



U.S. Department  
of Transportation  
**Federal Transit  
Administration**

REGION X  
Alaska, Idaho, Oregon,  
Washington

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August 12, 2011

Ms. Angela Freudenstein Angove  
Alaskan Way Viaduct Replacement Project  
999 Third Ave., Suite 2424  
Seattle, WA 98104

**Re: Federal Transit Administration Comments on the  
Alaskan Way Viaduct Replacement Project Final EIS**

Dear Ms. Angove:

**F-001-001** Thank you for the opportunity to comment on the Alaskan Way Viaduct Replacement Project 2010 Final Environmental Impact Statement (FEIS). Our primary interest is how the Project will affect local transit agencies' ability to provide adequate service and increase transit's mode share, as called for in all relevant regional planning documents.

FTA has concerns with WSDOT's conclusion that the Project requires no ongoing transit mitigation because it causes no long-term adverse impacts. As discussed in the CEQ guidance document, "NEPA's 40 Most-Asked Questions,"

The mitigation measures discussed in an EIS must cover the range of impacts of the proposal. The measures must include such things as design alternatives that would decrease pollution emissions, construction impacts, esthetic intrusion, as well as relocation assistance, possible land use controls that could be enacted, and other possible efforts. Mitigation measures must be considered even for impacts that by themselves would not be considered "significant." Once the proposal itself is considered as a whole to have significant effects, all of its specific effects on the environment (whether or not "significant") must be considered, and mitigation measures must be developed where it is feasible to do so. Sections 1502.14(f), 1502.16(h), 1508.14.

As we wrote in our December 2010 comments, FTA believes the FEIS would have benefitted had it specified the transit mitigation measures that WSDOT intends to employ. However, we suggest that the ROD can and should acknowledge that that the Project will have impacts on transit, and require that WSDOT develop and implement effective measures to reduce those impacts.

**F-001-002** We recognize that it may be appropriate to defer the detailed work relating to transit operations until closer to the facility's 2016 opening, and that it will require considerable coordination to best determine appropriate measures, given the range of the project's effects from the Stadium District south of the King Street and Union Stations, along Alaskan Way and past the ferry facilities, throughout downtown Seattle surface streets, and as far north as

### F-001-001

The project will not have significant impacts to transit, and the Final EIS discusses mitigation as required by CEQ and FHWA regulations. The project includes several features that will benefit transit operations in the downtown Seattle area. These are described in Chapter 3, Question 4 of the Final EIS and in Appendix C, Transportation Discipline Report and in the Project Commitments section of this Record of Decision. In brief, both the south and north portals include transit bypass lanes that will allow buses to pass general traffic in entering the downtown street grid. Overall transit access through downtown Seattle will be improved by the project as it will support service through more of the street grid than is presently possible; however, transit travel times will vary because access points will change. This is described in the Final EIS in Chapter 5, Question 14.

### F-001-002

The foreseeable transportation effects of the Bored Tunnel and associated mitigation measures are described in Chapters 5 and 8 of the Final EIS and in Appendix C, Transportation Discipline Report. There are no further foreseeable effects or mitigation measures to include in this Record of Decision. FHWA, with WSDOT and SDOT, will continue to work closely with transit service providers to ensure the entire transportation system functions smoothly and benefits its users. We look forward to FTA's assistance in this process.

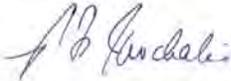
**F-001-002** Seattle Center, and affecting multiple transportation services.<sup>1</sup> FTA does not believe that those factors either obviate the need for mitigation or render the mitigation infeasible.

**F-001-003** FTA urges that the ROD also address two other issues regarding the FEIS's treatment of mitigation. First, in the FEIS, the Project's proposed Technical Advisory Committee would be charged with developing strategies to ameliorate the impacts of toll-caused diversion on "the transportation network," that is, "on all users" – without any commitment to transit-specific mitigation. Transit's significance to the functioning of the region's densest population center suggests the TAC should be expressly directed to seek transit-specific measures in addition to "network" solutions.

In addition, as noted above, FTA believes the ROD should commit WSDOT to funding the necessary mitigation measures as part of the Project. At a minimum, the ROD should specify that WSDOT must pursue implementation of and seek funding for all appropriate mitigation, not only "[f]or improvements on state facilities or requiring state funding." (FEIS, p. 216) The quoted language might be construed to relieve the Project of seeking to fund mitigation for many of the impacts to King County Metro transit service, for example.

**F-001-004** We have worked with WSDOT for many decades on multimodal transportation solutions and consider your leadership in transportation planning, access and equity to be amongst the best in the county, so we also appreciate the challenging nature of this complex project. Thank you for considering our concerns and suggestions for improving its implementation.

Sincerely,



R.F. Krochalis  
Regional Administrator

cc: Dan Mathis, Federal Highway Administration  
David Mosley, Washington State Ferries  
Joni Earl, Sound Transit  
Kevin Desmond, King County Metro  
Peter Hahn, City of Seattle DOT  
Randolph Everett, FHWA

<sup>1</sup> Washington State Ferries, the City of Seattle, Sound Transit, King County Metro, King County Ferries District, the Seattle Monorail, and Amtrak.

### F-001-003

The Final EIS includes an analysis of the operational effects of build alternatives on transit travel times, which are described in Chapter 5, Question 14. The Final EIS includes a commitment to mitigate for operational effects of tolling through the establishment of a Tolling Advisory Committee (see Final EIS Chapter 8, Question 1). FHWA understands transit measures will be considered by the Tolling Advisory Committee. King County will be directly involved in the work of the Tolling Advisory Committee.

### F-001-004

FHWA appreciates your comments and looks forward to working with FTA in implementing this important project.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
 REGION 10  
 1200 Sixth Avenue, Suite 900  
 Seattle, WA 98101-3140

OFFICE OF  
 ECOSYSTEMS, TRIBAL AND  
 PUBLIC AFFAIRS

August 12, 2011

RECEIVED

AUG 15 2011

AWV Facilities Team

Anjela Angove  
 Alaskan Way Viaduct Replacement Project Office  
 999 Third Ave, Suite 2424  
 Seattle, Washington 98104 - 4019

Re: U.S. Environmental Protection Agency (EPA) comments on the Alaskan Way Viaduct Replacement Project (AWVRP) Final Environmental Impact Statement (FEIS) and Section 4(f) Evaluation. EPA Project Number: 01-050-FHW.

Dear Ms. Angove:

The EPA has reviewed the AWVRP FEIS and we are submitting comments in accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act.

Our December 13, 2010 letter on the AWVRP 2010 Supplemental Draft Environmental Impact Statement (2010 SDEIS), provided detailed comments and recommendations on several environmental concerns as well as areas where we believed the 2010 SDEIS did not contain sufficient information. Overall, changes and additional information in the FEIS are fully responsive to our recommendations. We summarize the reasons for our recommendations and react to your responses below.

**F-002-001 Purpose and Need**

To more fully disclose purpose and need development for this project, we recommended that the FEIS discuss the reasoning behind not representing the Partnership Process's guiding principles "Create solutions that are fiscally responsible" and "Improve the health of the environment" in the 2010 SDEIS's purpose and need. Your direct response to our comment<sup>1</sup> discloses the reasoning we were hoping to better understand, thank you.

**F-002-002 Alternatives Development**

To more fully disclose alternatives development for this project, we recommended that the FEIS include additional information on how the 2010 SDEIS's screening criteria differed from the Partnership Process's "Evaluation Measures"<sup>2</sup>. Your inclusion in the FEIS of the document, "Revised Screening of Design Concepts 2010 Update"<sup>3</sup>, is responsive to our recommendation.

However, we disagree with the FEIS's assertion that "...the criteria for mobility and capacity were not more heavily weighted than the other screening criteria."<sup>4</sup> According to the document, "Revised

<sup>1</sup> FEIS, Appendix T, p. 10

<sup>2</sup> 2010 SDEIS, Appendix S, Exhibit 3-3

<sup>3</sup> FEIS, Appendix W

<sup>4</sup> FEIS, Appendix T, p. 11



**F-002-001**

Thank you for confirming that we have addressed your comment on Purpose and Need. FHWA appreciates your input on this project.

**F-002-002**

As your comment notes in its closing sentence, the alternatives are evaluated on their overall ability to meet the project's purpose and need. All elements of the purpose and need were considered, and each of the three alternatives meet them differently. The construction effects of the Cut-and-Cover Tunnel and the Elevated Structure on north-south capacity are severe, but they are not permanent effects as would result from the Surface, Transit and I-5 Scenario.

**F-002-002** Screening of Design Concepts 2010 Update”, the Partnership Process I-5, Surface and Transit hybrid scenario was eliminated because, “Mobility for trips to and through downtown would be reduced,...” and “North-south capacity in the transportation system would be reduced,...”<sup>5</sup> The 2006 SDEIS Tunnel Alternative (Cut-and-Cover Tunnel Alternative), however, was not eliminated in spite of traffic safety related design deficiencies and major traffic disruptions from construction. Regardless, we respect the importance of mobility and capacity relative to the project’s purpose, appreciate the importance of your updated analysis of the Surface and Transit Hybrid’s effects on mobility, and also understand the need to evaluate alternatives based on their overall ability to meet project purposes.

