Advisory Committee on Tolling and Traffic Meeting
March 13, 2013
Overview

Previous discussions:
• 2017 transportation system.
• Progress report.

Today’s topics:
• Round 2 toll scenario traffic modeling and revenue analysis results.
• Small group discussion.
ACTT Purpose

• The committee will make advisory recommendations on strategies for:
  • Tolling the SR 99 tunnel.
  • Minimizing traffic diversion from the tunnel due to tolling.
  • Mitigating traffic diversion effects on city streets and I-5.
Meeting Objectives

• Understand round 2 traffic and revenue model results.
• Provide feedback on the second round of scenarios.
• Discuss the path to making recommendations.
Future ACTT Meetings

<table>
<thead>
<tr>
<th>Proposed 2013 meeting dates (Wednesdays)</th>
<th>Meeting topic(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 24</td>
<td>Diversion and mitigation</td>
</tr>
<tr>
<td>May 15</td>
<td>Recommendations discussion</td>
</tr>
<tr>
<td>June 12</td>
<td>Recommendations discussion</td>
</tr>
<tr>
<td>Future meetings</td>
<td>TBD</td>
</tr>
</tbody>
</table>

Seattle City Council Resolution 31323: The ACTT is expected to continue working to refine its analysis and recommendations through December 2015 (when the tunnel is anticipated to open to traffic and when toll implementation begins). The ACTT 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.
Round 2
Toll Scenarios Overview
Four-Step Planning Process

1) Determine Toll Scenarios
   - Toll rate structure

2) Traffic Modeling
   - Understand travel behavior and diversion

3) Revenue Modeling
   - Annual gross toll revenue stream
   - O&M costs paid by tolls
   - Cost to implement tolls

4) Financial Modeling
   - Toll funding contribution to project
   - Matches timing of sources and uses

Iterative Process
Roles and Responsibilities for Toll Projects

<table>
<thead>
<tr>
<th>State Legislature</th>
<th>WSDOT (Project Owner)</th>
<th>Toll Authority (WA Trans. Commission)</th>
<th>Office of the State Treasurer</th>
<th>State Finance Committee</th>
</tr>
</thead>
</table>
| • Authorize tolling  
  • Authorize sale of bonds  
  • Appropriate toll revenue  
  • Maintain Toll Authority’s powers | • Prepare project financial plan  
  • Project development & delivery  
  • Oversee prep of traffic & revenue projections | • Develop & test proposed toll rate schedule  
  • Toll collection & customer service  
  • Operate, maintain & insure the facility | • Set and maintain toll, fees, policies and exemptions  
  • Review and report on toll collection and operations policies / expenditures | • Financial planning in developing & testing proposed toll rate schedule  
  • Certify toll sufficiency to meet bond covenants | • Ensure tolls are sufficient to meet obligations  
  • Sell bonds  
  • Administer accounts for debt repayment |
| | | • Ensure adopted tolls are sufficient to meet all obligations | | • Adopt Master Bond Resolution  
  • Support sale of bonds  
  • Investor relations/ maintain tax exempt status | Note: The State Finance Committee is composed of the Governor, the Lieutenant Governor, and the Treasurer. |
Round Two Scenarios Being Analyzed

• No toll and high toll ($1 - $4) were previously studied as benchmarks.

• Scenario 4 ($1.25 - $2.75): Objective is to achieve funding target.

• Scenario 5a ($0.50 - $0.75): Objective is to reduce diversion. Includes toll rate escalation.

• Scenario 5b ($1.75 peak only): Objective is to reduce diversion. Includes toll rate escalation.

• Scenario 6 ($0.45 - $3): Objective is to balance funding and diversion.
Scenario 4

Assumptions:

• Refined scenario 1.
• Toll rate same for northbound and southbound travel.
• No tolls overnight.
• Includes weekend tolls.
• Freight toll is 1.5 times the toll rate for all trucks, regardless of size or axle count.
Scenario 5a

Assumptions:

• Refined scenario 2.
• Low tolls throughout the day.
• No toll-backed bonds would be sold.
• Reduced facility insurance.
• Low starting toll that increases with inflation on an annual basis.
• Freight tolls based on number of axles.
Scenario 5b

Assumptions:

• Refined scenario 2.
• Higher tolls for peak periods with no mid-day tolls.
• No toll-backed bonds would be sold.
• Reduced facility insurance.
• Low starting toll that increases with inflation on an annual basis.
• Freight tolls based on number of axles.
Scenario 6

- **Assumptions:**
  - Shorter trips pay a reduced toll compared to longer trips.
  - No tolls overnight.
  - Includes weekend tolls.
  - Freight toll is 1.5 times the toll rate for all trucks, regardless of size or axle count.

