of the steps already taken to resolve the issue, and d) the resolution of any issues that were initially involved in the dispute.

23.7 Third Level Meeting. Elevate to the Designated Representatives.

23.8 Court of Law. If the PARTIES have not resolved the dispute within five (5) Business Days after the third level meeting, at any time thereafter either PARTY may seek relief under this Agreement in a court of law. The PARTIES agree that they have no right to relief in a court of law until they have completed the dispute resolution process outlined in this Section 23.

23.9 A PARTY's request to utilize this Section 23 dispute resolution Process is not evidence that either PARTY is in breach of this Agreement, and does not relieve any PARTY from complying with its obligations under this Agreement.

24. REMEDIES; ENFORCEMENT

Subject to the dispute resolution provisions in Section 23, the City of Seattle and the STATE shall have, in addition to any remedies available at law or equity, the right to demand specific performance of this Agreement, the SCL Agreement, UT 01476, and the SPU Agreement, UT 01474.

25. DESIGNATED REPRESENTATIVES

The Designated Representative for each PARTY is as follows:

STATE:
Program Administrator
Alaskan Way Viaduct & Seawall Replacement Program
Washington State Department of Transportation
999 3rd Avenue, Suite 2424
Seattle, WA 98104

CITY:
SDOT Deputy Director
Seattle Department of Transportation
P.O. Box 34996
700 Fifth Avenue, Suite 3800
Seattle, WA 98124-4996

26. EFFECTIVENESS AND DURATION

26.1 This Agreement shall be effective as of the date the last PARTY signs and, unless sooner terminated pursuant to the terms hereof, shall remain in effect until final

completion of all PARTIES' obligations contained or referred to in this Agreement, the SCL Agreement, UT 01476, and the SPU Agreement, UT 01474.

27. NOTICE

27.1 Except for the dispute resolution process in Section 23 above, for which notice shall be given to the officials listed in Section 25, all notices, demands, requests, consents and approvals that may be or are required to be given by either PARTY to the other PARTY shall be in writing and shall be deemed to have been duly given (i) upon actual receipt or refusal to accept delivery if delivered personally to the Designated Representative, (ii) upon actual receipt or refusal to accept delivery if sent by a nationally recognized overnight delivery service to the Designated Representative, or (iii) upon actual receipt if electronically transmitted to the Designated Representative with confirmation sent by another method specified in this Section 27. Notice of a change of Designated Representative or the address for the Designated Representative shall be given as provided in this Section 27.

28. TERMINATION AND SUSPENSION

28.1 This Agreement may be terminated pursuant to Section 2.3 or for other cause by either PARTY upon ninety (90) calendar days written notice. Said notice shall set forth the reasons for termination and the effective date of termination.

28.2 Termination of this Agreement, the SCL Agreement, UT 01476, or the SPU Agreement, UT 01474 shall not relieve the PARTIES of any obligations that are required to be performed prior to the date of termination, nor shall it relieve the PARTIES of any obligations that are intended to survive termination of this Agreement, the SCL Agreement, UT 01476, or the SPU Agreement, UT 01474. Furthermore, the PARTIES agree that, in the event the STATE exercises its right to terminate pursuant to this Section 28 or the STATE suspends the work or materially delays the work after construction of the PROJECT begins, then the STATE, at its cost and expense, shall modify the PROJECT, in consultation with the CITY, to provide for the restoration, continued service, operation, and maintenance of CITY Facilities, PROJECT infrastructure, CITY Street Right-of-Way, or any other CITY property and the STATE shall ensure that the modified PROJECT is completed. The STATE shall also ensure that all SPU and SCL utility services can continue to be provided by SPU and SCL either in substantially the same manner as occurred prior to the initiation of work, or in the manner intended by the proposed work, unless otherwise agreed to by the affected UTILITY.

29. CONFIDENTIALITY OF INFORMATION AND RECORDS

29.1 It is understood that certain information about CITY Facilities is deemed by the CITY to be sensitive and may be confidential under state or federal law. The STATE agrees that all documents and information collected from field activities known to include confidential information will be maintained in a locked file at the project office and access will be controlled by the STATE's consultants. Furthermore, confidential

information will only be provided to the selected contractor in conformed documents following Contract Award if such information is considered necessary for construction. The CITY will provide clear written guidelines that specifically define the information that is deemed sensitive and/or confidential.

29.2 Should any of those confidential or sensitive documents become the subject of a request for public disclosure under Chapter 42.56 RCW, the STATE shall use its best efforts to immediately notify the CITY of such request and the date by which the STATE anticipates responding, which date shall in no event be less than fifteen (15) calendar days after STATE's first notice of the disclosure request to the CITY. The CITY must then within a reasonable time of receipt of said notice in writing to the STATE (a) specifically identify each record, or part thereof, and (b) fully explain why such records(s) are exempt from disclosure under Chapter 42.56 RCW or any other law so that the STATE may respond to the records requester. The STATE shall withhold or redact those public records that the CITY reasonably claims are exempt from disclosure based upon the CITY's information. The CITY at its sole expense may seek a judicial declaration or injunction with respect to the public records request. The CITY further agrees that it will, at its sole expense, defend the non-disclosure of that information it claims is exempt from disclosure and indemnify the STATE for any and all penalties assessed and costs that the STATE incurs, if any.

29.3 The provisions of this Section 29 shall survive the termination of this Agreement.

30. GENERAL PROVISIONS

30.1 This Agreement shall be effective independently from any and all permits that may be issued by the CITY.

30.2 Each PARTY shall ensure that its employees, agents, and contractors comply with the obligations of this Agreement.

30.3 The PARTIES shall not be deemed to be in default under this Agreement if performance is rendered impossible by war, riots, or civil disturbances, or by floods or other natural catastrophes beyond the PARTIES' control; the unforeseeable unavailability of labor or materials; or labor stoppages or slowdowns or power outages exceeding back-up power supplies. This Agreement shall not be terminated or the PARTIES penalized for such noncompliance, provided that each PARTY takes immediate and diligent steps to bring itself back into compliance and to comply as soon as practicable under the circumstances without unduly endangering the health, safety, or integrity of the PARTY's employees or property, or the health, safety, or integrity of the public, street rights-of-way, public property, or private property.

30.4 This Agreement including the definition of the PROJECT as more particularly described in the Project Description attached as Exhibit A may be amended only by a

written instrument, duly authorized by the CITY and the STATE, and executed by their duly authorized representatives.

30.5 No failure to exercise, and no delay in exercising, on the part of either PARTY hereto, any rights, power, or privilege hereunder shall operate as a waiver thereof, except as expressly provided herein.

30.6 This Agreement, together with GCA 6366, the SCL Agreement, UT 01476 and the SPU Agreement, UT 01474, with the attached Exhibits and the documents, terms and provisions incorporated in any of the foregoing, constitute the entire agreement of the PARTIES with respect to the PROJECT, and supersede any and all prior negotiations and understandings with respect hereto.

30.7 Section and subsection headings are intended as information only, and shall not be construed with the substance of the section or subsection they caption.

30.8 All exhibits or other attachments are by this reference hereby incorporated into this Agreement.

30.9 This Agreement may be executed in counterparts, each of which shall be deemed an original, and all counterparts together shall constitute but one and the same instrument.

30.10 The PARTIES acknowledge the right of each PARTY to exercise its police power pursuant to general law and applicable statutes for the protection of the health, safety, and welfare of its citizens and their properties. Nothing in this Agreement shall be construed as waiving or limiting the STATE's or CITY's rights to exercise its police power or to preclude or limit exercising any regulatory power in connection with this PROJECT.

30.11 This Agreement shall be interpreted, construed, and enforced in accordance with the laws of the State of Washington. The venue for any action under this Agreement shall be in the Superior Court for King County, Washington.

30.12 A judicial determination that any term, provision, condition, or other portion of this Agreement, whether in whole or in part, is inoperative, invalid, void, or unenforceable shall not affect the remaining terms, provisions, conditions, or other portions of this Agreement, whether in whole or in part, and the remaining terms, provisions, conditions, or other portions of this Agreement, whether in whole or in part, shall remain valid and enforceable to the fullest extent permitted by law.

IN WITNESS WHEREOF, the PARTIES hereto have executed this Agreement as of the last date written below.