**F-002-003** **Air Quality**  
To help identify which alternative would best protect air quality, we recommended that the FEIS include additional comparative analysis of air quality impacts among alternatives. The 2010 SDEIS is of limited usefulness for comparative analysis of air impacts because the detailed information in Appendix M focused on the Bored Tunnel Alternative compared to existing conditions. New quantitative Mobile Source Air Toxic (MSAT) analyses for the Cut-and-Cover Alternative and the Elevated Structure Alternative in the FEIS’s updated Appendix M are responsive to our recommendation and serve to support your overall conclusion that, “The air quality analysis did not indicate a notable difference in emission levels among the alternatives, either for criteria pollutants or MSATs.”<sup>6</sup>

**F-002-004** **Water Resources**  
To help identify which alternative would best protect water resources, we recommended that the FEIS include additional comparative analysis of water resource impacts among alternatives. The 2010 SDEIS is of limited usefulness for a comparative analysis of water impacts because the detailed information in Appendix O focused on the Bored Tunnel Alternative compared to existing conditions and the Viaduct Closed Alternative. New quantitative land use change and annual pollutant loading analyses for the Cut-and-Cover Alternative and the Elevated Structure Alternative in the FEIS’s updated Appendix O is responsive to our recommendation and serves to support your overall conclusion that all build alternatives would be expected to improve water quality.

**F-002-005** **Multi-modal Enhancements**  
To address our concern about potential increases in transit travel times to and from downtown, we recommended that the FEIS discuss potential mitigation measures for impacts to transit from tolling. We also recommended that the FEIS include additional information on the likelihood that reasonable optimization measures for tolling would adequately mitigate adverse impacts on transit. Additional information in the FEIS on mitigation measures for impacts from tolling, such as “Potential Strategies to Reduce Traffic Diversion” and “Potential Strategies to Manage Diverted Traffic”<sup>7</sup>, are responsive to our recommendation. The Tolling Advisory Committee’s work, as described in the FEIS and in Exhibit E of the Memorandum of Agreement No. GCA 6486, accounts for our interest in adaptive management features which aim to ensure the effectiveness of tolling and traffic optimization measures.

**F-002-006** **Environmental Justice**  
To reduce the risk of adverse impacts to low income and minority populations from construction, we recommended that the FEIS integrate in all action alternatives the full suite of mitigation measures

<sup>5</sup> p. 19-20

<sup>6</sup> FEIS, p. 158

<sup>7</sup> FEIS, p. 216



### F-002-003

Thank you for confirming that your comment about the air quality analysis has been addressed to your satisfaction.

### F-002-004

Thank you for confirming that your comment about water resource impacts has been addressed to your satisfaction.

### F-002-005

Thank you for confirming that your comment about transit travel times and additional information on mitigation measures for tolling impacts have been addressed to your satisfaction.

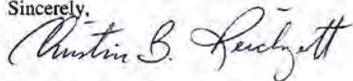
### F-002-006

Thank you for confirming that your environmental justice concerns have been addressed to your satisfaction.

**F-002-006** proposed for (i) "Neighborhoods and Community Services" and "Environmental Justice" on page 158 of the 2010 SDEIS, and, (ii) "Social and Employment Services" and "Environmental Justice" in section 6.2 of 2010 SDEIS Appendix H. The mitigation measures presented as answers to questions 5, 20 and 21 in Chapter 8 of the FEIS are responsive to our recommendation.

Thank you for this opportunity to comment and if you have any questions or concerns please contact Erik Peterson of my staff at (206) 553-6382 or by electronic mail at [peterson.erik@epa.gov](mailto:peterson.erik@epa.gov). You may contact me at (206) 553-1601.

Sincerely,



Christine B. Reichgott, Manager  
Environmental Review and Sediment Management Unit





August 15, 2011

Ms. Paula Hammond  
Secretary of Transportation  
State of Washington Transportation Building  
PO Box 47316  
Olympia, WA 98504-7316

The Honorable Richard Conlin  
Council President  
City of Seattle  
Seattle City Hall  
600 Fourth Avenue, 2<sup>nd</sup> Floor  
Seattle, WA 98104

Re: Port of Seattle - Alaskan Way Viaduct Replacement Project FEIS

Dear Secretary Hammond and Councilmember Conlin:

L-001-001

Thank you for the opportunity to review and comment on the Alaskan Way Viaduct Replacement Project Final Environmental Impact Statement (FEIS) and Section 4(f) Evaluation. The Port of Seattle (Port) congratulates the project team on completing this very complicated environmental analysis. We appreciate the team's effort, which included the opportunity for the Port to participate meaningfully in the process. We look forward to continuing work with the project team as we move closer to project implementation.

From the beginning of the Viaduct Replacement Project, the Port's major concern has been to protect and improve the regional transportation system in order to maintain and grow the region's economy. Our view is broad and does not end at our terminal gates. The Port supports more than 194,000 jobs in our region. We must assure that businesses throughout the state have a reliable transportation network to move their goods to the world's markets. We must also demonstrate to international shippers that we can accommodate their goods and move them quickly when arriving in Seattle.

On April 12, 2010, the Port Commission signed a Memorandum of Agreement (MOA) with Washington State signifying the Port's commitment to a viaduct replacement alternative which affords essential transportation capacity and significant environmental benefits while minimizing construction related disruptions on the waterfront. The MOA recognized 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.

The Port strongly supports the Bored Tunnel (Tunnel) as the Preferred Alternative for the replacement of the Alaskan Way Viaduct. The Port feels that the Tunnel is the best alternative to:

- Retain and create jobs
- Provide sustainable economic development

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## L-001-001

FHWA appreciates the Port of Seattle's input and partnership on this project. We look forward to continuing to work closely with you as design and construction progress.

L-001-001

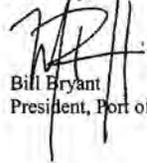
- Bring quality environmental benefits, including expansion of opportunities for transit, bicycles and pedestrians
- Enhance the waterfront for the movement of people and goods
- Ensure long-term capacity for regional growth
- Minimize construction impacts.

The Tunnel, with the complementary system upgrades including the Alaskan Way surface street, the Mercer Corridor, the Alaskan Way Seawall and South Holgate to King, provides the needed capacity to move traffic while allowing uncongested access to cargo terminals. The Tunnel and the Alaskan Way surface street maintains a critical connectivity between north and south industrial areas and keeps freight traffic moving efficiently within the harbor area while providing a good connection to the regional roadway network.

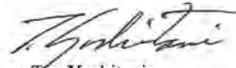
The Port has a strong interest in the continuing health of the working waterfront and the economic benefits it brings to the city and the region. As a major US gateway, the Port of Seattle, combined with the Port of Tacoma, represents the second largest container load center on the US west coast. The preferred alternative, including the Tunnel and complementary improvements, will provide needed access to cargo at Terminals 5, 18, 25, 30 and 46 while providing access to cruise services at Pier 66 and Piers 90-91. The Port will continue working with the project team to identify, resolve and mitigate construction impacts, especially at Port facilities, as design and construction progress.

Thank you again for the opportunity to partner on this project and to review and comment on this FEIS. The construction of the Tunnel is a major undertaking, which will create short-term hardships for neighboring properties and businesses and for the traveling public in general. However, we anticipate these impacts can be mitigated more easily than with the other replacement alternatives. We encourage the team to continue to work closely with the Port in identifying and mitigating construction impacts that adversely affect Port properties and Port tenants. We look forward to continuing our collaboration throughout the completion of this project. Please do not hesitate to contact us personally if you have any questions.

Sincerely,



Bill Bryant  
President, Port of Seattle Commission



Jay Yoshitani  
CEO, Port of Seattle



**King County**  
Department of Transportation  
201 South Jackson Street, M/S KSC-TR-6815  
Seattle, WA 98104-3856  
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August 15, 2011

Angela Angove  
Project Environmental Manager  
AWV Replacement Project Office  
99 3rd Avenue S., Suite 2424  
Seattle, WA 98104-4019

Dear Ms. Angove:

**L-002-001**

The King County Department of Transportation (KCDOT) is pleased to submit comments on the Final Environmental Impact Statement (FEIS) for the Alaskan Way Viaduct (AWV) Replacement Project. King County has worked closely with the lead and other agencies on this project since its inception. We have provided comments during the process and appreciate the lead agencies' responsiveness to our input.

Our previous comments emphasized the importance of transit as part of the AWV replacement project, the need to provide a variety of transit priority treatments in the project design, and the need to address the project's construction and operational impacts through appropriate mitigation. These comments are part of the project record and will not be restated here.