Weekdays

<table>
<thead>
<tr>
<th>Time</th>
<th>Scenario 6</th>
<th>SR 99 tunnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 – 6 a.m.</td>
<td>$0.50</td>
<td>Long trip = highest rate</td>
</tr>
<tr>
<td>6 – 9 a.m.</td>
<td>$3.00</td>
<td>Medium trip = middle rate</td>
</tr>
<tr>
<td>9 a.m. – 3 p.m.</td>
<td>$0.50</td>
<td>Short trip = lowest rate</td>
</tr>
<tr>
<td>3 – 6 p.m.</td>
<td>$4.50</td>
<td></td>
</tr>
<tr>
<td>6 – 11 p.m.</td>
<td>$4.00</td>
<td></td>
</tr>
<tr>
<td>11 p.m. – 5 a.m.</td>
<td>$4.50</td>
<td></td>
</tr>
</tbody>
</table>
Round 2
Revenue Results
Revenue Analysis

- Revenue models use traffic model projections to calculate how much toll revenue can be raised over a given period of time.
  - Toll rate $\times$ Transactions $\times$ Period of time = Tolls collected
- Results are estimates for approximately 30 years.
- Toll revenues could cover various costs including:
  - Toll collection costs.
  - Facility ownership: operations and maintenance, repair and replacement, insurance.
  - Financing costs.
Additional Financial / Toll Scenario Analysis

- What other technical analysis could be done?
  - Office of the State Treasurer’s financial capacity analysis.
  - Independent traffic and revenue analysis.
  - Transportation Commission toll rate setting process.
## Preliminary Revenue Results for Scenarios 4 - 6

<table>
<thead>
<tr>
<th></th>
<th>Scenario 4</th>
<th>Scenario 6</th>
<th>Scenario 5a</th>
<th>Scenario 5b</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue Collected from Tolls*</td>
<td>$1,270</td>
<td>$1,260</td>
<td>$600</td>
<td>$610</td>
</tr>
<tr>
<td>Toll Collection Costs**</td>
<td>($320)</td>
<td>($360)</td>
<td>($280)</td>
<td>($160)</td>
</tr>
<tr>
<td>Revenues after collection costs</td>
<td>$950</td>
<td>$900</td>
<td>$320</td>
<td>$450</td>
</tr>
</tbody>
</table>

Numbers represent estimates for approximately 30 years. Costs in millions of dollars.

*After adjustments for fees, credits and uncollectible accounts. Scenarios 5a and 5b assume 1.3 percent toll rate escalation.

**Includes credit card fees and customer service center, state operations and roadway toll system costs. Could be lower with additional operational toll facilities.
# Potential Costs

**Capital Contribution**

<table>
<thead>
<tr>
<th>Capital Contribution*</th>
<th>$200</th>
</tr>
</thead>
</table>

*Costs in millions of dollars.  
*Additional costs for financing to be determined.

### SR 99 Tunnel Expenses

<table>
<thead>
<tr>
<th>Operations and Maintenance</th>
<th>$160</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility Insurance Costs**</td>
<td>$55-85</td>
</tr>
<tr>
<td>Repair and Replacement</td>
<td>$190</td>
</tr>
</tbody>
</table>

*Numbers represent estimates for approximately 30 years. Costs in millions of dollars.  
**Variation due to coverage amounts and deductible levels.

<table>
<thead>
<tr>
<th>Mitigation</th>
<th>TBD</th>
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</table>
Traffic Modeling Results
Traffic Model Overview

- Traffic assignment models are best at highlighting differences between scenarios.
- Traffic modeling includes many important variables like toll rates, route options, the economics of how people value time, and the number of tolled facilities in a given area.
- Dynamic Traffic Assignment model is being used to assess route diversion effects on I-5 and city streets.
Traffic Model Outputs

Today’s data discussion points:

• Traffic volumes and diversion
• Travel times
• Data will be provided for:
  • A.M. peak period: 6 – 9 a.m.
  • Mid-day hour: 1:30 – 2:30 p.m.
  • P.M. peak period: 3 – 6 p.m.
Round 2
Traffic Volumes and Diversion
2017 Tunnel Volumes

Daytime

By time of day
2017 Traffic Volumes by Location Scenario 4 and 6
PM Peak Period 3 – 6 p.m.