CITY OF SEATTLE

By: _____

Title: City Clerk

Date: 5-23-11

WASHINGTON STATE

By: _____

Title: Administrator, AWVSRP

Date: 1/28/2011

APPROVED AS TO FORM:

By: _____

Title: Senior Assistant attorney General

Date: 1-28-11

EXHIBIT A TO MEMORANDUM OF AGREEMENT NO. GCA 6486

Unless specifically defined otherwise in this document, the definitions set forth in GCA 6486 ("SDOT Agreement"), UT 01476 ("SCL Agreement") and UT 01474 ("SPU Agreement"; collectively, "Agreements") apply to terms used in this document.

The PROJECT replaces SR 99 from South Royal Brougham Street to Roy Street and consists of designing and constructing a four-lane tunnel from South King Street to Thomas Street, north and south tunnel portals and access streets, re-establishment of the City street grid in the vicinity of the portals, and associated utility relocations.

The PROJECT consists of the following features:

Utility Work:

- Removal and replacement of existing City electrical, communications, water, drainage and wastewater facilities and other privately owned utilities that directly conflict with the north and south tunnel portals and tunnel portal excavations.
- Utility services necessary for the operation of the tunnel and tunnel operations buildings
- New Utility improvements.

Tunnel:

- A four-lane tunnel under the City from a south portal in the vicinity of Dearborn Street and Alaskan Way to a north portal in the vicinity of 6th Avenue North and Harrison Street.
- PROJECT work will include:
    - Approximately two miles of cut-and-cover and bored tunnel providing two travel lanes in each direction.
    - Tunnel portal structures and the shoring walls and excavation associated with portal construction.
    - Tunnel operations buildings at both the north and south portals to house tunnel egress, tunnel ventilation systems, and fire and life safety systems and controls.
    - Tunnel operations, intelligent transportation, and fire and life safety systems
    - Monitoring of, and mitigation, for tunnel-induced Deformation, such as protecting utilities, and preparing structures for predicted tunnel-induced Deformation through engineered measures such as grouting and structural retrofit.
    - Repair of public and private property that may be damaged as a result of construction.

North Tunnel Access and Reconnection of the Surface Street Grid:

- SR 99 roadway and roadway structures connecting the tunnel to existing SR 99 in the vicinity of Aurora Avenue at Roy Street, associated on and off ramps, and City right of way in the vicinity of the north tunnel portal.

- PROJECT work will include:
  - Advance traffic management systems including capability for tolling.
  - Reconnect Aurora Avenue to the City street grid at Denny Way.
  - Improvements to existing City street right-of-way including cross-corridor connections of John, Thomas, and Harrison Streets.
  - New lanes, curbs, sidewalks, traffic signals, intelligent transportation systems and signage, landscaping and street lighting.
  - Improvements to Aurora Avenue from Denny Street to Harrison Street.
  - Storm drains and other utilities in the new City street right-of way.

South Tunnel Access and Reconnection of the Surface Street Grid:

- Roadway and roadway structures connecting the tunnel south portal to SR 99 lanes being constructed as part of the Holgate to King Project in the vicinity of South Royal Brougham Way and improvements to City street right-of-way in the vicinity of the south tunnel portal.

- PROJECT work will include:
  - Removal of the south-end SR 99 temporary roadway detour built as part of Holgate to King Project.
  - Advance traffic management systems including capability for tolling.
  - New lanes, curbs, sidewalks, traffic signals, intelligent transportation systems and signage, landscaping and street lighting.
  - City street improvements including cross-corridor connections of S. Dearborn Street.
  - Restoration of 1st Avenue South from Royal Brougham Way to Railroad Way S.
  - Storm drains and other utilities in the new City street right-of-way.
  - Pedestrian plazas in the vicinity of the south tunnel portal.
  - Bicycle and pedestrian paths.

Other PROJECT work:

  - Environmental remediation
  - Temporary sediment and erosion control
  - Traffic control and detours
  - Maintenance of utility service

MEMORANDUM OF AGREEMENT
NO. GCA 6486
EXHIBIT B

Design Review, Construction Management, Inspection, Record Drawing and Task Order Procedures

1. **Scope.** This document establishes implementing procedures called for in and otherwise necessitated by GCA 6486 (SDOT Agreement), UT 01476 (SCL Agreement) and UT 01474 (SPU Agreement).

   1.1. With respect to CITY regulatory authority, the scope of this document is limited to the issuance of SDOT Street Use Permits. References to CITY permits, standards, or regulatory authority or responsibility, including references that are not expressly limited, are not intended to extend beyond Street Use Permits or the standards, authority, or responsibility under SMC Title 15.

   1.2. Nothing in this document is intended, or shall be construed, to expand the scope of CITY responsibility regarding the PROJECT beyond the scope stated in the SDOT, SCL, and SPU Agreements.

   1.3. Within the scope described above, this document is intended to describe roles and procedural responsibilities, clarify expectations, and standardize business processes for the duration of the PROJECT. Due to the complexity of the PROJECT and adjacent PROGRAM elements, the STATE and the CITY recognize that unanticipated situations will arise that require modification of these procedures.

2. **Plan Review for Design and Permits**

   2.1. These Design and Plan Review procedures are based on the expectation that WSDOT is responsible for executing the PROJECT work either under WSDOT's direct responsibilities for PROJECT elements or where the CITY has entered into a Task Order agreement for WSDOT assistance in executing the CITY's responsibilities. In instances where the CITY executes PROJECT work, additional procedures may be needed to address design and construction coordination.

   2.2. In implementing the procedures, the goal of WSDOT and the CITY is to facilitate timely and expeditious completion of PROJECT designs that:

   - Meet PROJECT requirements and standards and commitments in the SDOT, SPU, and SCL Agreements;

- Comply with WSDOT procedural requirements in a timely manner;
- Fulfill CITY regulatory requirements set forth in Seattle Municipal Code (SMC) Title 15 in a timely manner;
- Achieve the PROJECT schedule;
- Allow construction to proceed in a timely manner;
- Minimize PROJECT scope growth; and
- Minimize impact on CITY Facilities.

2.3. WSDOT will take the lead in coordinating regular communications and design coordination meetings with the CITY, WSDOT's consultants and contractors, and other utility owners.

2.4. WSDOT will prepare PROJECT designs affecting CITY Facilities in collaboration with SDOT, SCL, and SPU staff and agrees to seek and incorporate input from the CITY in the early stages of preliminary engineering, preparation of Plan Review Packages and Design Submittals, and throughout the PROJECT design and permitting process.

2.5. Design and construction of CITY Infrastructure will meet CITY Standards. Design of CITY Infrastructure will include consideration of long-term operation and maintenance costs, in addition to up-front design and construction costs.

2.6. The CITY will review all plans for work described in Section 7.3 of the SDOT Agreement GCA 6846.

2.7. WSDOT will coordinate and obtain written concurrence from the CITY on any requested deviation from CITY standards prior to the beginning of construction.

2.8. WSDOT and the CITY agree that WSDOT will submit plans for CITY Infrastructure prepared in accordance with SR 99 Alaskan Way Viaduct and Seawall Replacement CADD Manual, Revision 2.0, dated April 2010.

2.9. WSDOT will coordinate and obtain written concurrence from the CITY prior to implementing revisions or deviations from the Approved Plans.

2.10. The CITY will notify WSDOT in good faith when the CITY becomes aware of issues that may delay issuance of a Street Use Permit. Failure to provide such notice shall not provide grounds to challenge the issuance or non-issuance of a permit.

3. Procedures for Design-Bid-Build Contracts.

3.1. WSDOT will determine the project scope for a given design and contract package with CITY input. Changes to project scope will necessitate review by WSDOT AWVSR PROGRAM management in accordance with PROGRAM configuration management and change control procedures.

3.2. WSDOT and the CITY will collaborate to develop a target project delivery schedule to include WSDOT's Plan Review Package submittals to the CITY. WSDOT will notify the CITY of any proposed schedule modifications. If WSDOT determines that it cannot meet the anticipated dates, WSDOT will collaborate with the CITY's Designated Representative to develop a revised submittal schedule as soon as possible after delay is known or anticipated.

3.3. WSDOT will notify the CITY's Designated Representative fifteen (15) Business Days prior to the scheduled Plan Review Package scheduled transmittal to confirm that the Plan Review Package will be transmitted as scheduled or to establish a deferred date so that CITY staff can be appropriately scheduled for the review.

3.4. WSDOT will prepare and submit complete plans and supporting documentation to the CITY and provide corrections and additional information as needed by the CITY to allow CITY staff sufficient time to review the Street Use Permit application and the plans. The duration for review for each Plan Review Package is indicated in the tables below. Submittal of multiple Plan Review Packages to the CITY for concurrent review may increase the time required for review as indicated in the tables below, or as otherwise agreed by WSDOT and the CITY.