Our July 2009 scoping comments discussed Metro Transit's (Metro) unprecedented funding gap due to the decline in sales tax revenue, the primary source of funding for transit service. Metro is facing a potential 17 percent cut in transit service that would translate to an annual decrease of over 600,000 service hours. This is true in two years even if the King County Council proceeds with approval of a two-year temporary Congestion Reduction Charge. If this happens, future transit service could be significantly less than the service growth assumptions upon which the FEIS transportation analysis is calculated based on fall 2009 service levels followed by one percent annualized growth. The current anticipated service reduction would undermine the validity of the mode share and other transit-related findings in the FEIS. Only through an ongoing new and sustainable revenue source could Metro achieve financial stability to provide future growth in local and regional transit services. The January 2009 agreement signed by Governor Gregoire, former King County Executive Ron Sims and former Seattle Mayor Greg Nickels clearly stipulates that a one percent Motor Vehicle Excise Tax authority be granted to King County to support the increased service levels, providing for additional throughput of people vis-à-vis the decreased auto capacity of the AWV replacement project. We appreciate the

## **L-002-001**

FHWA appreciates the input from King County throughout this process. These comments have been addressed in developing the build alternatives, analyzing impacts, and determining mitigation measures. For example, as requested by King County, the Tolled Bored Tunnel Alternative includes transit bypass lanes at the tunnel portals. These bypass lanes provide for priority transit treatment. Additionally, WSDOT is providing more than \$30 million to Metro to enhance transit service through early 2014, and for strategies to encourage the use of transit, teleworking and ridesharing. These funds are intended to mitigate for construction impacts associated with the Alaskan Way Viaduct and Seawall Replacement Program. WSDOT also funded City of Seattle projects to add and upgrade traffic signals in the Elliott Avenue/15th Avenue NW, West Seattle, and south of downtown corridors, and provided funding so Metro could expand its bus monitoring system.

FHWA acknowledges that there continues to be funding challenges for transit and other transportation modes. The King County Council's recent adoption of the licence tab fee (on August 15, 2011) may help to alleviate immediate funding concerns for transit (<http://www.kingcounty.gov/exec/news/release/2011/August/15CRC.aspx>). Continued efforts will be needed at the local level to provide the funding to maintain and improve transit service.

The Final EIS includes an analysis of the operational effects of build alternatives on transit travel times, which are described in Chapter 5, Question 14. The Final EIS includes a commitment to mitigate for operational effects of tolling through the establishment of a Tolling Advisory Committee (see Final EIS Chapter 8, Question 1). FHWA understands transit measures will be considered by the Tolling Advisory Committee. King County will be directly involved in the work of the Tolling Advisory Committee.

Angela Angove  
August 15, 2011  
Page 2

L-002-001

state's stated intention to keep working with King County and other parties seeking this transit replacement funding or some other equivalent authority.

The tolling analysis in the FEIS reveals the extent to which traffic diverted by tolling would congest transit routes, resulting in substantially increased travel times for numerous bus routes, impacts to thousands of daily passengers, and more demand for transit service. Despite such impacts, the mitigation provided by the FEIS is limited to "improvements on state facilities or requiring state funding," with no mention of transit or other local facilities. The Record of Decision must commit a variety of mitigation measures proportionate to the project's impacts that are inclusive, but not limited to, state facilities and state funding. The state and King County were able to reach agreement on a formula for and amount yielded by said formula for transit mitigation during construction for the S. Holgate Street to S. King Street Viaduct Replacement. Likewise, we look forward to working with the state to use the same formula to fund from the AWW replacement project budget transit mitigation during construction of the SR 99 bored tunnel as well as the central waterfront. To date, that has not occurred.

King County looks forward to reviewing the Record of Decision and participating on the Tolling Advisory Committee.

Sincerely,



Harold S. Taniguchi, Director  
King County Department of Transportation

Enclosures

cc: Chris Arkills, Transportation Policy Advisor, King County Executive Office  
Lauric Brown, Deputy Director, King County Department of Transportation (KCDOT)  
Ron Posthuma, Assistant Director, KCDOT  
Kevin Desmond, General Manager, Metro Transit Division, KCDOT

# MANCA LAW

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## **VIA EMAIL AND U.S. MAIL**

July 14, 2011

Victor M. Mendez  
Administrator  
Federal Highway Administration  
1200 New Jersey Ave., SE  
Washington, DC 20590  
victor.mendez@dot.gov

Gloria M. Shepherd  
Associate Administrator  
Office of Planning, Environment & Realty  
Federal Highway Administration  
1200 New Jersey Ave., SE  
Washington, DC 20590  
gloria.shepherd@dot.gov

Dear Mr. Mendez and Ms. Shepherd:

Attached is our Petition for Extraordinary Relief to the Federal Highway Administration (FHWA). There exist serious problems with the environmental review and funding plan for the Alaskan Way Viaduct Replacement Project in Seattle, Washington. Given the concerns raised in this petition, we believe that the FHWA's legal obligations and its stewardship of federal transportation resources **compel your investigation, an administrative hearing, and the additional relief we request.** Most immediately, because the final environmental impact statement (FEIS) will be complicated and a local referendum concerning the project will be held on August 16, 2011, **we ask for a 90-day comment-and-review period** for the FEIS from the date of its publication in the Federal Register. Due to the short time period remaining, **we expect a response within 14 days.**

The gravity and breadth of the concerns we raise warrant your attention separate from the review process for the FEIS, which is scheduled for publication on July 15, 2011. We intend to submit comments on the FEIS, but more is at stake in this petition than the consideration of environmental impacts. Although environmental review of this project has been underway for several years, WSDOT's bias and the inadequacy of the project's funding plan have only recently become so flagrant that we came to believe that this petition for relief was necessary.

The FHWA's decision whether to grant federal funding for this project is subject to the National Environmental Policy Act (NEPA), the Administrative

**Mr. Victor M. Mendez and Ms. Gloria M. Shepherd**  
**July 14, 2011**  
**Page 2 of 3**

Procedures Act, and other applicable law. The FHWA delegated its responsibilities for preparing an environmental impact statement to the Washington State Department of Transportation (WSDOT). Unfortunately, WSDOT and other state officials have repeatedly engaged in behavior that raises concerns as to whether the hard look required by NEPA has been carried out objectively and in good faith. Despite NEPA's command to the contrary, WSDOT has made a de-facto decision to select a deep-bored-tunnel alternative, with WSDOT and state officials publicly admitting that a final decision has been made. Recently, WSDOT sued to quash a citizen referendum aimed at challenging the preferred alternative. And WSDOT took punitive action to isolate a cooperating agency, the Seattle Department of Transportation (SDOT), in violation of NEPA, preventing SDOT from giving input into and reviewing the FEIS. In sum, WSDOT has breached the integrity of the NEPA process, and the inevitable result will be a tainted FEIS.

The FHWA should also have significant concerns about the project's funding and the low expected usage of the proposed tunnel due to tolls and lack of mid-downtown access. Even if the FHWA contributes the nearly \$500 million assumed in WSDOT's funding plan, the project still suffers from a \$700 million shortfall. The Port of Seattle has not firmly committed the agreed-upon \$300 million. The hoped-for \$400 million in bonds financed with tolls could prove elusive, as changes in state law undermine that plan. And to reach that amount, tolls would have to be priced so high that the proposed tunnel would carry fewer than 40,000 vehicles per day, one-third as many as the existing facility. Traffic diversion would be so severe that the effects would be slightly *worse* than not replacing the viaduct with a freeway. To top it off, the State of Washington will not financially guarantee the project; the legislature has capped its contribution, and the City of Seattle refuses to pay cost overruns as the State insists. Unless the FHWA secures a viable funding plan from WSDOT, the proposed tunnel is neither desirable nor justifiable. The FHWA should refrain from releasing the Record of Decision (ROD) until WSDOT satisfactorily resolves this funding uncertainty.

The Seattle City Council passed ordinance 123542 on February 22, 2011 putting three Memorandum of Agreement (MOA) into place between itself and WSDOT. These MOA's govern various aspects of the proposed tunnel, including authorization to give notice to proceed to bring them into effect if a ROD is issued. The citizens of the city of Seattle have put this ordinance to referendum and, if it is rejected, the city council will lack the authority to grant notice to proceed on these agreements. This vote is a quintessential part of the public process surrounding this project. The FHWA must extend the FEIS review period to avoid interfering in the referendum and its political consequences.

We thank you for your attention to this matter and look forward to your prompt reply.

Sincerely,

Mr. Victor M. Mendez and Ms. Gloria M. Shepherd  
July 14, 2011  
Page 3 of 3



GARY W. MANCA  
Attorney for Protect Seattle Now



MICHAEL R. DRUMMOND  
Board Member, Protect Seattle Now



TIM GOULD  
Chair of Transportation and Land Use Committee  
Sierra Club Washington

Cc: Ellen Athas, Council on Environmental Quality (via email)  
Horst G. Greczmiel, Council on Environmental Quality (via email)

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TO THE FEDERAL HIGHWAY ADMINISTRATION  
Washington, DC

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IN THE MATTER OF  
THE ALASKA WAY VIADUCT REPAACEMENT PROJECT—  
SEATTLE, WASHINGTON

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**PETITION FOR EXTRAORDINARY RELIEF**

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July 14, 2011

Submitted on behalf of

PROTECT SEATTLE NOW  
PO Box 17385  
Seattle, WA 98127  
(206) 683-7810

SIERRA CLUB WASHINGTON  
CHAPTER  
180 Nickerson St, Suite 202  
Seattle, WA 98109  
(206) 378-0114

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This petition for extraordinary relief arises from the misconduct of the Washington State Department of Transportation (WSDOT) and the inadequate funding plan for the Alaskan Way Viaduct replacement project in Seattle, Washington. Prompt remedial measures by the Federal Highway Administration (FHWA) are urgently needed and justified. The final environmental impact statement (FEIS) is scheduled for publication in the *Federal Register* on July 15, 2011. The City of Seattle, a cooperating agency and a co-lead agency under Washington's State Environmental Policy Act (SEPA), is holding a citywide referendum relating to the project on August 16, 2011. As a federal-aid funded project constituting a major federal action, this project is subject to the FHWA's final approval, and the requirements of the National Environmental Policy Act (NEPA) and other applicable federal laws must be met. Due to the project's prejudicial environmental-review process and unresolved funding plan, the FHWA should grant the relief requested.

