Puget Sound Gateway Program
SR 167 Completion and SR 509 Completion Projects

Joint Steering Committee
December 7, 2016

CRAIG J. STONE, PE     GATEWAY PROGRAM ADMINISTRATOR
STEVE FUCHS, PE         SR 167 PROJECT MANAGER
OMAR JEPPERSON, PE      SR 509 PROJECT MANAGER
Agenda

• Welcome & Introductions
• Process Review
• Project Scenarios and Traffic Analysis Results
• Review Forward Compatibility
• Review Updated Cost Estimates
• Discuss FASTLANE Grant Application
• Recommend Preliminary Preferred Scenario
• Conclusion and Next Steps
Practical Design

• **WSDOT Executive Order 1096:**
  - WSDOT will design transportation infrastructure related solutions that are targeted to **address the essential needs of a project, not every need.** In doing so, designs are developed with criteria that achieve stated performance for the least cost...

• **ESHB 2012:**
  - (1)(a) For projects identified as Connecting Washington projects…The legislature encourages the department to continue to institutionalize innovation and collaboration in design and project delivery with an eye toward the most efficient use of resources. **In doing so, the legislature expects that, for some projects, costs will be reduced during the project design phase due to the application of practical design**
Puget Sound Gateway Program Guiding Principles

1. Support regional mobility to provide efficient movement of freight and people
2. Improve local, regional, state and national economic vitality
3. Provide a high level of safety
4. Support local and regional comprehensive land use plans
5. Minimize environmental impacts and seek opportunities for meaningful improvements
6. Create solutions that are equitable, fiscally responsible, and allow for implementation over time
7. Support thoughtful community engagement and transparency
Puget Sound Gateway Program

Total funding is $1.87 billion; this amount assumes $310 million local match and tolling funding.
Joint Steering Committee Work Plan

December 2015
- Determine Needs
- Define Performance Metrics
- Develop & Refine Scenarios

February
- We are here

June - October
- Recommend Preliminary Preferred Scenario
- Review & Environmental Check-in

December
- Recommend Const. & Imp. Plan

April 2017

September 2017
Scenario Refinement Process

SR 509 Process

1. CLOSE THE GAP
   - $712M
   - 2A
   - 3A
   - 4A
   - 4A

2. Preferred Scenario
   - $1897M
   - EIS

SR 167 Process

1. CLOSE THE GAP
   - $973M
   - 2A
   - 2C
   - 2D
   - 2B

2. Preferred Scenario
   - $1933M
   - EIS+
   - 4A
   - 4A
   - 4A
   - 4A

## SR 167 Scenario Comparison Table

### Scenario Comparison Table - SR 167 Completion Project

<table>
<thead>
<tr>
<th>Performance Category</th>
<th>Baseline Performance Metrics</th>
<th>Contextual Performance Metrics</th>
<th>Cost</th>
</tr>
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<tbody>
<tr>
<td>Mode</td>
<td>Mobility</td>
<td>Economic Vitality</td>
<td>Safety</td>
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<tr>
<td></td>
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<td>Other</td>
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| PERFORMANCE METRIC | No Build | SR 08: Baseline Performance Metrics (SR 08 to SR 16) | SR 08: Baseline Performance Metrics (SR 08 to SR 16) | SR 08: Baseline Performance Metrics (SR 08 to SR 16) | SR 08: Baseline Performance Metrics (SR 08 to SR 16) | SR 08: Baseline Performance Metrics (SR 08 to SR 16) | SR 08: Baseline Performance Metrics (SR 08 to SR 16) | SR 08: Baseline Performance Metrics (SR 08 to SR 16) | SR 08: Baseline Performance Metrics (SR 08 to SR 16) | SR 08: Baseline Performance Metrics (SR 08 to SR 16) | SR 08: Baseline Performance Metrics (SR 08 to SR 16) | SR 08: Baseline Performance Metrics (SR 08 to SR 16) | SR 08: Baseline Performance Metrics (SR 08 to SR 16) | SR 08: Baseline Performance Metrics (SR 08 to SR 16) | SR 08: Baseline Performance Metrics (SR 08 to SR 16) |
|---------------------|----------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------------|
|                     | Full Connectivity at I-5 with Split Diamond at Valley and Meridian | Limited Connectivity at I-5 with Split Diamond at Valley & Meridian | Moderate Connectivity at I-5 w/Full Meridian Connectivity |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
## SR 509 Scenario Comparison Table