3.5. SDOT will coordinate CITY review of the Plan Review Packages to include receiving and distributing materials among CITY of Seattle reviewers, collating and tracking review comments, and working with other CITY departments to resolve conflicting comments or requirements.

3.6. WSDOT will submit a Street Use Permit application early during design development in order to define permit conditions for incorporation into contract documents. This application submittal will initiate the permit review and issuance process.

Table 1: Design-Bid-Build Review Periods

Submittal Phase	**CITY Review Period Number of Business Days per Number of Plan Review Packages Under Review***		
	One	Two	Three
30% Plan Review Package	15 days	25 days	25 days
Progress Plan Review Package	25 days	40 days	45 days
100% Plan Review Package	15 days	15 days	20 days
WSDOT Post-Advertisement Construction Contract Addenda Plan Review Package **	Varies – 3 to 20 days as noted below	Varies – 3 to 20 days as noted below	Varies – 3 to 20 days as noted below
Final Plan Review Package	15 days	15 days	20 days

* In the event that more than three Plan Review Packages and/or major PROGRAM-related documents are under review at the same time, WSDOT and CITY agree to negotiate a reasonable review time for the Plan Review Packages being submitted.

** Post-Advertisement addenda review time will be based on the volume of revisions to plan sheets and specifications affecting City Facilities follows:

Table 2: Addenda Review Periods

Number of addenda added/revised plan sheets (excluding quantity tabs/structure notes)	CITY Review Period (Number of Business Days)
< 200	5
< 400	8
< 800	15
More than 800	20

3.7. The CITY's design review and Street Use Permit processes will take place as follows:

3.7.1. The CITY review period begins on the Business Day following receipt by the CITY's Designated Representative of the Plan Review Package and ends when the CITY'S final comment document is submitted to WSDOT electronically in a Microsoft Excel document format. The CITY is responsible to assign appropriate staff to review and provide comment within the established timeframes.

3.7.2. Following its review of the Progress Plan Review Package, SDOT will prepare and deliver to WSDOT draft Street Use Permit conditions. SDOT will update the draft conditions after completion of CITY's review of each subsequent Plan Review Package to enable incorporation of the draft conditions into WSDOT's construction contract documents.

3.7.3. WSDOT will deliver the Plan Review Packages as further described in this Exhibit. If the CITY receives a submittal from WSDOT that does not contain all the requirements of a Plan Review Package, the CITY will notify WSDOT that the submittal is incomplete. To expedite the process and to the extent possible, the CITY will attempt to begin review of an incomplete submittal. However, WSDOT will submit the information needed to complete the Plan Review Package as soon as possible and will highlight any changes made since submittal of the incomplete Plan Review Package. The CITY's plan review period will not commence until the receipt of a complete Plan Review Package.

3.7.4. The CITY's Designated Representative will work with the CITY departments to identify comments on the Plan Review Packages. The CITY departments will reconcile conflicting comments, and SDOT will incorporate the comments in a single document.

3.7.5. The CITY will assist WSDOT in determining appropriate responses to comments and resolution of concerns noted in its comments.

3.7.6. WSDOT will provide initial written responses to all comments within ten (10) Business Days of receiving the CITY's comments to a Plan Review Package. All comments related to CITY Infrastructure shall be resolved to the CITY's satisfaction and incorporated into the succeeding Plan Review Packages.

3.7.7. WSDOT will hold a comment resolution meeting with the CITY within ten (10) Business Days after WSDOT receives and responds to the CITY comments. Any unresolved comments will be forwarded to a comment resolution team composed of CITY and WSDOT staff. In the event the team cannot resolve all issues, they will be elevated to appropriate levels of management in accordance with the dispute resolution provisions of GCA 6486, UT 01474, and UT 01476.

3.8. WSDOT and the CITY agree to follow a process to facilitate both WSDOT's compliance with both WSDOT procedures governing preparation of bid packages and SDOT procedures for issuing Street Use Permits. The process will include the following steps:

3.8.1. WSDOT will endeavor to resolve and address all CITY comments on previous Plan Review Packages to the CITY's satisfaction prior to submittal of the 100% Plan Review Package. The CITY will be responsive to requests to meet and review the design approach to resolution. WSDOT agrees to resolve and address, to the CITY's satisfaction, all CITY comments from previous Plan Review Packages that are related to CITY Infrastructure design.

3.8.2. The CITY will determine, following the receipt of the 100% Plan Review Package, whether all comments on the previous Plan Review Package have been addressed. At the conclusion of this determination, the CITY will notify WSDOT in writing either that the CITY's comments have been resolved to the CITY's satisfaction or that WSDOT has not addressed all the CITY's comments to the CITY's satisfaction. If the CITY notifies WSDOT that it has not addressed all CITY comments to the CITY's satisfaction, the CITY will submit to WSDOT proposals for addressing the outstanding issues. WSDOT will engage CITY reviewers in resolution of the remaining review comments and, either party may elevate unresolved comments in

accordance with the dispute resolution provisions of GCA 6486, UT 01474, and UT 01476.

3.8.3. WSDOT will invite the CITY to participate in its Round Table Meeting to enable full discussion of the implications and consequences to CITY Facilities or compliance with SMC Title 15 of changes proposed by WSDOT to the 100% Plan Review Package. WSDOT will coordinate revisions made to the contract plans and provisions after WSDOT submits the 100% Plan Review Package.

3.8.4. SDOT will issue its Street Use Permit within five (5) Business Days following the Round Table Meeting if the CITY determines that the plans conform to the requirements of SMC Title 15. If any issues remain for resolution, the CITY will condition the Street Use Permit accordingly. WSDOT will engage CITY reviewers in resolution of review comments and, if resolution cannot be reached, either PARTY may elevate unresolved comments in accordance with the dispute resolution provisions of GCA 6486, UT 01474, and UT 01476.

3.8.5. If the Street Use Permit has not been issued within five (5) Business Days following the Round Table Meeting, the SDOT Director or his designee will review the cause of permit delay within one (1) Business Day, and meet with the STATE's Program Administrator or his designee to discuss the issues and develop a course of action.

3.8.6. WSDOT will work with the CITY to ensure that all comments on the 100% Plan Review Package are adequately incorporated into WSDOT's advertisement for bid, or are otherwise addressed to WSDOT's and the CITY's satisfaction and that all comments on the 100% Plan Review Package related to design of CITY Infrastructure are addressed to the CITY's satisfaction. This process will include comment resolution with CITY reviewers, a meeting with WSDOT and CITY resolution teams, and, if resolution cannot be reached, elevation of unresolved comments in accordance with the dispute resolution provisions of GCA 6486, UT 01474, and UT 01476.

3.8.6.1. WSDOT will prepare and submit post-advertisement addenda to the CITY prior to releasing addenda to prospective bidders. Addenda will clearly delineate changes that have been made to the plans and specifications. The addenda review periods will be determined by the scope and complexity of the proposed addenda with review times generally as indicated in the tables above.

3.8.6.2. WSDOT will notify the CITY when the final addendum is issued to prospective bidders. This notice will constitute the Final Plan Review

Package submittal. The CITY will review the Final Plan Review Package to confirm whether WSDOT has adequately addressed the CITY plan review comments, whether all applicable conditions of the Street Use Permit have been addressed to the CITY's satisfaction, and whether plans conform to the requirements of the SMC Title 15. Prior to bid opening, and upon the CITY's determination that a Final Plan Review Package meets requirements, the CITY will issue to WSDOT a Letter of Plan Approval that:

- Identifies the plans and specifications that have been granted the CITY's regulatory approval for construction by the CITY, and
- Signifies that WSDOT has addressed the plan review comments.

No construction may take place until the Letter of Plan Approval has been issued by the CITY.

4. Procedures for Design-Build Contracts

4.1. The procedures that follow are intended to facilitate meeting requirements, standards, and objectives for the Design-Build portions of the PROJECT.

4.2. WSDOT agrees to work with the CITY in defining and meeting the design and construction standards for the PROJECT work affecting CITY Facilities. The CITY will provide clear design guidance for elements of the PROJECT to be owned, operated or maintained by the CITY. WSDOT will include CITY design and construction standards in WSDOT's Design-Build Contract documents for CITY Facilities.

4.3. WSDOT will apply for a Street Use Permit prior to issuance of the final Request for Proposals. The CITY may review and comment on the Final RFP.