#### I. REQUESTS FOR RELIEF

The petitioners ask that the FHWA:

1. Extend the comment-and-review period for the FEIS to 90 days.
2. Carefully scrutinize the FEIS in light of WSDOT's prejudice.
3. Take the lead in preparing, free of WSDOT's biased involvement, and in consultation with the Seattle Department of Transportation, any additional environmental documents that prove to be necessary and include these in the ROD.
4. Investigate WSDOT's violation of the regulations governing its responsibilities to a cooperating agency, and report on what occurred, with proposed remedies from the FHWA.
5. Require that WSDOT produce a viable and cost-effective funding plan to complete the proposed tunnel project and actually implement the proposed mitigation measures.
6. In the absence of such a funding plan, withhold support for the proposed tolled deep-bored tunnel.
7. Hold an informal hearing for the FHWA to take more evidence on WSDOT's prejudice and the lack of adequate funding.

**O-001-001**

See response to Comment O-001-007.

**O-001-002**

See response to Comments O-001-011 through O-001-015.

**II. SUMMARY**

The petitioners' requests for relief are based on three categories of facts. First, a lengthy and complex FEIS for this critically important project was recently released, only weeks before local voters will have a chance to show their level of support for the underlying project. Second, WSDOT has shown, since 2009, that it is prejudiced towards its preferred alternative, resulting in a defective environmental-review process. Third, this is an expensive, cost-ineffective project with no financial guarantor; neither the State of Washington nor the City of Seattle is willing to fully commit to paying for it. Each of these circumstances is extraordinary.

O-001-001

**A. A 90-Day Comment Period**

This is not a typical project documented with a typical FEIS. And so a typical comment-and-review period is not appropriate. The Alaskan Way Viaduct is a north-south highway slicing through the heart of the largest city in the Pacific Northwest. The project is so complicated that the FEIS weighs in at over 7,000 pages. The preferred alternative in the FEIS is significantly different than the preferred alternative named in the 2010 draft EIS; many new impacts will inevitably be revealed for the first time in this document. And WSDOT's preferred replacement for the Viaduct, a tolled deep-bored tunnel, would have total program costs of \$4.2 billion.<sup>1</sup> The City of Seattle would be an essential partner on this project, offering funding, technical assistance, and construction cooperation. Yet city voters might soon show their disapproval of the preferred alternative by rejecting an upcoming referendum on August 16, 2011. More than 30 days will therefore be necessary to assess the impact of the referendum, to give the public and decision-makers the opportunity for meaningful review of, and comment on, the FEIS, and to allow FHWA to fully and adequately respond to this petition.

O-001-002

**B. Procedural NEPA Violations**

WSDOT has exhibited impermissible prejudice towards a bored-tunnel alternative for this project. WSDOT's judgment has been so clouded by political pressure that it made a premature final decision on alternatives, stifled public participation, intervened in a local election, structured the purpose-and-need statement to favor its preferred alternative, and unlawfully cut a cooperating agency out of the final environmental review. The FHWA must intervene now, carefully scrutinize WSDOT's actions to date, and take a stronger role in oversight of implementing the NEPA process.

<sup>1</sup>See FHWA, Case Studies: Alaskan Way Viaduct, [http://www.fhwa.dot.gov/ipdt/case\\_studies/wa\\_alaskan\\_way.htm](http://www.fhwa.dot.gov/ipdt/case_studies/wa_alaskan_way.htm).

O-001-003

**C. Inadequate Funding Plan**

It has only now become clear to the Seattle public that the proposed project's funding plan and cost performance are inadequate. The project lacks a financial guarantor. The Washington state legislature has capped its financial contribution at \$2.8 billion (\$400 million presumed from tolls), well short of the proposed tunnel project's budgetary needs, while at the same time enacting a state law that assigns liability for cost overruns to Seattle property owners. At the same time, the City of Seattle's official policy is to oppose any plan that makes its taxpayers liable for such costs. Even more immediate than the lack of a guarantor for likely cost overruns, the basic budget is still not whole. WSDOT's hope to raise \$400 million from potential tolls looks more doubtful every day, and so does their hope to persuade the Port of Seattle to give them a \$300 million gift for basic budget. These funding shortfalls and financial risks become more striking in light of the low return on the federal investment in this infrastructure. For roughly \$3 billion, the proposed tunnel would carry fewer than 40,000 vehicles per day. Unless the FHWA successfully obtains a better funding plan from WSDOT, the proposed tunnel is neither desirable nor justifiable.

**III. BACKGROUND**

The Alaskan Way Viaduct is the elevated portion of State Route 99 that runs north-south through downtown Seattle. WSDOT and the City of Seattle have collaborated on a plan to replace the Viaduct because of damage caused by an earthquake in 2001 and the approaching end of its useful life.

O-001-004

Two leading replacement alternatives, a new elevated highway and a cut-and-cover tunnel, were studied in a 2006 Supplemental DEIS. Both of these alternatives were rejected in a 2007 advisory vote in Seattle and abandoned as unworkable. WSDOT and the City then convened a 29-member stakeholder committee to provide feedback on new alternatives.<sup>2</sup> Members of that committee, including representatives of business, labor, and environmental groups, suggested the state "move forward with an Alaskan Way Viaduct Replacement Plan that includes improvements to I-5, transit, surface streets and potential for construction of a deep bore tunnel" and "a state-funded Supplemental Environmental Impact Statement should include review of an I-5/surface/transit hybrid."<sup>3</sup>

O-001-005

Just a month after this result from a year-long process, in January 2009, Governor Gregoire recommended that a deep-bored tunnel be the replacement for the Viaduct.<sup>4</sup> Although this tunnel had not been studied in the extensive 2008 analysis, nor reviewed under

<sup>2</sup>App'x, Doc. 1.  
<sup>3</sup>App'x, Doc. 2.  
<sup>4</sup>App'x, Doc. 3.

**O-001-003**

See response to Comments O-001-016 through O-001-021.

**O-001-004**

A more complete description of the Partnership Process is provided in Chapter 2, Question 5 of the Final EIS and in the Project History Report provided as Appendix S of the 2010 Supplemental Draft EIS (available on the project website and also included on CD with the Final EIS).

**O-001-005**

Many public officials have made statements supporting and opposing alternatives and other aspects of this project. This is normal for a project of this magnitude and local and regional importance. These comments are outside of and have not influenced the NEPA review process.

O-001-005

NEPA or SEPA, the governor said that she was “confident that a bored tunnel replacement . . . is the best solution for Seattle, the region, and the state.”<sup>5</sup> Since then, she and other state and WSDOT officials have repeatedly said that they have decided to choose this tunnel as the Viaduct replacement. WSDOT then changed the project’s statement of purpose and need in a supplemental EIS, without explanation, and ignored the committee members’ endorsement of an “I-5/ Surface/ Transit” alternative.

O-001-006

On February 28, 2011, the Seattle City Council adopted an ordinance that conditionally approved three agreements with WSDOT on the design and construction of the proposed deep-bored tunnel. Petitioner Protect Seattle Now (PSN), an association of Seattle citizens who are concerned about the environmental and fiscal effects of a deep-bored tunnel replacement for the Viaduct, then gathered 28,900 signatures in 30 days to place this ordinance to a referendum. The Seattle City Attorney brought suit in King County Superior Court to block the referendum. Upon PSN’s motion, the City Attorney was dismissed as party plaintiff for initiating the suit without the authority to do so. WSDOT then assumed the plaintiff’s chair voluntarily.<sup>6</sup> PSN substantially prevailed on the merits, the Court ordered a referendum on the ballot,<sup>7</sup> and the election is scheduled for August 16, 2011.

The Sierra Club Seattle Group (Sierra Club) is a coalition member of PSN and also a long standing environmental advocate. Its national organization represents hundreds of thousands of individuals, and the Seattle Group counts among its members thousands of city- and federal-tax-paying residents of Seattle. The Sierra Club submitted a letter commenting on the 2010 Supplemental DEIS and intervened in the referendum lawsuit on behalf of two of its volunteers who, as PSN officers, were named in the lawsuit.

#### IV. DISCUSSION

##### A. A 90-Day Comment Period Is Necessary

O-001-007

Three aspects of this project warrant an extended time period of 90 days for the public to review and comment on the FEIS. First, the FEIS is over seven thousand page long. The preferred alternative has been changed only recently, and there are new impacts to consider. Adequate and robust public participation is essential to the NEPA process. It allows an agency to obtain the information it needs to document and consider a project’s environmental impacts.<sup>8</sup> The period between FEIS release and ROD release allows FHWA to conduct internal review and for the public and other agencies to consider and

<sup>5</sup>*Id.*

<sup>6</sup>App’x, Doc. 4 at 3:24-4:2.