**Scenario Comparison Table - SR 509 Completion Project**

<table>
<thead>
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<th>Contextual Performance Metrics</th>
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<tr>
<td>Scenario 3A - Moderate Connectivity</td>
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<tr>
<td>Scenario 4A - Full Connectivity</td>
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</table>

**Performance Metrics**

- Essential Performance Metrics
- Contextual Performance Metrics
- Cost

**Scenario Comparison Table Details**

- **Mobility**
  - **SR 509 Performance**: Performance of SR 509
  - **No Build**: No Build
  - **Scenario 3A - Moderate Connectivity**: Moderate Connectivity
  - **Scenario 4A - Full Connectivity**: Full Connectivity

- **Economic Vitality**
  - **SR 509 Performance**: Performance of SR 509
  - **No Build**: No Build
  - **Scenario 3A - Moderate Connectivity**: Moderate Connectivity
  - **Scenario 4A - Full Connectivity**: Full Connectivity

- **Safety**
  - **SR 509 Performance**: Performance of SR 509
  - **No Build**: No Build
  - **Scenario 3A - Moderate Connectivity**: Moderate Connectivity
  - **Scenario 4A - Full Connectivity**: Full Connectivity

- **Environmental Impact**
  - **SR 509 Performance**: Performance of SR 509
  - **No Build**: No Build
  - **Scenario 3A - Moderate Connectivity**: Moderate Connectivity
  - **Scenario 4A - Full Connectivity**: Full Connectivity

**Date**: 12/07/16

**Preliminary Cost Review**

**WSDOT**
## Key Questions

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<tr>
<th>Program Level</th>
<th>1. How many lanes are included on SR 167 and SR 509?</th>
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<tr>
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<td>2. What level of tolling is considered?</td>
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<td>3. How are lanes managed?</td>
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<table>
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<th>Project Level</th>
<th>4. What degree of forward compatibility should be included in the design?</th>
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<tr>
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<td>5. Degree of potential impact to I-5?</td>
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<td>6. Where are connections most important?</td>
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<td>7. How is south access to the airport accommodated? (SR 509)</td>
</tr>
<tr>
<td></td>
<td>8. How is access to the Port of Tacoma best accommodated? (SR 167)</td>
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SR 167 Scenarios & Traffic Analysis
Scenario 2C: Full Connectivity at I-5 with Split Diamond Interchange at Valley Avenue and Meridian Avenue
Scenario 2C: Full Connectivity at I-5 with Split Diamond Interchange at Valley Avenue and Meridian Avenue

Highlighted features:
• ½ SPUI at 54th Ave interchange
• Service level Diverging Diamond interchange at I-5
• ½ Diamond interchange at Valley Avenue
• ½ SPUI interchange at Meridian Avenue

Other Items Total
• Interurban Trail
• RRP & Wetland Mitigation
Scenario 2D: Limited Connectivity at I-5 with Split Diamond Interchange at Valley Avenue and Meridian Avenue
Scenario 2D: Limited Connectivity at I-5 with Split Diamond Interchange at Valley Avenue and Meridian Avenue

Highlighted features:
• ½ SPUI at 54th Ave interchange
• Service level Diverging Diamond interchange at I-5 with connections to/from north only
• ½ Diamond interchange at Valley Avenue
• ½ SPUI interchange at Meridian Avenue

Other Items Total
• Interurban Trail
• RRP & Wetland Mitigation
Scenario 4A: Moderate Connectivity at I-5 with Full Connectivity at Meridian Avenue
Scenario 4A: Moderate Connectivity at I-5 with Full Connectivity at Meridian Avenue

Highlighted features:
- ½ Diamond with SB cloverleaf at 54th Ave interchange
- System level interchange to/from the north at I-5
- NB I-5 auxiliary lane
- No interchange at Valley Avenue
- Full SPUI at Meridian interchange
- Widen NB Puyallup River Bridge
- N. Levee to Valley Connector

Other Items Total
- Interurban Trail
- RRP & Wetland Mitigation
Scenario 2C/2D/4A Comparison

Legend:
Scenario 2C
Scenario 2D
Scenario 4A
Shared Component
Refined Traffic Analysis Results

- Presents only analysis for PM peak
- Used Dynamic Traffic Assignment (DTA)/Mesoscopic tools