*Alaskan Way volumes not included in arterials west of I-5. All volumes taken at Seneca Street.

**Tolls on the SR 99 tunnel change how drivers access I-5. More drivers access the freeway north and south of Seneca Street.
2017 Traffic Volumes by Location Scenario 5a and 5b
PM Peak Period 3 – 6 p.m.

*Alaskan Way volumes not included in arterials west of I-5. All volumes taken at Seneca Street.*
2017 Car and Freight Travel Times
A.M. Peak Hour 7:30 – 8:30 a.m.

- A.M. peak hour travel times for autos and freight vary minimally across the routes reported.

<table>
<thead>
<tr>
<th>Route</th>
<th>Northbound (in min.)</th>
<th>Southbound (in min.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Seattle &amp; CBD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northbound</td>
<td>18</td>
<td>17</td>
</tr>
<tr>
<td>Southbound</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Woodland Park &amp; CBD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northbound</td>
<td>13</td>
<td>14</td>
</tr>
<tr>
<td>Southbound</td>
<td>4</td>
<td>6</td>
</tr>
</tbody>
</table>

Handout 4d

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2017 Car and Freight Travel Times
P.M. Peak Hour 5 – 6 p.m.

• P.M. peak hour travel times for autos and freight vary minimally across the routes reported.
A.M. peak hour travel times for transit vary minimally due to priority treatments.
2017 Transit Travel Times
P.M. Peak Hour 5 – 6 p.m.

- P.M. peak hour travel times for transit vary minimally due to priority treatments.
Freight Volumes Based on Different Toll Rates

- Medium trucks follow similar diversion patterns to general purpose traffic.

- Heavy trucks have two alternate routes to SR 99 - Alaskan Way and I-5.
  - High tunnel tolls for general purpose vehicles make these alternate routes more congested.
  - Typically heavy trucks have a higher value of time.
  - Heavy trucks seem to prefer the tunnel when there is increased congestion on their alternate routes.

- Charging a flat truck toll multiplier, regardless of size or axle count, draws more heavy trucks into the tunnel.
Diversion Areas for Committee Discussion

Metrics:

• Travel times
• Speeds and traffic operations
• Change in volume on downtown streets and I-5
• Priority routes for transit, freight, bicycles and pedestrians
Diversion Areas for Committee Discussion
Scenario 4 – PM Peak Hour

- Parts of South Lake Union and the Mercer Corridor
- Belltown area
- Parts of Alaskan Way and Pioneer Square
- Parts of the downtown core
- South Spokane Street area
Diversion Areas for Committee Discussion
Scenario 6 – PM Peak Hour

• Parts of South Lake Union and the Mercer Corridor
• Belltown area
• Parts of Alaskan Way and Pioneer Square
• Parts of the downtown core
• Areas east of I-5 and near the I-90 interchange
Diversion Areas for Committee Discussion
Scenario 5a – PM Peak Hour

- Parts of South Lake Union and the Mercer Corridor
- Parts of Alaskan Way
- Parts of the downtown core
Diversion Areas for Committee Discussion
Scenario 5b – PM Peak Hour

- Parts of South Lake Union and the Mercer Corridor
- Belltown area
- Parts of the downtown core
- Parts of Alaskan Way and Pioneer Square
Small Group Discussion
Small Group Discussion Overview

• Break into two groups to discuss the traffic and revenue modeling results further and how they relate to the committee’s guiding principles.
• Each group will have 60 minutes for discussion.
• Each group should elect a committee member to report out.
• 20 minutes for group report-outs and questions.
• Each group will have program staff to guide discussion and answer questions.
• Each group will have someone to take notes.
Small Group Report Out
Closing: Next Steps
Website: www.AlaskanWayViaduct.org

Twitter: @BerthaDigsSR99

Email: viaduct@wsdot.wa.gov

Hotline: 1-888-AWV-LINE

Milepost 31 is located at 211 First Ave. S.