<sup>7</sup>App’x, Doc. 5.

<sup>8</sup>See, e.g., *Or. Envtl. Council v. Kunzman*, 817 F.2d 484, 492 (9th Cir. 1987)

#### O-001-006

The referendum does not materially bear on selection of the Bored Tunnel or the NEPA process.

#### O-001-007

As stated in a letter to this commenter dated August 8, 2011, FHWA has denied the commenter’s request for a 90-day comment period on the Final EIS. The NEPA regulations do not require a comment period on a Final EIS; they require only that there be a 30-day waiting period following publication of the Final EIS. While a comment period is not required, FHWA and WSDOT invited comments on the Final EIS to provide an additional opportunity for public input. FHWA has determined the 30-day period to be sufficient and appropriate. There have been extensive comment opportunities that have occurred throughout this process; the entire Final EIS, including appendices, was made available in electronic form; and much of the information in the Final EIS had previously been made available. Also, it should be noted that the 30-day comment period is measured from the publication of a notice in the Federal Register announcing the availability of the Final EIS. The Final EIS itself was made available on-line on July 7, 2011; the comment deadline ran through August 15, 2011. Therefore, the Final EIS was actually available for review and comment for a total of 39 days.

O-001-007

comment on the FEIS.<sup>9</sup> Unless the FHWA grants significantly more than 30 days, an already flawed process will be rushed through its final stages without a meaningful opportunity for public comment.

O-001-008

Second, a cooperating agency, the City of Seattle, is holding a referendum related to the project on August 16, 2011. The referendum concerns the authority of the City Council to finally approve the construction phase of its agreements with WSDOT governing property, environmental remediation, design review, permitting, and construction aspects of the proposed deep-bored tunnel. Because the City's cooperation is essential to a successful implementation of the project, FHWA should give itself time to understand the effect on the project if voters reject the referendum.

O-001-009

Voter opposition to the referendum would also cast doubt on the project's desirability and viability. The campaigns for and against the referendum have centered their arguments on the merits of the tunnel.<sup>10</sup> The outcome of the vote will very likely shift the politics and funding viability surrounding the project. If voters soundly reject the referendum, the FHWA and other decision makers will have a clear indication that the public does not want the tunnel. At the very least, a "reject" vote would show that the public does not have the appetite to approve the tax packages that will be necessary to pay for the project. The public's backing and willingness to pay for a project are essential considerations before rushing ahead with a multi-billion-dollar project.

O-001-010

The third reason for a longer comment-and-review period for the FEIS time is that the concerns laid out in this petition require substantive action on the part of FHWA. The FEIS review period is precisely the time for the FHWA to examine the process to date, understand the public's substantial and concerns about the process and the project, and decide whether to issue a ROD. Hasty approval of a flawed process would be inappropriate.

O-001-011

**B. Procedural NEPA Violations**

Although the FHWA may delegate the preparation of an EIS to a state agency such as WSDOT, the FHWA is ultimately responsible for ensuring the process complies with NEPA. Therefore, FHWA must ensure that "no action by an agency or an applicant concerning the proposal shall be taken which would . . . limit the choice of reasonable alternatives," until the ROD is issued.<sup>11</sup> This prohibition prevents a premature choice among alternatives.

An agency also must take a "hard look" at the environmental impacts of a project, "and it must be taken objectively and in good

<sup>9</sup>CEQ, Forty Most Asked Questions Concerning CEQ's NEPA Regulations, Question #34b (Mar. 23, 1981), available at <http://ceq.hss.doe.gov/nepa/regs/40/40p3.htm>.

<sup>10</sup>See, e.g., App'x, Docs. 6-7.

<sup>11</sup>CEQ, Forty Most Asked Questions Concerning CEQ's NEPA Regulations, Question #10a (Mar. 23, 1981).

**O-001-008**

The City of Seattle (specifically, the Seattle Department of Transportation) is a co-lead agency with FHWA and WSDOT, not a cooperating agency. The outcome of the August 16, 2011 referendum is not expected to materially affect implementation of this project.

**O-001-009**

While the outcome of the referendum may provide some indication of public opinion, it does not affect funding for the project, selection of the Bored Tunnel, or the NEPA process.

**O-001-010**

FHWA has been closely involved throughout the NEPA process and does not require any additional time before completing this Record of Decision.

**O-001-011**

Throughout the course of this project, extensive analysis has been completed on multiple alternatives with ample and appropriate public disclosure and discourse. FHWA is satisfied a thorough and complete "hard look" has been completed and documented as required and that all appropriate procedures have been followed. The NEPA process is described in Chapter 2 of the Final EIS.

O-001-011

faith, not as an exercise in form over substance, and not as a subterfuge designed to rationalize a decision already made.”<sup>12</sup> As the Ninth Circuit has observed, these principles bar an agency from taking any action to prejudice the outcome:

The whole point of NEPA is to study the impact of an action on the environment before the action is taken.

Where [i]nterim action prejudices the ultimate decision on the program[,] NEPA forbids it. Action prejudices the outcome when it tends to determine subsequent development or limit alternatives.<sup>13</sup>

WSDOT has violated these clear commands and the result has been impermissible prejudice poisoning the process. WSDOT’s actions require the FHWA to intervene.

**1. WSDOT and state officials admit they have already made a final decision**

During the last two years, WSDOT officials, the Governor, and the Transportation Committee chairs from both houses of the state legislature have all made numerous public statements saying that they have made a final choice to construct a deep-bored tunnel alternative:

- A year and half before the first EIS even considered a deep bore tunnel’s efficacy and impacts Gov. Gregoire declared “The time for debate is over.”<sup>14</sup>
- Rep. Judy Clibborn, House Transportation committee chair, said on August 11, 2009, “The state is building that tunnel, it’s a done deal.”<sup>15</sup> And referring to Seattle’s concerns over the tunnel, “The only impact the city could have would be to slow it down and make it very expensive.”<sup>16</sup>
- Gov. Gregoire, on September 24, 2009, “It’s done. We’re moving forward.”<sup>17</sup>
- Sen. Mary Margaret Haugen, Senate Transportation Committee chair on June 29, 2010, “It’s time to quit arguing about whether it’s good or not; the time is now to build it,” adding that the tunnel was a “done deal.”<sup>18</sup>
- Gov. Gregoire, on October 28, 2010, “The debate must end. We are going to build a tunnel.”<sup>19</sup>

<sup>12</sup>*Metcalf v. Daley*, 214 F.3d 1135, 1142 (9th Cir. 2000)

<sup>13</sup>*N. Cheyenne Tribe v. Norton*, 503 F.3d 836, 847 (9th Cir. 2007) (internal citations omitted).

<sup>14</sup>App’x, Doc. 8.

<sup>15</sup>App’x, Doc. 9.

<sup>16</sup>App’x, Doc. 10.

<sup>17</sup>App’x, Doc. 11.

<sup>18</sup>App’x, Doc. 12.

<sup>19</sup>App’x, Doc. 13.

**O-001-012**

Many public officials have made statements supporting and opposing alternatives and other aspects of this project. This is normal for a project of this magnitude and local and regional importance. These comments are outside of and have not influenced the NEPA review process. FHWA is satisfied all appropriate NEPA procedures have been followed.

- In December 2010, Ron Judd, WSDOT's outreach director for the project said, "The debate about whether or not we're going to do a tunnel is over."<sup>20</sup>
- Responding to the citizen's referendum, Gov. Gregoire on March 31, 2011, "The fact of the matter is the decision for the deep-bored tunnel was made in 2009."<sup>21</sup>
- WSDOT's project manager, Ron Paananen, March 2011 said, state officials "are not interested in revisiting the decision."<sup>22</sup>
- In May 2011, WSDOT Secretary Paula Hammond was asked "If construction begins at the end of August on the tunnel, is that the point at which there is no turning back in your view?" Hammond replied, "Actually, we've made the decision, the governor, the executive of King County, and the then Mayor of Seattle, in 2009, made the decision to construct the deep bore tunnel."<sup>23</sup>

These top state officials have exploited the weight of their offices to make a de-facto final decision, when in fact NEPA says that there could not yet be a final decision. Their comments also created an aura of inevitability, chilling public participation. Their actions undermine NEPA's goals of informed decision-making and public participation.<sup>24</sup>

WSDOT shut off public and agency consideration of alternatives long before all the environmental effects were ever known. NEPA does not allow such behavior. Even when the EIS process has been completed and a decision made, NEPA dictates that agencies remain open to unforeseen environmental effects, as the U.S. Supreme Court has explained:

The broad dissemination of information mandated by NEPA permits the public and other government agencies to react to the effects of a proposed action at a meaningful time. It would be incongruous with this approach to environmental protection, and with the Act's manifest concern with preventing uninformed action, for the blinders to adverse environmental effects, once unequivocally removed, to be restored prior

<sup>20</sup>App'x, Doc. 14.

<sup>21</sup>App'x, Doc. 15.

<sup>22</sup>App'x, Doc. 16.

<sup>23</sup>Audiofile available at Ross Reynolds, *The Conversation*, KUOW (May 25 2011), <http://www.kuow.org/program.php?id=23515>.