I-5 Travel Times

<table>
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<th>Year</th>
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## PM Peak Projected Travel Times for Selected South End Routes: 2025

### 8-7 PoT to Puyallup

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<td>WB</td>
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### 10-5 PoT to SR18

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### 8-6 PoT to Sumner/Pacific MIC

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### 4-10 Kent MIC to PoT

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### % Travel Time Savings:

- **2C/3A**
  - EB: 33%
  - WB: 39%

- **4A/4A**
  - EB: 33%
  - WB: 43%

- **2C/3A**
  - EB: 36%
  - WB: 27%

- **4A/4A**
  - EB: 36%
  - WB: 27%
PM Peak Projected Travel Times for Selected South End Routes: 2045

% Travel Time Savings:

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<tr>
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<th>2C/3A</th>
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<tr>
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<td>40%</td>
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<tr>
<td>WB</td>
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PM Peak Period Speeds: 2025

272nd St to SR 18

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SR 18 to SR 167

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SR 167 to I-705

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SR 18 to I-705

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SR 167 to 54th Ave E

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PM Peak Period Speeds: 2045
SR 509 Scenarios & Traffic Analysis
Scenario 3A
Scenario 3A
Scenario 4A
Scenario 4A
Scenario 3A/4A

Legend:
- Scenario 3A
- Scenario 4A
- Shared Component
Refined Traffic Analysis Results

- Presents only analysis for PM peak
- Used Dynamic Traffic Assignment (DTA)/Mesoscopic tools

I-5 Travel Times

<table>
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<th>2-9 Through Study Area on I-5</th>
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<th>2-9 Through Study Area on I-5</th>
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PM Peak Period Travel Times: 2025

### 1-4 Duwamish MIC to Kent MIC

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% Travel Time Savings:

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<th>4A/4A</th>
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### 3-7 SeaTac to Puyallup

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% Travel Time Savings:

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### PM Peak Period Travel Times: 2045

#### 1-4 Duwamish MIC to Kent MIC

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#### 3-7 SeaTac to Puyallup

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</table>

% Travel Time Savings:

- **2C/3A**
  - **NB**: 20% 20%
  - **SB**: 27% 27%
- **4A/4A**
  - **NB**: 20% 20%
  - **SB**: 27% 27%
PM Peak Period Speeds: 2025
PM Peak Period Speeds: 2045
SR 167 Forward Compatibility
What degree of forward compatibility should be included in the design?

- At the I-5/SR 167 Interchange
- Construct initial narrower project footprint
- Plan for full build out
- Right of way acquisition for remainder of corridor
Forward Compatibility at I-5 interchange
Forward Compatibility at I-5 interchange
Forward Compatibility at I-5 interchange

SR 167 COMPLETION PROJECT
I-5 Forward Compatibility

LEGEND
Green - Scenario 2C
Blue - Full Build
Orange - HOV Direct Connect

PUGET SOUND GATEWAY

SCALE IN FEET
Forward Compatibility at I-5 interchange
Forward Compatibility with Footprint

I-5 to SR 161 - 2 Lanes Each Direction, Single Roadway Prism - Phase 1

Not to Scale

SOUTHBOUND  NORTHBOUND

SECTION AA

SINGLE PRISM COST: $248M

ADVANTAGES:
- SMALLER INITIAL FOOTPRINT
- LESS WETLAND IMPACTS

DISADVANTAGES:
- CLOSED DRAINAGE SYSTEM TO MAINTAIN
- BARRIER MORE EXPENSIVE TO MAINTAIN THAN CABLE GUARDRAIL

FOR DISCUSSION PURPOSES ONLY

Washington State Department of Transportation

SR 167 COMPLETION PROJECT
Forward Compatibility with Footprint
Right of Way Consideration at Valley Avenue
Right of Way Consideration at Valley Avenue
SR 509 Forward Compatibility
Forward Compatibility Considerations for SR 509

Considerations for deferring forward compatible components in Phase 1:
• 2045 modeling does not show a need for 6 lanes unless other major infrastructure investments are made to I-5 and existing SR 509.
• A 6 lane facility and the connections to I-5 are roughly twice the allocated budget with risk and inflation.
• All forward compatibility components would cost an additional $28m.
• Forward compatibility was identified at a contextual need and not an essential need.