4.4. As a requirement of its Design-Build Contract(s), the Design-Builder will organize Task Forces for design development, coordination, and management of various elements of the work. The Task Forces are a primary vehicle for coordination and will provide an opportunity for WSDOT and CITY staff to provide input to the design process. Task Force meetings will also be the primary means to keep reviewers up to date on design development. Over-the-shoulder reviews will be conducted to facilitate quicker turn-around of formal plan reviews. Dependent on the need for coordination with adjacent contracts, some of the Task Forces will be designated as "corridor-wide." In addition to WSDOT and CITY staff, Task Force membership may include representatives from other stakeholders such as private utility owners, King County, the Port of Seattle, the stadiums, and adjacent contractors.

4.5. The CITY will participate in Task Forces affecting CITY Facilities and for the performance of the CITY's regulatory responsibilities. Based on current PROJECT planning, the CITY will participate in the following Task Forces:

- Utilities
- Construction Monitoring
- Fire and Life Safety
- Maintenance of Traffic
- Road/Traffic
- Buildings
- Public Information
- Quality

4.6. Task Forces will meet on a regular basis to solicit input, coordinate design and construction activity, and assure dissemination of critical PROJECT information to all members. The Design Builder or WSDOT will be the designated lead for meetings and recording of meeting minutes. The Task Forces will work collaboratively to review and provide guidance as the Design Builder develops Design Submittals.

4.7. WSDOT and the CITY recognize that regular attendance at Task Force meetings by their respective staffs is necessary to discuss and agree upon resolutions of design issues before more formal review processes begin in order to streamline later review and minimize substantial comments when the Preliminary and Final Design plans are submitted.

4.8. Attendance at over-the-shoulder review by CITY staff members will be determined by the CITY Construction Project Engineer based in part upon the materials to be reviewed. Whenever possible three (3) Business Days notice will be given to persons who do not regularly attend Task Force meetings. The CITY will make every effort to assign staff members to over-the-shoulder review meetings who are authorized to make final decisions regarding compliance of the plans for CITY Facilities with the CITY's standards, specifications and permit requirements.

4.9. WSDOT's Design Builder will submit a Quality Management Plan (QMP) that will define the timing, content, and format of all design reviews. The QMP will also include processes and procedures for how regularly scheduled Task Force meetings will be used to support quality goals. These meetings, combined with over-the-shoulder reviews, will be an integral part of the process to discuss and resolve design issues outside of the formal review process and reduce the level of effort required to conduct the formal review process. The QMP will define how over-the-shoulder reviews will be conducted with Task Force members. Over-the-shoulder reviews are in-progress reviews of the design and provide opportunities for WSDOT, the CITY, and other stakeholders to provide comments and feedback on the design.

4.10. The design builder will be required to provide three submittals for each design element as indicated below. These submittals are intended to meet the requirements of the design and Street Use Permit plan review processes of both WSDOT and the CITY. The CITY will review design elements affecting CITY Facilities and CITY interests,

and for the performance of the CITY's regulatory responsibilities, within the scope stated in this Agreement, UT 01476 (SCL Agreement) and UT 01474 (SPU Agreement).

4.10.1. Preliminary Design Submittal. The intent of the Preliminary Design Submittal is to provide a formal opportunity for WSDOT, the CITY, the Design Builder, various design team disciplines, and other approved PROJECT stakeholders to review the construction documents in order to provide input addressing whether the plans reflect Design Builde Contract requirements for construction; whether design features are coordinated; and whether there are no fatal flaws within a given discipline or between disciplines. The contents of the Preliminary Design Submittal will vary by discipline as specified in the RFP or as mutually agreed by members of the applicable Task Force.

4.10.2. Final Design Submittal. The Final Design Submittal will be prepared when the design for a given element or area is near 100% complete. The Final Design Submittal includes plan sheets, specifications, technical memos, reports, calculations, and other pertinent data, as applicable and incorporates design changes or otherwise addresses CITY comments. As a result of the on-going discussion and resolution of design and construction issues through the regularly-scheduled Task Force meetings and over-the-shoulder reviews, it is anticipated that there will be very few revisions or changes at this stage. The Final Design Submittal will include all specifications, including but not limited to, all amendments to the WSDOT Standard Specifications for Road, Bridge and Municipal Construction, special provisions, technical requirements, and technical specifications, necessary to construct the work represented in the submittal. Following resolution of all comments, the Final Design Submittal may proceed through the written certification process described below in preparation for being released for construction.

4.10.3. Released for Construction (RFC) Submittal. At a minimum, the Design Builder will provide a preliminary and a final submittal of all plans and technical specifications and resolve all comments prior to being released for construction. Comments from the CITY concerning design of the CITY's stated requirements for CITY Infrastructure, and comments regarding compliance with SMC Title 15, will be resolved to the CITY's satisfaction. WSDOT will ensure that the RFC Submittal reflects all QA, QC, and design reviews required by the QMP and this Agreement, UT 01476 (SCL Agreement) and UT 01474 (SPU Agreement). . WSDOT will also provide a written certification from its contractor to be used to verify to WSDOT and the City that all QA procedures have been completed to ensure that all review comments have been incorporated as agreed to during the comment resolution process among WSDOT, and the Design-Builder, and that the documents are ready to be released for construction. Each sheet of the plan

set and the cover of each set of technical specifications in the RFC Submittal will carry the Professional Engineer's stamp registered in the State of Washington and will be stamped "Released for Construction" by the contractor's Design QA Manager.

4.10.4. WSDOT will provide hard copies and electronic files (in both CADD and PDF formats) of documents pertaining to CITY Facilities or the Street Use Permit as requested by the CITY's Construction Project Engineer. The electronic drawing files will include copies of all sheet and reference files used in the RFC Submittal. All design submittals will conform to the AWVSRP Computer Aided Design & Drafting Manual. Construction will not begin until WSDOT has determined that all required government and private approvals have been obtained.

4.10.5. Design Review. The review period for the Preliminary and Final Design Submittals will be fourteen (14) calendar days from the Business Day following receipt by the CITY's Construction Project Engineer of the Plan Review Package. The review period may be extended for submittals with overlapping review periods. The CITY will provide staff to provide guidance, review and comment on the Preliminary and Final Design Submittals for CITY Infrastructure, and work that impacts CITY Facilities and for work requiring a Street Use Permit as necessary to complete the reviews within the allotted period. Reviews may be required for the entire design or discrete portions of the design. Review comments will be submitted in a manner and form as requested and approved in the Design-Builder's QMP and mutually agreed by WSDOT and the CITY. WSDOT and the CITY Construction Project Engineer will jointly determine the design elements to be reviewed by the CITY.

4.10.6. Comment Resolution. The Design-Builder will schedule and maintain minutes of all resolution meetings with WSDOT and CITY staff and other Task Force members as appropriate to document and resolve review comments. It is intended that all comments will be resolved at these meetings. The Design-Builder will incorporate comment resolutions in subsequent submittals and provide a spreadsheet explaining action taken on each comment. In the event WSDOT disagrees with any CITY comment, the CITY and WSDOT will make staff with decision making authority on the issue available at the earliest possible opportunity to resolve the matter. If resolution cannot be reached, unresolved comments will be elevated in accordance with the dispute resolution provisions of GCA 6486, UT 01474, and UT 01476.

4.10.7. Street Use Permit Issuance. Upon receipt of a Preliminary Design Submittal, SDOT will make a determination as to whether the proposed work package requires a Street Use Permit under the provisions of SMC Title 15, or Letter

of Plan Approval, and so notify WSDOT. SDOT will issue a Street Use Permit and Letter of Plan Approval for the initial RFC Submittal within three (3) days of receipt of the RFC Submittal if the CITY has determined that the plans for the PROJECT element conform to the requirements of SMC Title 15 and that WSDOT has resolved all CITY plan review comments. Upon receipt of the City-issued Street Use Permit and Letter of Plan Approval WSDOT will be authorized to proceed with construction subject to the terms and conditions of the permit.

4.10.8. If the Street Use Permit has not been issued within three (3) Business Days after receipt of the RFC Submittal, the SDOT Director or his designee will review the cause of permit delay within one (1) Business Day, and meet with the STATE's Program Administrator or his designee to discuss the issues and develop a course of action.

4.10.9. Changes to RFC Submittal. WSDOT will diligently attempt to avoid the need for plan changes after issuance of a Street Use Permit or Letter of Plan Approval. In the event such changes occur, the CITY will undertake any additional review and permit re-issuance in as expedited a manner as practicable. WSDOT will require the Design-Builder's QMP to address the process for implementing design changes, including field changes, on the RFC Submittal. Design changes will be subject to the QA and QC measures and procedures, commensurate with those applied to the original design or that portion of the PROJECT under consideration for change. WSDOT will obtain CITY concurrence for all design changes affecting CITY Facilities or permitted interests prior to implementation of the change.