<sup>24</sup>*See, e.g., Oregon Envtl. Council v. Kunzman*, 817 F.2d 484, 492 (9th Cir. 1987) ("A properly prepared EIS ensures that federal agencies have sufficiently detailed information to decide whether to proceed with an action in light of potential environmental consequences, and it provides the public with information on the environmental impact of a proposed action and encourages public participation in the development of that information.")

O-001-012

to the completion of agency action simply because the relevant proposal has received initial approval.<sup>25</sup> Yet WSDOT's director and its political superiors have insisted on putting the blinders over the eyes of themselves and the public *before* release of the FEIS and ROD.

The statements of WSDOT and state officials, apart from stifling public participation, prejudiced the decision-making and limited alternatives being studied. Again, "[a]ction prejudices the outcome when it tends to determine subsequent development or limit alternatives, according to the Ninth Circuit Court of Appeals, whose interpretation of NEPA is binding on the actions of WSDOT and NEPA in this case.<sup>26</sup> How could WSDOT and other state officials' predetermination of the final choice of alternatives *not* determine subsequent development of the EIS and limit alternatives? NEPA forbids such prejudicial action, and this situation merits the FHWA's inquiry and granting of relief.

**2. A prejudiced WSDOT sues citizens who refuse to accept its premature decision**

O-001-013

The upcoming referendum in Seattle is an opportunity for the public to weigh in on the final choice of alternatives by the City, a recognized cooperating agency. Instead of assuming a neutral role, however, WSDOT took the plaintiff's seat in a lawsuit aimed at stopping the referendum. The referendum is a power of the citizens enshrined in state law and the Seattle City Charter and is a significant part of the public-participation process in Washington.<sup>27</sup> And NEPA holds public participation as a guiding principle.<sup>28</sup> It is incongruous that WSDOT would simultaneously maintain the positions of plaintiff blocking citizen involvement and objective decision-maker carrying out the EIS process. WSDOT's challenge to the referendum ultimately failed, as Judge Laura Gene Middaugh of the King County Superior Court issued an order on May 20, 2011 allowing a referendum to proceed to the ballot this August.<sup>29</sup> We fail to see any scenario where WSDOT's failed attempt was appropriate before release of the FEIS and ROD. WSDOT's actions thus further indicate that its mind has long been closed to an objective review of the project.

<sup>25</sup>*Marsh v. Or. Natural Res. Council*, 490 U.S. 360, 371 (1989) (internal citations omitted).

<sup>26</sup>*N. Cheyenne Tribe v. Norton*, 503 F.3d 836, 847 (9th Cir. 2007) (internal citations omitted).

<sup>27</sup> Wash. Const. Art. II Sec. 1(b); Seattle City Charter, art. IV, § 1.H

<sup>28</sup>*See State of Cal. v. Block*, 690 F.2d 753, 771 (9th Cir. 1982) ("NEPA requires not merely public notice, but public participation in the evaluation of the environmental consequences of a major federal action.")

<sup>29</sup>*See App'x*, Doc. 5.

**O-001-013**

The referendum concerned the process by which the City Council would give its own notice to carry out the agreements entered into between WSDOT and the City once the environmental review process was complete. The referendum was passed on August 16, 2011. The approval of the referendum confirmed use of the process originally set out in the agreements by which the City would direct its agencies to go forward with their work under the agreements.

The litigation challenging Referendum 1 was filed by the City Attorney on behalf of the City of Seattle. WSDOT intervened in that litigation because, as the state agency responsible for the state highway system and specifically for the SR 99 project, it had a significant interest in the litigation. Under FHWA's oversight, WSDOT has been committed to fulfilling NEPA's public participation requirements over the last 10 years. However, NEPA's public participation process does not extend to local initiatives and referenda, and WSDOT's participation in the referendum litigation was unrelated to its NEPA obligations.

### 3. WSDOT violated NEPA rules regarding cooperative agencies

Before the lawsuit, WSDOT actively ignored Seattle Department of Transportation (SDOT) and even punished it. SDOT is a cooperating agency in the EIS because the proposed project will be built exclusively within the City of Seattle's geographic boundaries.<sup>30</sup> SDOT's role as cooperating agency is important as it requires WSDOT to use SDOT's environmental analysis and proposals and to meet with SDOT at their request.<sup>31</sup> In December 2010, SDOT submitted a DEIS comment letter to WSDOT detailing its concerns with and comments on the October, 2010 DEIS.<sup>32</sup> These comments requested additional study of reasonable alternatives be performed prior to the release of the FEIS.<sup>33</sup> In response to SDOT's comments, WSDOT cut SDOT out of the FEIS review in clear contravention to NEPA's requirements.<sup>34</sup>

In a letter dated April 26, 2011, WSDOT AWV Administrator Ron Paananen stated that "while WSDOT and FHWA would typically provide SDOT with the internal review draft of the Final EIS for your review, policy comments from the City of Seattle's Mayor's office have led us to change the typical practice."<sup>35</sup> Later in the letter, Mr. Paananen explained, "The Mayor's Office, via SDOT, submitted comments [that] suggest the I5/Surface/Transit option be studied as a reasonable alternative." By blocking a cooperating agency from participation in the EIS, WSDOT violated NEPA. This action is further evidence of an agency that has lost objectivity, is refusing to take a hard look at viable alternatives, and is pursuing a predetermined outcome.

WSDOT later retreated from this hardline position, allowing some of SDOT's comments and data to be incorporated into the FEIS, and SDOT has since signed the FEIS. However, not all of SDOT's comments were addressed, as evidenced by a statement submitted by SDOT Director Peter Hahn at the time of signing.

Overall, I believe the EIS document has been crafted primarily to support and defend the selection of the Deep Bored Tunnel as the preferred alternative, rather than to provide an

<sup>30</sup>See 40 C.F.R. § 1508.5 ("Cooperating Agency means any Federal agency other than a lead agency which has jurisdiction by law . . . . A State or local agency of similar qualifications . . . may by agreement with the lead agency become a cooperating agency.").

<sup>31</sup>See 40 C.F.R. § 1501.6(a) ("The lead agency shall: (1) Request the participation of each cooperating agency in the NEPA process at the earliest possible time. (2) Use the environmental analysis and proposals of cooperating agencies with jurisdiction by law or special expertise, to the maximum extent possible consistent with its responsibility as lead agency. (3) Meet with a cooperating agency at the latter's request.").

<sup>32</sup>See App'x, Doc. 17.

<sup>33</sup>See App'x, Doc. 18.

<sup>34</sup>See 40 C.F.R. § 1502.9 ("The lead agency shall work with the cooperating agencies and shall obtain comments as required in Part 1503 of this chapter").

<sup>35</sup>See App'x, Doc. 19.

### O-001-014

The City of Seattle (specifically, the Seattle Department of Transportation) is a co-lead agency with FHWA and WSDOT, not a cooperating agency. City of Seattle staff from multiple departments have been extensively involved in planning this project and in reviewing discipline reports as appropriate for their expertise and jurisdiction. City of Seattle staff reviewed and commented on a preliminary draft of the Final EIS and their comments were incorporated in the final published document. FHWA is satisfied the City's involvement is appropriate for a co-lead agency and that the Final EIS accurately and objectively evaluates all reasonable alternatives.

O-001-014

unbiased account of the impacts of the tolled deep bore tunnel compared to other reasonable alternatives.<sup>36</sup>  
The EIS process requires the FHWA, or its designee, take a hard look at all reasonable alternatives. WSDOT failed to meet that duty by ignoring a cooperating agency's study and comments. WSDOT also violated the duty owed to cooperating agencies. Under 40 C.F.R. § 1501.6(a),

The lead agency shall: (1) Request the participation of each cooperating agency in the NEPA process at the earliest possible time. (2) Use the environmental analysis and proposals of cooperating agencies with jurisdiction by law or special expertise, to the maximum extent possible consistent with its responsibility as lead agency. (3) Meet with a cooperating agency at the latter's request.

Rather than use SDOT's environmental analysis and proposals, WSDOT rebuked SDOT and cut it out of the process. WSDOT violated NEPA and its implementing regulations.

**4. An arbitrary change to the statement of purpose and need**

Many groups commented on the 2010 Supplemental Draft EIS (SDEIS) and expressed strong reservations about the change in the project's statement of purpose and need. This point, however, deserves additional emphasis as the FHWA prepares to choose between the alternatives developed in the FEIS. Not only has WSDOT set up the FHWA to commit a NEPA violation, but it is also fair to presume that WSDOT's arbitrary change to the statement of purpose and need is born from its prejudice towards the tunnel. It is one consequence, petitioners believe, of WSDOT's decision to bend the EIS process towards its predetermination to select the tunnel.

In the 2006 Alaskan Way Viaduct & Seawall Replacement Project Supplemental Draft Environmental Impact Statement ("2006 SDEIS"), the purpose-and-need statement was as follows:

The main purpose of the proposed action is to provide a transportation facility and seawall with improved earthquake resistance. The project will maintain or improve mobility, accessibility, and traffic safety for people and goods along the existing Alaskan Way Viaduct Corridor as well as improve access to and from SR 99 from the Battery Street Tunnel north to Roy Street.<sup>37</sup>

<sup>36</sup>See *id.*

<sup>37</sup>WSDOT et. al, Alaskan Way Viaduct and Seawall Replacement Supplemental Draft Environmental Impact Statement 122 (July 2006), available at <http://www.wsdot.wa.gov/Projects/Viaduct/library-environmental.htm#sdeis>.