Considerations for building forward compatible components in Phase 1:
• Sound Transit is constructing FWLE in 2019 – 2022; need to construct efficiently while minimizing impacts.
• Don’t want to build infrastructure that needs to be reconstructed.
• Reconstructing some elements may have significant traffic impacts in the future.
Forward Compatibility Considerations: SR 509 Single Roadway Prism

SR 509: 2 LANES EACH DIRECTION, SINGLE ROADWAY PRISM

NOT TO SCALE

WALL IN FILL

WALL IN CUT

EMBANKMENT SECTION

BRIDGE SECTION
Forward Compatibility Considerations: SR 509 Section at Undercrossing

4 LANE

6 LANE PRACTICAL DESIGN CONCEPT

6 LANE FULL STANDARD
## Forward Compatibility Considerations Locations:

<table>
<thead>
<tr>
<th>Location</th>
<th>Base (YrE$)</th>
<th>Forward Comp. (YrE$)</th>
<th>Future Reconst. (2035$)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sound Transit Compatibility</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>SR 99</td>
<td>$8.9</td>
<td>$1.7</td>
<td>$15.3</td>
</tr>
<tr>
<td>S 216TH ST</td>
<td>$6.9</td>
<td>$0.6</td>
<td>$11.0</td>
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<tr>
<td>West Side Wall-216TH</td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>SR 509</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>S, 192ND ST.</td>
<td>$9.1</td>
<td>$1.6</td>
<td>$14.9</td>
</tr>
<tr>
<td>28TH/24TH AVE S</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S 208TH ST</td>
<td>$3.0</td>
<td>$0.6</td>
<td>$5.1</td>
</tr>
<tr>
<td>SB5-SR516 BRAID</td>
<td>$4.4</td>
<td>$1.1</td>
<td>$7.6</td>
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<tr>
<td>So. Access Expressway</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>SB SAE Ramp</td>
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<td>$12.3</td>
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<td>I-5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NB509/I-5 U'XING VIC.</td>
<td>$77.3</td>
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<td>$127.9</td>
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<tr>
<td><strong>Total</strong></td>
<td>$109.6</td>
<td>$28.2</td>
<td>$194.1</td>
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</table>
Forward Compatibility Considerations: I-5

I-5 / SR 509
INTERCHANGE
NORTH OF S 216TH ST.
## Forward Compatibility Cost Considerations

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>COSTS (MILLIONS)</th>
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<th></th>
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<tr>
<td></td>
<td>BASE (YOE$)</td>
<td>FORWARD COMPAT. (YOE$)</td>
<td>FUTURE RECONST. (2035$)</td>
<td></td>
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<td><strong>SOUND TRANSIT COMPATIBILITY</strong></td>
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<tr>
<td>SR 99</td>
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<td>$0.6</td>
<td>$11.0</td>
<td></td>
</tr>
<tr>
<td><strong>WEST SIDE WALL-216TH</strong></td>
<td><strong>COORDINATING WITH SOUND TRANSIT</strong></td>
<td></td>
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</tr>
<tr>
<td>SR 509</td>
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<td></td>
<td></td>
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<tr>
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<td>$14.9</td>
<td></td>
</tr>
<tr>
<td>28TH/24TH AVE S</td>
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<td><strong>INCLUDED IN BASE</strong></td>
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</tr>
<tr>
<td>S 208TH ST</td>
<td>$3.0</td>
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<td><strong>SO. ACCESS EXPRESSWAY</strong></td>
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<tr>
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<td>$127.9</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$109.6</strong></td>
<td><strong>$28.2</strong></td>
<td><strong>$194.1</strong></td>
<td></td>
</tr>
</tbody>
</table>
Updated Cost Estimates (CEVP)
Program Cost Results: 2C/3A

- 60% $2.029B
- 50% $1.989B
Program Cost Threats

% Contribution to Total Mean Cost Risk

Mean Cost Risk (Current $M)