4.10.10. WSDOT will require the Design Builder to document all revisions made to the Approved Plans and design documents during the construction phase of the PROJECT by preparing new, revised or supplemental documents (including plan sheets, technical specifications, calculations, reports, and narratives). The new, revised, and supplemental documents will meet all requirements for the original documents. Every revision will be assigned a number. The revision number will be assigned sequentially, with each change in a document or plan sheet identified by the revision number. The assigned number will be located both at the location of the change on the sheet and in the revision block of the document, along with an explanation of the change. Revised RFC Submittals will be reviewed by the CITY Project Construction Engineer, who will coordinate with CITY departments as required depending upon the nature of the changes and initiate amendment of the Street Use Permit if required, consistent with applicable law.

5. Construction Management, Inspection, and Acceptance Procedures

5.1. The following procedures govern construction management, inspection, and acceptance processes of CITY Facilities constructed by WSDOT for the PROJECT and address fulfillment of the CITY's regulatory role under SMC Title 15. The procedures will be used for Design-Bid-Build Contract and Design-Build Contract project delivery methods.

5.2. WSDOT and the CITY agree to work cooperatively with each other and in good faith to implement these procedures to attempt to accomplish the following:

5.2.1. Enable timely and expeditious execution of the PROJECT in accordance with the agreed standards on schedule.

5.2.2. Facilitate thorough review of all stages of construction to ascertain that CITY Infrastructure constructed by WSDOT is in compliance with CITY policy and regulations, and standards and specifications.

5.2.3. Facilitate communications and activities pertaining to construction management, inspection and contract administration, including communications in the field, roles and responsibilities, review of proposed changes to Approved Plans and other submittals by the contractor or Design Builder, processes for pre-acceptance inspections, and acceptance of infrastructure.

5.2.4. Enable both WSDOT and the CITY to comply with all laws and procedures governing their actions.

5.3. WSDOT will develop, advertise and award multiple construction contracts to fulfill its PROJECT responsibilities. WSDOT's construction contracts will be administered in accordance with the then-current Washington State Department of Transportation Standard Specifications for Road, Bridge, and Municipal Construction and WSDOT's construction contract forms and documents.

5.4. WSDOT will construct CITY Infrastructure in the fulfillment of its PROJECT responsibilities and may also construct CITY Infrastructure on the CITY's behalf by reimbursable Task Orders. Construction of CITY Infrastructure will conform to CITY laws, rules, regulations and standards.

5.5. WSDOT will designate STATE Project Engineers to administer its construction contracts for the PROJECT and to ensure work is constructed in accordance with the Approved Plans and the terms and conditions of the Street Use Permits and GCA 6486, UT 01474, and UT 01476. WSDOT may use consultant(s) in providing some or all of construction management services. The CITY may consult with and make inquiries of the STATE Project Engineer or designee, attend all meetings and have access to all documentation pertinent to CITY Facilities and performance of its regulatory responsibilities.

5.6. The CITY will provide a City Construction Project Engineer tasked to: (1) coordinate the activities of CITY inspectors, crews and consultants; (2) communicate with the

STATE Project Engineer regarding regulatory compliance, changes in design, the CITY's participation in reviewing contractor submittals, and the use of CITY resources; (3) coordinate the final inspection and acceptance of CITY Infrastructure with representatives from CITY departments; and (4) report on construction progress and issues to CITY department managers.

5.7. The CITY will provide qualified staff and/or consultants to fulfill its inspection, construction, and administration responsibilities during construction. CITY staff will work under the general direction of the City Construction Project Engineer CITY crews, technical and inspection staff and consultants will work in an integrated manner with STATE Project Engineer staff to perform construction related tasks and evaluate conformity of construction of CITY Infrastructure with the Approved Plans. CITY inspectors and compliance officers will immediately notify the STATE Project Engineer or designee of any compliance issues.

5.8. For each PROJECT contract, WSDOT will provide the CITY with a detailed contract execution schedule that includes CITY Infrastructure work, and will coordinate with the CITY to schedule utility shutdowns, cut-overs, and other CITY crew work and inspections. At a minimum, schedule updates will be provided on a monthly basis. Schedule changes will be promptly communicated to the CITY as soon as they become known by WSDOT.

5.9. Contractor Submittals. Within thirty (30) days of contract execution, WSDOT will prepare or cause its contractor(s) to prepare and submit a preliminary Submittal Control Document for each construction contract for use by WSDOT and the CITY to plan and manage staffing requirements for review of contractor submittals relating to construction of CITY Infrastructure and fulfillment of CITY permit requirements. The Submittal Control Document will include material submittals pursuant to CITY material standards and the City of Seattle Standard Specifications for Road, Bridge and Municipal Construction. The Submittal Control Document is a construction management tool that will be expanded and elaborated as each contract progresses.

5.9.1. WSDOT will forward electronic copies of submittals for CITY review to the City Construction Project Engineer who will assign primary, and if appropriate, secondary CITY reviewers. Hard copies will be provided upon request.

5.9.2. For Design-Bid-Build components of the PROJECT, the City Construction Project Engineer will return City review comments on all documents included in the approved Submittal Control Document within ten (10) business days of the CITY's receipt, unless the CITY of Seattle Standard Specifications for Road, Bridge and Municipal Construction allow for a longer review period, and respond in a timely manner to requests for information. The CITY will notify WSDOT if a submittal will require longer than ten (10) Business Days to review.

5.9.3. For Design-Build components of the PROJECT, the CITY Construction Project Engineer will return CITY review comments within five (5) working days to WSDOT. WSDOT will track all submittals and discuss the status of active submittal reviews with the City Construction Project Engineer on a weekly basis. The City Construction Project Engineer will act as a liaison between WSDOT and the CITY departments in resolving issues regarding disposition of submittal comments.

5.9.4. CITY reviewers will send their comments on submittals to the City Construction Project Engineer. The City Construction Project Engineer will consolidate comments if necessary and send comments to WSDOT for dissemination back to contractors. For design submittals on Design-Build Contracts, comment responses will be provided to CITY reviewers along with the revised design for submittals that need to go through another round of review pursuant to Section 4 above.

5.9.5. The CITY is responsible for providing submittal review comments within the allotted time. If additional time is needed to respond, the City Construction Project Engineer will discuss this on a case-by-case basis, and obtain WSDOT's approval for a time extension in advance of the due date.

5.9.6. Pursuant to CITY review comments, the STATE Project Engineer will provide disposition instructions for all submittals to its contractors.

5.10. Access to SPU and SCL Facilities. WSDOT will provide the CITY with twenty-four (24) hour, seven (7) days a week, safe access to CITY Facilities in all construction and staging areas for the purpose of operation, maintenance, and emergency response. CITY staff will notify WSDOT in advance of their arrival on site except in the case of emergency. In the case of emergencies, safety practice dictates that CITY staff will make every effort to notify the STATE Project Engineer immediately upon entering a PROJECT construction site or staging area.

5.11. Testing and Inspection. WSDOT will develop (or in the case of Design-Build Contracts, require its contractor to develop) a quality management plan to include an inspection and test plan describing all the proposed quality assurance inspections and tests to be performed throughout the construction process. Activity-specific inspection and test plans will be prepared during the preparatory phase for each definable feature of work. WSDOT will provide the CITY with the opportunity to review the quality management plan. The CITY will review and comment on the inspection and test plan, and any other provisions regarding CITY Infrastructure.

5.11.1. WSDOT will form quality assurance or verification teams as appropriate for the contract type. The CITY will have representation on these teams. The quality team for each contract will hold meetings to review test and

inspection results and address and rectify issues relating to inspection, substandard material quality, adjustments needed for inadequate quality assurance and quality control processes, test results demonstrating that tolerance standards are not met, disparities between quality assurance and quality verification test data, future quality concerns, and any other issues raised by WSDOT and the CITY regarding quality of construction of CITY Infrastructure.