**O-001-015**

This comment portrays changes to the purpose and need statement as being done entirely by WSDOT. This is not the case. All three lead agencies (FHWA, WSDOT, and SDOT) jointly evaluated public comments and information developed during the Partnership Process and concluded the project's purpose and need statement should be revised. The changes to the statement were made with full participation by FHWA, WSDOT, and SDOT and were completed in July 2009. The changes are grounded on careful analysis and public comment. The change highlighted by this comment is simply clarifying how the "people and goods" referred to in the 2006 purpose and need statement move. This clarification does not constitute a new purpose as the comment contends.

The statement that WSDOT recommended a surface and transit alternative is factually incorrect. The document referenced in this comment is a fact sheet describing the scenarios developed during the Partnership Process and is not a statement of preference or recommendation by WSDOT or any other agency.

Contrary to the assertion in this comment, the changes to the purpose and need statement were described in the 2010 Supplemental Draft EIS (Chapter 3, Question 6) and in the Final EIS (Chapter 2, Question 6).

Notably, the project goal was a broad statement favoring the movement of people and goods; capacity for vehicles was not an end to itself, although obviously it could be one means of achieving that goal.

In 2008, WSDOT convened a Stakeholder Advisory Committee and worked together with the city and county transportation departments (“Partnership Process”) to develop alternatives for replacing the Viaduct after Seattle voters, in an advisory vote, rejected both prior alternatives, a four-lane tunnel and an elevated highway. These three agencies established Guiding Principles for the Partnership Process and the Committee’s work, and the second such principle echoed the 2006 statement of purpose and needs:

Provide efficient movement of people and goods now and in the future. Any solution to the Alaskan Way Viaduct must optimize the ability to move people and goods today and in the future in and through Seattle in an efficient manner, including access to businesses, port and rail facilities during and after construction.<sup>38</sup>

After the governor made her decision in early 2009, however, the 2010 SDEIS subtly changed these prior two statements of the project’s goals, as follows:

The purpose of the proposed action is to provide a replacement transportation facility that will:

- Reduce the risk of catastrophic failure in an earthquake by providing a facility that meets current seismic safety standards.
- Improve traffic safety.
- Provide capacity for automobiles, freight, and transit to efficiently move people and goods to and through downtown Seattle.
- Provide linkages to the regional transportation system and to and from downtown Seattle and the local street system.<sup>39</sup>

Perhaps a transportation department is justified in stating that a highway-replacement project needs to supply capacity for vehicles. But WSDOT, and by extension the FHWA, did not start there initially. It was new for WSDOT to say the project needs to create “capacity” for “automobiles” and “freight.”

The reasons for this change have not been explained by WSDOT. The federal Administrative Procedure Act requires the FHWA to articulate a reason for this change in policy course.<sup>40</sup> As the U.S. Supreme Court has stated, a federal agency may not “depart from a prior policy *sub silentio*.”<sup>41</sup> Rather, “the agency must show that

<sup>38</sup>See App’x, Doc. 20.

<sup>39</sup>WSDOT, FHWA, Alaskan Way Viaduct Replacement Project Supplemental Draft Environmental Impact Statement 4 (Oct. 2010) (emphasis added).

<sup>40</sup>See, e.g., *Motor Veh. Mfrs. Ass’n v. State Farm Ins.*, 463 U.S. 29, 42 (1983)

<sup>41</sup>*FCC v. Fox Television Stations, Inc.*, 129 S. Ct. 1800, 1811 (2009).

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there are *good reasons* for the new policy.”<sup>42</sup> We doubt that such good reasons appear in the agency record, nor can we conceive any facts or community needs that changed between 2006 and 2010 to justify the change. The change appears arbitrary and capricious, especially in light of WSDOT adopting guiding principles for the project in 2008 that did not include bare “capacity” for vehicles.

WSDOT’s action, and by implication the FHWA’s, also appears contrived to exclude consideration of the “I5/ Surface/ Transit” alternatives that rely more significantly on transit and had been recommended by WSDOT in December 2008.<sup>43</sup> It potentially excludes alternatives that rely on transit, demand management, and system-wide mobility improvements to the flow of people and goods.

Because the FHWA owns this change as much as WSDOT does, the FHWA risks an adverse outcome in any court challenge to the FEIS. To avoid that scenario, and to demonstrate that the FHWA is acting fair-mindedly and reasonably, the FHWA should take all steps necessary to change back the statement of purpose and need.

O-001-016

#### C. Inadequate Funding Plan

The current preferred alternative is a tolled bored tunnel. An alternative may be unreasonable if it is economically unfeasible. As the FHWA’s general counsel wrote in a 2004 memo providing guidance on environmental review of toll roads, “the economic feasibility of a particular alternative, especially when considered in conjunction with other factors, might provide the basis for eliminating that alternative as unreasonable.”<sup>44</sup> The Council on Environmental Quality (CEQ)’s guidance also describes “reasonable alternatives” as “those that are practical or feasible from the technical and economic standpoint and using common sense.”<sup>45</sup> The Ninth Circuit upheld an agency’s decision to exclude an alternative as unreasonable where evidence showed that “it would be significantly more costly and more environmentally destructive than the proposed route.”<sup>46</sup> And the Eighth Circuit has stated that, at the selection stage, “under NEPA, if the stated purpose will not be achieved by the proposed action or if the indirect costs or consequences are so great that a decision by the agency to proceed with the proposed action can only be said to be arbitrary and capricious, then a court may nullify the decision.”<sup>47</sup> A body of agency guidance and court decisions, therefore, dictate that the FHWA carefully review the tolled-tunnel alternative’s cost, its funding plan, and its reasonableness in light of these and other fac-

<sup>42</sup>*Id.* (emphasis added).

<sup>43</sup>See App’x, Doc. 21.

<sup>44</sup>See Gribbin, D.J., FHWA, NEPA Analysis of Toll Roads (Oct. 15, 2004), available at [http://www.environment.fhwa.dot.gov/guidebook/NEPA\\_tollroads.asp](http://www.environment.fhwa.dot.gov/guidebook/NEPA_tollroads.asp).

<sup>45</sup>CEQ, Forty Most Asked Questions Concerning CEQ’s NEPA Regulations, Question #2a (March 23, 1981).

<sup>46</sup>*Citizens for a Better Henderson v. Hodel*, 768 F.2d 1051, 1057 (9th Cir. 1985).

<sup>47</sup>*Jackson County, Mo. v. Jones*, 571 F.2d 1004, 1013 (8th Cir. 1978).

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The Washington State Legislature passed into law RCW 47.01.402, which commits the state to providing funding up to \$2.8 billion to replace the SR 99 Alaskan Way Viaduct, with tolling to provide up to \$400 million of that commitment.

The state funds programmed by the State Legislature include gas tax revenue from the Motor Vehicle Fund through the Nickel and Transportation Partnership Act (TPA) taxing authorities, and federal funding. The funds are used across Washington State for highway-related projects and are bonded with General Obligations bonds backed by the good faith and credit of the state (RCW 47.10.864). Bonds issued under the authority of RCW 47.10.861-866 are a general obligation of the State of Washington and pledge the full faith and credit of the state to the payment of principal, interest and contain an unconditional promise to pay such principal and interest when the bonds become due. Bond proceeds for toll revenue may include General Obligation bonds, Toll Revenue bonds, or a combination of both, as determined by the Washington State Treasurer and the State Finance Committee. In addition, on February 9, 2010, the Port of Seattle Commission, by a 5 to 0 vote, moved to affirm the Port’s support and financial commitment to the Bored Tunnel Alternative.

Finally, WSDOT has submitted a federally required finance plan to FHWA, entitled *Initial 2011 Financial Plan SR 99 Alaskan Way Viaduct Replacement Project*, which is currently under review. FHWA expects to complete its review and approve the finance plan following FHWA’s authorization of this Record of Decision.

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tors. In our view, the conclusion that the FHWA must reach is that the tolled-tunnel is unreasonable and, even if reasonable, undesirable due to its broken funding plan, which relies on highly risky assumptions.

WSDOT has released the following funding plan for the State's budgeted \$3.1014 billion for the tolled-tunnel alternative, \$468.4 million of which is assumed to come through your agency.

State Funding	
2009 Gas Tax (Partnership Funding)	\$1,597
2003 Gas Tax (WVSA Funding)	\$216
Other State Funds	\$210.4
Federal Funds	\$468.3
Local Funding	\$0
toll Funding	\$400.0*
Port of Seattle Funding	\$300.0**
<b>Total Source of Funds</b>	<b>\$3,101.4</b>

45

Already, at least \$700 million of this funding (\$300 million from the Port of Seattle and \$400 million from tolling) is in doubt and quite possibly will never materialize. This \$700 million is critical, because the Washington state legislature imposed a hard cap on the state's funding contribution to the project; no more than \$2.4 billion is permitted from state gas-tax revenues and federal dollars funneled through the state.<sup>49</sup> Thus, without the \$700 million, a tunnel is not economically viable.