0.0 5.0 10.0 15.0 20.0 25.0 30.0

Risk Event or Base Uncertainty

CTR 40.1. Market conditions at time of advertisement differ from those...
STG 30.2. Changed seismic design criteria (for new structures)
PSP 30.1. Additional local street / intersection improvements due to traffic impacts
CTR 10.1. Changed project delivery method and/or packaging
PSP 30.2. Additional mitigation for impacts to local infrastructure during...
Extended overhead cost of project delay (contractor, compensable) / Program
STG 30.1. Seismic retrofit / replacement of existing structures
Identified Minor Risks (aggregate) / Program
Unidentified Risks (aggregate) / Program
PSP 30.3. Inclusion of weigh stations
CTR 50.1. Extraordinary material price changes: fuel
SOLDIER PILE WITH TIE BACK RETAINING WALL (Base Uncertainty)
ENV 50.1. Midway Landfill impacts
ROADWAY EXCAVATION INCL. HAUL (Base Uncertainty)
DES 60.2. Design changes / additional scope due to maintenance considerations
STG 20.1. Changed ground improvement methods required (due to regulatory...
ENV 70.3. Changed flow control / detention requirements
Extended overhead cost of project delay (agency) / Program
Preliminary Engineering: SR 167 (Base Uncertainty)
Preliminary Engineering: SR 509 (Base Uncertainty)
Program Cost Opportunities

Opportunity Event or Base Uncertainty

- DES 10.1. Opportunity for design/ATC optimization of roadway/interchange alignment
- STG 10.1. Changed design of other bridge structures (incl. DB ATCs)
- PSP 10.6. Sound Transit contribution to project cost
- Identified Minor Opportunities (aggregate) / Program
- Unidentified Opportunities (aggregate) / Program
- CNS 70.2. Re-use of cut materials as fill
- CNS 70.3. Import fill material from adjacent project
- STG 20.2. Changed foundation system design due to soil conditions
- UTL 10.2. High-pressure gas line relocations
- GRAVEL BORROW INCL. HAUL (Base Uncertainty)
- GEOSYNTHETIC RETAINING WALL (Base Uncertainty)
- PS CONC. GIRDER WIDENING (Base Uncertainty)
- TEMPORARY ACCESS BRIDGE (Base Uncertainty)
- SPLICED PT GIRDER (Base Uncertainty)
- PS CONC. GIRDER WIDENING (Base Uncertainty)

Mean Opportunity (Current $M) (values are savings)

- DES 10.1: 38.5
- STG 10.1: 12.0
- PSP 10.6: 5.5
- Identified Minor Opportunities: 3.7
- Unidentified Opportunities: 3.6
- CNS 70.2: 3.1
- CNS 70.3: 1.1
- STG 20.2: 1.1
- UTL 10.2: 0.7
- GRAVEL BORROW INCL. HAUL: 0.6
- GEOSYNTHETIC RETAINING WALL: 0.5
- PS CONC. GIRDER WIDENING: 0.2
- TEMPORARY ACCESS BRIDGE: 0.1
- SPLICED PT GIRDER: 0.1
- PS CONC. GIRDER WIDENING: 0.0

% Contribution to Total Mean Cost Opportunity

- 38.5%
- 12.0%
- 5.5%
- 3.7%
- 3.6%
- 3.1%
- 1.1%
- 1.1%
- 0.7%
- 0.6%
- 0.5%
- 0.2%
- 0.1%
- 0.1%
- 0.0%
Program Cost Results: 2C/3A Unconstrained

- 60% $1.907B
- 50% $1.866B

Program Cost (Escalated $M)

Percentile (Cumulative Probability)

Probability (for Individual Ranges)
Program Cost Comparison: Constrained vs. Unconstrained

- Constrained: $1.866
- Unconstrained: $1.989
SR 167: Scenario 2C

Other Items Total $180m
- Interurban Trail
- RRP & Wetland Mitigation
SR 167: Scenario 2D

Other Items Total $180m
- Interurban Trail
- RRP & Wetland Mitigation
SR 167: Scenario 4A

Other Items Total $180M
- Interurban Trail
- RRP & Wetland Mitigation

$1,512m
SR 509: Scenario 3A

- 188th: $12M
- 200th: $327M
- 28th/24th: $17M
- I-5: $122M, $23M
- SR 516: $266M, $132M
- Federal Way Urban Center
- Auburn Urban Center
- Kent Manufacturing Industrial Center
- SeaTac Urban Center
- Burien Urban Center

Total: $921M
SR 509: Scenario 4A

- 188th: Full $67M
- 509: Toll Point 2 $11M
- 200th: $25M
- SeaTac Urban Center
- Airport Southern Access
- 28th/24th: $17M
- 4 Lane
- 509: Toll Point 1 $122M, $23M
- I-5: $316M
- Veterans North & South Full
- SR 516: $132M
- Federal Way Urban Center
- Auburn Urban Center
- Kent Manufacturing Industrial Center
- Kent Urban Center