5.11.2. WSDOT will provide the CITY with timely notice prior to commencement and completion of all material stages of CITY Infrastructure work and will invite the CITY to inspect such work upon completion of any material stage. The CITY on-site inspector will be invited to the weekly construction meeting prior to any work being started on CITY Facilities. WSDOT will provide at least five (5) Business Days notice for each inspection. The CITY will submit a complete list of any concerns or deficiencies to WSDOT within ten (10) Business Days after the date of any inspection. WSDOT will timely address each comment or issue presented by the CITY to the CITY's satisfaction. Both WSDOT and the CITY agree to act as expeditiously as possible to assure a timely resolution of any deficiencies.

5.11.3. Throughout construction of the PROJECT, CITY staff and consultants will assist the STATE Project Engineer in evaluating contract compliance of CITY Infrastructure built by WSDOT's contractors. WSDOT will coordinate with the CITY to designate mandatory inspection points (hold points) for CITY Infrastructure. No work will proceed beyond a hold point until inspection has been performed or the option to inspect has been waived by a letter or e-mail from the City Construction Project Engineer to the STATE Project Engineer. WSDOT will provide notification to the CITY twenty-four (24) hours in advance of completion of work to be inspected by the CITY so that the CITY may perform inspection if desired.

5.11.4. The CITY will notify WSDOT promptly of any Defective Work observed by CITY inspectors.

5.11.5. Testing of CITY Infrastructure will conform to the requirements of the CITY Standard Specifications for Road, Bridge and Municipal Construction. The CITY may observe testing of materials and inspect installation of CITY Infrastructure and provide a written evaluation to the STATE Project Engineer regarding whether the materials or facilities tested meet with the requirements of the Approved Plans. WSDOT will endeavor to provide five (5) Business Days notice of all testing required by the Approved Plans, and the CITY will be provided a copy of certified test reports of materials or installation of CITY Infrastructure. The CITY will exercise its right to approve or reject construction or materials of CITY Infrastructure that are deficient, or that (1) do not meet with the requirements of the Approved

Plans; (2) are not constructed in accordance with CITY-issued permits; (3) have defects in material and workmanship; and/or (4) have defects in design(s).

5.11.6. Except as otherwise agreed, all deficiencies will be reported through the STATE Project Engineer to the respective contractor's appropriate representative for resolution. Appropriate communications will be determined for each situation. CITY inspectors will not directly communicate with WSDOT's contractors without the express authorization of the STATE Project Engineers except when public or worker safety is in question.

5.11.7. WSDOT will ensure that underground CITY Facilities are jointly inspected and any deficiencies corrected prior to final grading and placement of overlying permanent pavement.

5.12. Change Management. The following procedures will apply to work affecting CITY Facilities or work subject to CITY-issued Street Use Permits.

5.12.1. Changes necessitated by design deficiencies or unforeseen site conditions will be managed in accordance with WSDOT contracts and standard procedures. When changes are required to the Approved Plans, the STATE Project Engineer will consult with the City Construction Project Engineer to determine CITY review requirements. When CITY review is required, the City Construction Project Engineer will coordinate the timely review of the contract modification and supporting documentation. In any case, the STATE Project Engineer will obtain CITY approval prior to implementing any change order affecting CITY Facilities or work subject to CITY issued Street Use Permits.

5.12.2. Within three (3) Business Days of receiving a proposed change to Approved Plans for any CITY Infrastructure work, WSDOT or its contractor will transmit the scope for the proposed change to the CITY for review, comment, and written approval. Before executing the change order, in a non-emergency situation and unless otherwise agreed by WSDOT and the CITY, WSDOT will allow the CITY sufficient time to review, comment and approve or disapprove in writing changes to the Approved Plans. The CITY will assign any change a high priority and provide a timely response commensurate with the complexity of the proposed change.

5.12.3. The CITY may request additions and changes to the construction contract through WSDOT. WSDOT will comply with the requested changes provided that the changes are within the general scope of the PROJECT and comply with the PROJECT permits, State and/or Federal law and applicable rules, codes and/or regulations. WSDOT retains the right to reject requested changes if incorporating such changes could result in unwarranted additional

cost to the STATE or a delay in the PROJECT schedule. Such additions and changes may lead to change orders, or they may lead to Betterments or New Work. If the CITY and WSDOT agree to implement the change, the requesting CITY department and WSDOT will document the request in writing by completing and signing a concurrence letter. The CITY agrees to reimburse WSDOT for the costs associated with Betterments and additional New Work.

5.12.4. WSDOT will make available to the CITY all change order documentation that affects CITY Infrastructure.

5.13. Special Construction Considerations.

5.13.1. SCL. The following procedures apply specifically to SCL Facilities during construction.

5.13.1.1. Electrical Clearance Procedures. WSDOT contractors may need to obtain electrical clearances when it is necessary to de-energize electrical lines or system appurtenances. Individual clearance holders will be required to go through a training session based on SCL's System Operation Center (SOC) guidelines to familiarize themselves with SCL requirements for holding and maintaining a clearance on the SCL electrical system. SCL will provide WSDOT's contractor an outline of procedures and guidelines to follow at all times during the clearance and WSDOT will ensure that such guidelines and procedures are followed. Chief Dispatcher, Dana Wheelock or his designee at 206-706-0241, will be the contact for SCL. SCL's Power Line Clearance Coordinator reserves the right to review the contractor crew's qualifications and notify WSDOT. WSDOT will require the contractor to replace those sub-contractors who do not meet qualifications required under state law.

5.13.1.2. Advance Notice of Service Outages. WSDOT will submit a request in writing, thirty (30) calendar days prior to any necessary outages specifying the electrical boundaries, the date the outage will begin and the date the facilities can be re-energized and put into/back into service. SCL will accommodate such requests unless prohibited by operational necessity, a previously scheduled outage conflicts with the outage requested by WSDOT, or emergency conditions prohibit the outage or limit the availability of crews. If denied, SCL will assist WSDOT in finding another outage window. If granted, SCL will outline any conditions related to such outage to WSDOT.

5.13.2. SPU. The following special considerations apply to construction work associated with SPU Facilities.

5.13.2.1. Testing Specific to SPU Facilities. SPU will perform periodic inspection on joint bonding installed on new water mains and test isolation couplings at connections of new water mains to existing water mains. SPU will also perform tests on all cathodic test stations on the new water mains for electrical continuity. SPU will obtain water samples from the new water mains after they have been chlorinated and flushed by a WSDOT contractor in accordance with City Standards and will perform tests on the water sample for purity.

5.13.2.2. Water main connections. SPU will perform the pipe work necessary to connect new water mains or relocated water mains to the existing water system pursuant to CITY Standard Plan No. 300. WSDOT will provide SPU with at least fourteen (14) calendar days notice prior to scheduling any SPU crew work and will provide longer notice to the extent possible through regular construction scheduling meetings. SPU will make every effort to complete the work within twenty-four (24) hours of the time WSDOT has requested the work to be done. WSDOT contractors will be required to perform site preparation and restoration work to support SPU crews, including the provision of traffic control.

5.13.2.3. New drainage and wastewater system connections. SPU will core drill and install all tees pursuant to CITY standard specification 7-17.3(2)C, Plugs and Connections. WSDOT will notify SPU fourteen (14) calendar days prior to the need for this work. SPU will make every effort to complete the work within twenty-four (24) hours of the time WSDOT has requested the work to be done. WSDOT contractors will be required to perform site preparation and restoration work to support SPU crews, including the provision of traffic control.

5.13.2.4. Valve operation and water system shutdown. SPU will perform all water valve operations, shutdowns, and disconnections of its water system to its affected customers and will notify these customers of such planned service interruptions.

5.14. Acceptance. WSDOT will notify the CITY upon completion of the construction of CITY Infrastructure and will invite the CITY to participate in a joint pre-final inspection of the completed work.

5.14.1. The CITY will timely inspect the completed CITY Infrastructure and will exercise its right to approve or reject construction or materials which are deficient, or which deviate from the Approved Plans or any CITY-approved revisions to the Approved Plans. The CITY will submit a written response within ten (10) Business Days of the date of the pre-final inspection, notifying WSDOT that CITY Infrastructure has been constructed in accordance with the Approved Plans, or rejecting the completed CITY

Infrastructure. In the event that the completed CITY Infrastructure is rejected, such response will include written notice of any known deficiencies and Defective Work so that WSDOT can use the response in its preparation of a contract punch list.

5.14.2. WSDOT will address each deficiency identified by the CITY during the pre-final inspection and will resolve all deficiencies and Defective Work to comply with the Approved Plans, or any approved revisions to the Approved Plans. If disagreements arise between the CITY and WSDOT on what constitutes Defective Work or a deficiency or whether the CITY Infrastructure meets agreed upon requirements, the disagreement will be resolved using the dispute resolution provisions of GCA 6486, UT 01474, or UT 04176. The CITY will assist the STATE Project Engineer in determining appropriate remedies for each deficiency and for Defective Work. Both WSDOT and the CITY agree to act as expeditiously as possible to assure a timely resolution of deficiencies and Defective Work.