Total Cost: $1,095M
CEVP Cost Estimates

- Total Gateway Funding: $1.875b
  - 2C/3A: $1.989b
  - 2D/3A: $1.969b
  - 4A/4A: $2.607b

- Total Connecting Washington Funding: $1.57b
CEVP Cost Estimates with Additional Project Elements

Total Gateway Funding: $1.875b
- 2C/3A: $28m + $203m = $231m
- 2D/3A: $28m + $203m = $231m
- 4A/4A: $28m + $203m = $231m

Total Connecting Washington Funding: $1.57b
- 2C/3A: $1.989b
- 2D/3A: $1.969b
- 4A/4A: $2.607b

Forward Compatibility:
- $28m
- $203m

Other potential elements:
- 167 NB Aux. Lane (+$120m)
- 509 NB Aux. Lane (+$33m)
- 509 NB 2-Lane C/D ($50m)
Cost Review

- 2013 CEVP Gateway Concept: $776
- 2015 Procurement: $712
- Executive Committee Presentation of 16/16/16 (C5.38/16): $712
- 2016 CEVP Update: $816

Total Costs:
- $1,548b - $1,915b
- $1,745b
- $1,989b

Inflation: $296
Risk: $92
$3,509
$2,167

Budget:
- Total: $1,750b
- Inflation: $1,750b
- Additional: $1,745b

Legislative Budget:
- $1,745b
- $1,989b

$401
FASTLANE Grant Update
FASTLANE Grant Application

• New Federal grant program focused on freight projects
• $4.5B program through 2020
• $800M awarded in FFY 2016 to 18 Recipients (212 applications received totaling almost $10B)
  o South Lander Street Grade Separation (Seattle) - $45M of $140M
  o Strander Boulevard Extension (Tukwila) - $5M of $38M
• $850M Notice of Funding Opportunity for FFY 2017 announced on Oct 28th, with applications due Dec 15th
• Grant pursuit: Letters of Support from partners and stakeholders
FASTLANE Grant Application – Letters of Support

- Governor Jay Inslee
- City of Des Moines
- IBEW Local 76
- Kent Chamber of Commerce
- Northwest Seaport Alliance
- Premier Transport
- Puget Sound Regional Council
- Puyallup Tribe of Indians
- Puyallup/Sumner Chamber of Commerce
- City of Puyallup

- South County Area Transportation Board (SCATBd)
- Port of Tacoma
- Washington State Transportation Commission
- Washington Trucking Association
- City of Burien (pending)
- City of Fife (pending)
- FIMSIB (pending)
- City of Kent (pending)
- Port of Seattle (pending)
### 2016 FASTLANE Grants

<table>
<thead>
<tr>
<th>State</th>
<th>Project</th>
<th>Project Size</th>
<th>Grant Amount</th>
<th>Project Cost</th>
<th>Share</th>
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<tbody>
<tr>
<td>VA</td>
<td>Atlantic Gateway</td>
<td>Large</td>
<td>$165M</td>
<td>$905M</td>
<td>18%</td>
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<tr>
<td>DC</td>
<td>Arlington Memorial Bridge</td>
<td>Large</td>
<td>$95M</td>
<td>$166M</td>
<td>54%</td>
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<td>OK</td>
<td>US 69/75 Bryan County</td>
<td>Large</td>
<td>$62M</td>
<td>$120.6M</td>
<td>51%</td>
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<tr>
<td>LA</td>
<td>I-10 Freight CoRE</td>
<td>Large</td>
<td>$60M</td>
<td>$193.5M</td>
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<tr>
<td>AZ</td>
<td>Interstate 10</td>
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<td>$54M</td>
<td>$157.5M</td>
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<tr>
<td>CA</td>
<td>SR 11 Segment 2 &amp; SB Connectors</td>
<td>Large</td>
<td>$49M</td>
<td>$172.2M</td>
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<tr>
<td>WA</td>
<td>South Lander St</td>
<td>Large</td>
<td>$45M</td>
<td>$140M</td>
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<tr>
<td>GA</td>
<td>Port of Savannah</td>
<td>Large</td>
<td>$44M</td>
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<td>MA</td>
<td>Conley Terminal Intermodal Imp.</td>
<td>Large</td>
<td>$42M</td>
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<tr>
<td>WI</td>
<td>I-39/90 Corridor</td>
<td>Large</td>
<td>$32M</td>
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<td>NY</td>
<td>I-390/I-490/Rt. 31 Interchange</td>
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<td>$32M</td>
<td>$162.9M</td>
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<td>WA</td>
<td>Strander Blvd Ext &amp; Grade Separation</td>
<td>Small</td>
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<td>$38M</td>
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<tr>
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<td>Total for 18 FASTLANE Projects</td>
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<td><strong>$759.2M</strong></td>
<td><strong>$3,612.4M</strong></td>
<td><strong>21%</strong></td>
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</table>

*Note: Does not show 6 smaller projects that received grants*
Preliminary Gateway Construction Staging

**SR 167**
- **Stage 1**
  - 70th & I-5, SR 509 Spur
- **Stage 2**
  - SR 167

**SR 509**
- **Early work**
  - ST FWLE construction
- **Stage 1**
  - I-5 to 24th/28th
- **Stage 2**
  - 24th/28th to 188th
Preliminary Preferred Scenario
### SR 167 Performance Evaluation Results

<table>
<thead>
<tr>
<th>Performance Category</th>
<th>Baseline Performance Metrics</th>
<th>Contextual Performance Metrics</th>
<th>Cost</th>
</tr>
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<tbody>
<tr>
<td>Mode</td>
<td>Mobility/Travel Time/Etc.</td>
<td>Safety/Active Mobility/Env't</td>
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<tr>
<td>Performance METRIC</td>
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</tr>
<tr>
<td>SCENARIO</td>
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</tr>
<tr>
<td>No Build</td>
<td></td>
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</tr>
</tbody>
</table>

1. **SR 167 Performance**
   - Maintain/improve SR 167 Operations
   - Li Performed between I-5 and SR 59
2. **SR 98 Performance**
   - Maintain/improve SR 98 Operations
   - Li Performed between I-5 and SR 59
3. **Travel Time**
   - Reduce travel times between urban centers in King County
4. **Traffic Reliability**
   - Reduce travel time variability between industrial centers in Seattle & King County
5. **Complete Freeway Network**
   - Reducing time achieved
6. **Economic Benefits**
   - Economic benefits for local and regional comprehensive plans
7. **Safety**
   - Safe and efficient crossings of highways and transit connections
8. **Active Mobility**
   - Safety and affordability of alternative transportation modes
9. **Env't**
   - Environmental compatibility with local governance goals
10. **Other**
    - Other considerations

**Scenarios:***
- **Scenario 2C:** Full Connectivity at I-5 with Split Diamond at Meridian
- **Scenario 2D:** Limited Connectivity at I-5 with Split Diamond at Valley & Meridian
- **Scenario 4A:** Moderate Connectivity at I-5 w/Full Meridian Connectivity

**Costs:**
- Scenario 2C: $1.068M
- Scenario 2D: $1.045M
- Scenario 4A: $1.512M
## SR 509 Performance Evaluation Results

### Scenario Comparison Table - SR 509 Completion Project

<table>
<thead>
<tr>
<th>Performance Category</th>
<th>Essential Performance Metrics</th>
<th>Contextual Performance Metrics</th>
<th>Cost</th>
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<tbody>
<tr>
<td>Mode</td>
<td>Mobility</td>
<td>Safety</td>
<td>Preliminary Cost Overview</td>
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<tr>
<td>Performance Metric</td>
<td>Economic Vitality</td>
<td>Mode</td>
<td></td>
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<tr>
<td>Scenario</td>
<td>Safety</td>
<td>Env't</td>
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</tr>
<tr>
<td>Scenarios</td>
<td>Safety</td>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

- **No Build**
- **Scenario 3A - Moderate Connectivity**
- **Scenario 4A - Full Connectivity**

### Key Performance Indicators

- Mobility
- Economic Vitality
- Safety
- Contextual Performance Indicators

### Date: 12/07/16
Key Takeaways

SR 167:
- Scenario 2C & 2D operate well, slightly better NB I-5 performance with 2C, slightly better SB I-5 performance with 2D.
  - Need further analysis to understand best overall performance between the two scenarios.
  - Scenario 4A operates well but is cost prohibitive.

SR 509:
- Scenarios 3A and 4A function and rate similarly.
  - Scenario 4A is cost prohibitive.

I-5
- NB I-5 improvements will be carried forward for further analysis.
Discussion
More information:

Craig J. Stone, PE
Puget Sound Gateway Program Administrator
(206) 464-1222
stonec@wsdot.wa.gov