5.14.3. Once the STATE Project Engineer determines that WSDOT has remedied all deficiencies and Defective Work identified during the pre-final inspection, the STATE Project Engineer will invite the CITY to participate in a joint final inspection of the completed CITY Infrastructure. The CITY will submit a written response within ten (10) Business Days of the date of the final inspection notifying WSDOT that CITY Infrastructure has been constructed in accordance with the Approved Plans, or notifying WSDOT of any remaining deficiencies or Defective Work.

5.14.4. Acceptance of CITY Infrastructure may be executed in stages. Letters of Acceptance and notification of interim use and operation will be executed in accordance with Section 15, Final Inspection and Project Acceptance of GCA 6486.

6. Redlines and Record Drawings.

6.1. For PROJECT work that WSDOT constructs including work performed on behalf of the CITY through a Task Order, WSDOT shall maintain one set of Approved Plans as the official contract drawings and provisions to which WSDOT shall make drawings and notations in either red ink or red pencil to show the constructed configuration of all infrastructure that deviates from the design and contract requirements shown in the Approved Plans as typically recorded pursuant to WSDOT and City of Seattle standard practices. These documents shall be referred to as the red-line plans.

6.2. The red-line plans shall be kept current throughout construction with accurate and comprehensive information detailing the constructed configuration of the infrastructure. The red-line plans shall reflect the same level of detail as the Approved

Plans, and shall provide the drawing accuracy necessary for the CITY and private utility purveyors to locate their respective utilities in accordance with State law.

6.3. The STATE Project Engineer and the City Construction Project Engineer shall jointly review the red-line plans monthly to evaluate whether the red-line plans reflect a current, accurate and comprehensive record of the constructed configuration of the infrastructure. If the STATE Project Engineer or the City Construction Project Engineer determines that the Red-Line Plans are not current, accurate or comprehensive, WSDOT shall immediately revise the red-line plans to remedy deficiencies.

6.4. Prior to placing CITY Infrastructure into service during the course of construction, WSDOT shall provide the CITY with color photocopies of portions of the red-line plans showing the constructed configuration of the CITY Infrastructure being placed into service.

6.5. WSDOT shall submit one color set of the completed red-line plans prior to the Parties executing a Letter of Acceptance provided for in Section 15 of GCA 6486.

6.6. All record drawings for CITY Infrastructure shall comply with the digital and graphical standards of the City of Seattle Inter-Departmental CADD Standards.

6.7. A transmittal of record drawings shall include two (2) full-scale bond copies plus the digital files meeting with the requirements established above.

7. Task Order Invoicing and Payment

7.1. Invoicing. The PARTIES shall invoice each other monthly based on work progress and cost expenditures. Invoices shall be submitted to the receiving PARTY within thirty (30) calendar days after the end of the month in which the work was performed, with the exception of CITY invoicing to the STATE which may occur within sixty (60) calendar days after the end of the month in which the work was performed.

7.1.1. Invoices shall include a reference to the Task Order under which the invoiced services were authorized, the billing period, and a summary of the work performed during the billing period, total value of the invoice, total amount invoiced to date, the budgeted amount, and amount remaining. Invoices will provide an appropriate level of supported detail for the agreed approach to reimbursement. Actual cost reimbursement will be by unit cost or time and materials.

7.1.1.1. In addition to requirements of section 7.1.1, unit cost reimbursement will include a schedule of values, percent complete for each bid item, total quantity for each bid item, itemized list of materials-on-hand quantities, and itemized indirect charges/rates as appropriate.

7.1.1.2. In addition to requirements of Section 7.1.1, for work performed on a time and materials basis, the invoice will include a list of personnel, and equipment employed to complete the invoiced work and the itemized hours and rates for each person and piece of equipment, itemized materials list with cost and quantity used, and itemized indirect charges/rates as appropriate.

7.1.1.3. Billings for non-salary costs, directly identifiable with the PROJECT, shall include an itemized listing of the charges. The PARTIES shall retain copies of original invoices, expense accounts, and miscellaneous supporting data and shall supply copies of the original supporting documents and/or accounting records to the PARTY upon request.

7.1.2. To ensure prompt payment, the PARTIES will mail via United States Postal Service invoices and appropriate supporting materials to the Designated Representatives as described in Section 25 of GCA 6486 or in the appropriate Task Order.

7.1.3. Invoices must be signed by an authorized representative of the issuing PARTY who shall verify that the invoice is accurate, the services have been purchased or the work has been performed, and that the costs shown have been reasonably incurred in accordance with this Agreement, UT 01476 (SCL Agreement) or UT 01474 (SPU Agreement).

7.2. Reimbursement. Monthly progress payments for reimbursable costs under this Agreement, UT 01476 (SCL Agreement) or UT 01474 (SPU Agreement). shall be made upon the completion and documentation of the work in support of invoices as described in Section 7.1 above. Within forty-five (45) calendar days after a PARTY'S receipt of any complete and accurate invoice, the invoiced PARTY shall remit the reimbursement. The PARTIES will work cooperatively to resolve issues related to the accuracy of these invoices so as to avoid any delay in payment. Any invoiced expenditure unsupported by appropriate documentation shall be identified in writing and not included in the reimbursement; provided, however, that the presence of unsupported items within an invoice shall not delay payment of those items that are supported by appropriate documentation. It is agreed that any partial payment under a Task Order will not constitute agreement as to the appropriateness of services and that, at the time of final audit; all required adjustments will be made and reflected in a final payment.

7.3. In addition, the PARTIES may require other financial documents to verify that the amounts invoiced are included within the budgeted scope of each Task Order, including, but not limited to, (1) work statements or payroll records, (2) invoices for materials and supplies, (3) statements from professionals for services rendered, (4) certifications by the PARTIES that materials and services are satisfactorily rendered,

and (5) itemized listings of the charges supported by copies of original bills, invoices, expense accounts, and miscellaneous supporting data retained by the PARTIES.

7.4. Monitoring and Reporting of Progress. The PARTIES are committed to working cooperatively and efficiently and will closely monitor the time required to complete work products consistent with the scope of work and budget for each Task Order. The PARTIES shall provide clear, accurate and detailed monthly progress reports to each other by the 20th of the succeeding month. The PARTIES shall further refine progress reporting, accounting and program management systems as they agree, in order to ensure useful and descriptive information that complements each PARTY'S project control system. The PARTY performing work authorized in a Task Order shall provide active, ongoing oversight to ensure that public funds are expended efficiently.

7.5. Reconciliation. The PARTIES agree to monitor and reconcile the actual versus estimated Task Order work and costs on a quarterly basis. The PARTIES will negotiate additional funding or a reduction in services relating to a Task Order to the extent that such work cannot be performed within the estimate of compensation and expense reimbursement due for the services delivered and work performed. Each PARTY will rely on information contained in the progress reports to identify changes in the work as reported on by the other PARTY in order to have the opportunity to take corrective action or clarify assumed work efforts.

7.6. The PARTIES agrees to submit a final invoice to the PARTY within ninety (90) calendar days after completion of a Task Order.

7.7. Availability of Records. All PROJECT records in support of all costs incurred and actual expenditures kept by the PARTIES shall be maintained in accordance with procedures prescribed by the Washington State Auditor's Office and the applicable Federal funding agencies. The records shall be open to inspection by the PARTIES and the Federal government during normal business hours, and shall be retained and made available for such inspection for a period of not less than six (6) years from the final payment of any federal aid funds to the PARTIES. Copies of said records shall be furnished to the PARTIES and/or the Federal government upon request. This requirement shall be included in all third-party contracts related to the work entered into by the CITY to fulfill the terms of this Agreement, UT 01476 (SCL Agreement) or UT 01474 (SPU Agreement).

7.8. Audit. If an audit is requested by the PARTIES or required by any applicable Federal agency requirements, the PARTIES agree to cooperate fully with any such audit and provide documentation as is requested in support of all costs.

MEMORANDUM OF AGREEMENT
NO. GCA 6486
SR 99 ALASKAN WAY VIADUCT
PROPERTY, ENVIRONMENTAL REMEDIATION, DESIGN REVIEW, PERMITTING, AND CONSTRUCTION COORDINATION AGREEMENT
FOR SR 99 BORED TUNNEL PROJECT

EXHIBIT C
TASK ORDER TEMPLATE

Washington State Department of Transportation

SR 99 Proposed Bored Tunnel Project

Task Order

Task Order Title [enter short title for reference]	Task Order Number WSDOT-001 [example] [Insert "Amendment" here if this TO is an amendment to a previous TO]
Requesting Agency [enter name of agency requesting services]	Requesting Agency Account Number [enter accounting numbers/codes]
Service Agency [enter name of agency providing services]	Service Agency Account Number [enter accounting numbers/codes]
Notice to Proceed Date [enter start date]	Task Order Amount $ [enter authorized task order amount]
Completion Date [enter completion or termination date]	

Task Order Provisions

1.0 The Requesting Agency and Service Agency shall issue, conduct and administer this Task Order in compliance with all the provisions of the following Memoranda of Agreement between the State of Washington Department of Transportation and the City of Seattle: GCA 6486, UT 01474 and UT 01476.

2.0 The provisions of this Task Order can only be revised through a mutually executed amendment to this Task Order.

3.0 Background

[Insert narrative on the need for this scope of services]
[If this Task Order amends a previous task order, explain the circumstances and need for amendment]
[Denote whether City services are in direct support of known WSDOT contract work and if so which WSDOT contract]
[Denote whether WSDOT services are intended to fulfill the City's obligations to the Project or are a betterment opportunity to improve City facilities in conjunction with the project]
[Reference all other relevant project contracts, task orders and work]

4.0 Scope of Services

[Provide a narrative defining the scope of services]

[Reference any attached graphics, plans, specifications, photos or other materials that aid in defining the scope of services]
[List any services specific to the administration of this Task Order including services related to accounting, and measurement and payment services to be provided by the Service Agency]

5.0 Schedule

[Insert schedule milestone dates including the required completion date]
[Reference any attached schedule]

6.0 Task Order Amount

[Reference and attach detailed estimates for the contract amount, as may be appropriate]

7.0 Assumptions and Exclusions

[Insert any assumptions and exclusions pertinent to the development of the scope of services, schedule, and/or task order amount]

8.0 Designated Representatives

WSDOT Representative & Phone Number:
City Representative & Phone Number:

In consideration of the provisions contained herein, or attached and incorporated and made part hereof, the Requesting Agency and the Service Agency have executed this Task Order as of the last date written below.

Requesting Agency [enter agency name]	Service Agency [enter agency name]
[enter name of agency signatory] [enter title of agency signatory]	[enter name of agency signatory] [enter title of agency signatory]
Date	Date

EXHIBIT D TO MEMORANDUM OF AGREEMENT NO. GCA 6486

1. Relocated surface street within existing City right-of-way between South King Street and Battery Street consisting of the following three segments: 1) Relocated and reconstructed Alaskan Way between King Street and Pike Street with the necessary elements to accommodate efficient and safe cross traffic movements; 2) a new surface street climbing the hill west of the Pike Place Market from the intersection of Pike Street and Alaskan Way to the intersection of Blanchard Street and Elliot Avenue, including a bridge crossing over the BNSF mainline; 3) final connections from Alaskan Way to Elliott and Western Avenues between Blanchard Street and Battery Street. These streets will be designed to serve all anticipated users, including automobiles, transit, freight, bicycles and pedestrians

2. Demolition, salvage and recycling of the existing Alaskan Way Viaduct and access ramps between S King Street and the Battery Street tunnel;

3. Demolition of the on and off ramps to the existing viaduct at Columbia and Seneca Streets and associated restoration of Columbia and Seneca Streets between Alaskan Way and First Avenue.

4. Replacement, rehabilitation or protection-in-place of the Marion Street pedestrian bridge, as determined feasible, consistent with Item #1 above, and in consideration of the demolition method(s) of the Alaskan Way Viaduct in Item #2 above.

5. North and south tunnel ventilation buildings which will be designed in accordance with Section 8 – Urban Design, as stipulated in this agreement;

6. Re-establishment of the City street grid in the vicinity of the portals: John, Thomas and Harrison Streets between Dexter Avenue N and 6th Avenue N; Denny Way between Dexter Avenue N and 6th Avenue N; S. Dearborn Street between Alaskan Way and 1st Avenue S;

7. Battery Street Tunnel decommissioning, including any associated restoration of Battery Street between the Denny Way tunnel portal and Elliot Avenue that is necessary specifically due to the tunnel decommissioning method;

8. Total WSDOT budget allocated for PROGRAM elements listed in items 1 through 7 above is estimated at: $380 million.

NO. GCA 6486

Exhibit E

Advisory Committee on Tolling & Traffic Management

Charge: Make advisory recommendations to WSDOT, the Governor, the Legislature, the Transportation Commission, the Federal Highway Administration (FHWA), the Seattle City Council, and the Seattle Mayor on strategies for: (1) tolling the SR99 bored tunnel , (2) minimizing traffic diversion from the tunnel due to tolling, and (3) mitigating traffic diversion effects on city streets and I-5. These recommendations may be implemented by the State, City of Seattle, Port of Seattle, and/or King County as appropriate. Authority for tolling will require action by the State Legislature, while tolling rates are within the purview of the Transportation Commission.

Staffing: The Advisory Committee will be staffed by managers or policy level staff from WSDOT, SDOT, Port of Seattle, King County, and Council central staff. Staffing will be supported by technical staff from each of the agencies and/or consultant support. The role of staff will be to manage the Advisory Committee's work plan, develop a schedule, frame issues, and review and format technical data for the Advisory Committee's review. WSDOT and the City of Seattle will manage resources from the state's Alaskan Way Viaduct and Seawall Replacement Program budget to cover mutually agreeable staffing and consultant costs to support the Advisory Committee. State and City will jointly facilitate these meetings.

Membership: The Advisory Committee will be comprised of up to 15 members. The Mayor; Seattle City Council; and WSDOT will each appoint one-third of the members. All members will be confirmed by Council. Advisory Committee membership should represent the following types of interests: Freight, retail, drivers, labor, bicycle and pedestrian interests, large employer, waterfront business, adjacent and affected neighborhoods, transit riders, low-income, and others.

Timeline: The Advisory Committee will begin work in March 2011, and it will submit its initial tolling and diversion minimization recommendations by June 2012. Interim milestones will be established by the staff in conjunction with the Advisory Committee members.

The Advisory Committee is expected to continue working to refine its analysis and recommendations through December 2015 (when the deep bored tunnel is scheduled to open to traffic and toll implementation begins). The Advisory Committee will continue its work for up to one year after tolling begins to review the effects of the implemented tolling and diversion minimization strategies and to make further recommendations.

Scope of Work:

The work of the Advisory Committee will take place through an iterative process of reviewing financial goals, assessing the impact of different tolling strategies on traffic using the SR 99 bored tunnel, and evaluating a range of strategies to minimize diversion. The tasks of the committee will include:

1. Review anticipated traffic impacts on city streets and I-5 for different tolling scenarios.

2. Explore ways to:
    a. Refine the tolling strategy for the SR 99 bored tunnel, including considering variable toll rate, and regional tolling and/or tolling of other state and city facilities.
    b. Reduce the level of toll revenue to the bored tunnel project by identifying alternative funding source(s).
    c. Optimize the tolling strategy for the SR 99 bored tunnel to balance accomplishing state funding goals while minimizing diversion of traffic.

3. Assess various strategies for minimizing and mitigating adverse effects of traffic diversion from tolled SR99 onto city streets through optimizing traffic flows and/or restricting or limiting traffic, including, but not limited to:

    a. Setting priorities for street use by time of day for various users (cars, trucks, bicycles, pedestrians, transit, parking consistent with City's complete streets policy goals;
    b. Identify opportunities for traffic calming, and other restrictions on certain modes of travel;
    c. Creating "transit first" policies through transit priority streets and other methods to improve transit speed and reliability;
    d. Using other traffic demand management measures;
    e. Funding enhanced transit services and vanpools.

4. Assess various strategies for minimizing and mitigating diversion of traffic onto I-5 and other state facilities through optimizing traffic flow and/or restricting or limiting traffic, including, but not limited to:

    a. Modifying I-5 operations, including the express lanes and on and off-ramps in the City;
    b. Extending the use of intelligent transportation systems on I-5 through the City.

5. Develop specific transportation plans for the north and south portal areas to more specifically identify street uses, traffic flows, and treatments. This work should also implement other recommendations of the Center City Strategy.

----------End of Replacement Project Financial Plan Appendices----------