**1. The Port of Seattle's questionable \$300 million**

As WSDOT's project director Ron Paananen stated in a court declaration on November 24, 2009, the tolled-tunnel alternative is not viable without the Port of Seattle's contribution of \$300 million.<sup>50</sup> Yet WSDOT seeks the FHWA's approval for this alternative without a binding commitment from the Port of Seattle. WSDOT and the Port entered an interlocal agreement in April 2010, but the agreement requires the Port to contribute funds only "[t]o the extent feasible and authorized by the Port Commission."<sup>51</sup> The agreement assumes that the Port will contribute to the project over three years, 2016-2018.<sup>52</sup> However, there is not a single document anywhere, let alone a proper

O-001-017

<sup>49</sup>WSDOT, *Alaskan Way Viaduct & Sewall Replacement Program - Understanding the Program's Cost and Funding*, (May 2011), available at [http://www.wsdot.wa.gov/NR/rdonlyres/A0086739-79D7-4ABD-A01B-DA59AA32D710/0/2011\\_0516\\_BoredTunnel\\_CostFunding\\_folio\\_web.pdf](http://www.wsdot.wa.gov/NR/rdonlyres/A0086739-79D7-4ABD-A01B-DA59AA32D710/0/2011_0516_BoredTunnel_CostFunding_folio_web.pdf).

<sup>50</sup>See Wash. Rev. Code § 47.01.402.

<sup>51</sup>App'x, Doc. 22 at 4 ¶¶ 10-11.

<sup>52</sup>See App'x, Doc. 23 at 4 § III.B.

<sup>53</sup>*Id.* at § III.B.5.

**O-001-017**

The Port of Seattle affirmed its participation in the project by approving Memorandum of Agreement (MOA) No. GCA 6444 on February 9, 2011. This MOA agrees to provide \$300 million in funding for the project.

Contrary to the assertions made in this comment, the Port of Seattle has consistently affirmed its commitment to provide the \$300 million in funding for the project. In their discussion supporting the agreement, the Port of Seattle Commissioners cited their support for the Bored Tunnel Alternative, its advantages over other alternatives, the importance of SR 99 to the regional economy, and the importance of funding projects that support freight movement.

O-001-017

authorization by the Port Commission, indicating that such funding is feasible and forthcoming.

Many indicators show that the Port of Seattle will not be able, or willing, to contribute such a significant sum to a project that will not directly benefit the Port or serve its mission. The Port's annual operating budget is only about \$500 million; its annual capital budget is approximately \$400 million.<sup>53</sup> Thus a \$300 million contribution, even spread out over three years, is obviously unrealistic without selling off assets or issuing bonds. But state law caps the indebtedness levels of the Port without a public vote.<sup>54</sup> In this uncertain economic environment, the Port is cutting it very close. As of December 31, 2010, the Port had room to issue only \$487 million in general-obligation bond debt without a vote.<sup>55</sup> These debt-limit issues aside, it is not clear whether the Port would have sufficient revenues to service the debt without an additional vote. The Port's property-tax levy may increase by a rate of no more than 1% per year unless the voters approve.<sup>56</sup> And now at least one Port commissioner is already on record questioning whether it is desirable for the Port to allocate \$300 million to the tolled-tunnel project.<sup>57</sup>

In light of these circumstances, the FHWA must carefully inquire into the feasibility of the Port's contribution and the real possibility that the Port Commission or the voters will never authorize \$300 million in bonds. If the Port's contribution does not materialize, the FHWA should demand WSDOT to prove that the tolled-tunnel alternative is economically reasonable and desirable. The FHWA should not throw good money after bad.

**2. The uncertain \$400 million from tolling**

Even more troubling, WSDOT may not be able to finance \$400 million in bonds through tolling. The problem stems primarily from state law's new limitations on tolling. In 2009, the state legislature authorized up to \$400 million in financing from tolls.<sup>58</sup> Since then, however, the voters of Washington approved Initiative 1053,<sup>59</sup> which requires legislative approval before a fee, such as a toll, is actually imposed or increased in any fiscal year. The state Attorney General issued an opinion last year stating that legislative authorization prior to I-1053's enactment is not enough; the legislature must pass a new law authorizing WSDOT to impose tolls.<sup>60</sup> Because any increase in toll rates would also require subsequent legislative ap-

O-001-018

**O-001-018**

The funds used across Washington State for highway related projects are bonded with General Obligations bonds backed by the good faith and credit of the state (RCW 47.10.864). Bonds issued under the authority of RCW 47.10.861-866 are a general obligation of the state of Washington and pledge the full faith and credit of the state to the payment of principal, interest and contain an unconditional promise to pay such principal and interest when the bonds become due. Revenues from tolls are important but not the only source available to the state.

Bond proceeds for toll revenue may include General Obligation bonds, Toll Revenue bonds or a combination of both as determined by the Washington State Treasurer and the State Finance Committee. Finally, WSDOT has submitted a federally required finance plan to FHWA, entitled *Initial 2011 Financial Plan SR 99 Alaskan Way Viaduct Replacement Project*, which is currently under review. FHWA expects to complete its review and approve the finance plan following FHWA's authorization of this Record of Decision.

<sup>53</sup>See App'x, Doc. 24.

<sup>54</sup>See Wash. Rev. Code § 53.36.030.

<sup>55</sup>See App'x, Doc. 25, at XI-3.

<sup>56</sup>See Wash. Rev. Code §§ 84.55.010, .050(1), .101.

<sup>57</sup>See App'x, Doc. 26.

<sup>58</sup>See Wash. Rev. Code § 47.01.402(b)(6).

<sup>59</sup>Codified at Wash. Rev. Code § 43.135.055 and in other statutory sections.

<sup>60</sup>See App'x, Doc. 27.

O-001-018

proval, serious doubts must arise about WSDOT's ability to adjust toll rates as necessary to raise enough money for bond payments.

Further clouding this picture, over 327,000 signatures were gathered to submit Initiative 1125 to Washington state voters this fall. If approved, it would expressly prohibit variable tolling.<sup>61</sup> Variable tolling is necessary, according to WSDOT, to finance \$400 million in bonds while minimizing traffic diversion from the tunnel during off-peak times.<sup>62</sup> Mr. Paananen, the WSDOT project director, recently admitted that passage of I-1125 would doom the project financially under the current plan's assumptions: "A flat toll rate would not achieve our objective as far as financing the project. . . . We would have to work with legislators and the governor's office, as far as handling that difference."<sup>63</sup>

Thus, \$400 million in financing hinges on a very uncertain future. We believe FHWA should demand that WSDOT produce a viable plan for making up this \$400 million shortfall if and when it materializes, or clarify to the public and decision makers what WSDOT will cut from the project scope.

**3. The tolling levels necessary to collect funding make the tolled-tunnel alternative unreasonable**

Economic infeasibility is not the only problem with tolling. Indeed, the FHWA must carefully review the FEIS, before issuing the ROD, to determine whether WSDOT's analysis of tolling impacts includes necessary changes from the 2010 SDEIS. As the Nelson-Nygaard Report indicates, the 2010 SDEIS defined the project to exclude a critical new connection within the city street grid (the "Elliott/Western connector") that will be built if a bored tunnel is selected. This omission results in an overestimate of the number of vehicles using the tunnel, and an underestimate of the tolling diversion:

The State did model a 2015 "program" alternative (including the connector) with Toll Scenario C, but the results are not reflected in the SDEIS. In this model, 38,000 daily trips were forecasted to use the tunnel, compared to 86,000 without a toll. The State's analysis suggests that with the planned Elliott/Western connector tolling diversion from the tunnel could be as high as 55% of daily traffic.<sup>64</sup>

The diversionary effects of a toll make it impossible for the tolled-tunnel alternative to be cost effective or to meet the project's purpose and need. To raise \$400 million in tolls, each one-way peak hour trip

O-001-019

**O-001-019**

An analysis of the Nelson-Nygaard document is provided in Appendix V of the Final EIS. Contrary to statements in the Nelson-Nygaard document, the analysis of the Bored Tunnel program with tolls does include the Elliott-Western Connector. This is provided in the Final EIS Chapter 7 and Chapter 8 of Appendix C, Transportation Discipline Report.

<sup>61</sup>See App'x, Doc. 28.

<sup>62</sup>See App'x, Doc. 29 at 15, 29.

<sup>63</sup>See App'x, Doc. 30.

<sup>64</sup>Nelson / Nygaard Consulting Associates, Inc., Additional Review of the Impacts of Deep Bored Tunnel Tolling Diversion on City Streets; Identification of Mitigation Draft Executive Summary (April 2011) (Nelson-Nygaard Report), to be available in Final Environmental Impact Statement.

O-001-019

would cost up to \$5.00 for the 2-mile stretch of tunnel.<sup>65</sup> Because there are ample free parallel routes, diversion is so high that only 38,000 vehicles are expected to use the tunnel each day.<sup>66</sup> This is only 1/3 of the current viaduct traffic; other users would divert to city streets.<sup>67</sup> This calls into question the very utility of the project. Why spend this much for a facility that is expected to be unaffordable and undesirable for so many potential users?

Before issuing the ROD, the FHWA must ensure that it is reasonable to spend federal-aid highway dollars on a project that delivers so little utility, and only to drivers who are financially able to pay the high cost of tolls.

**4. Without adequate funding, the mitigation measures are illusory**

O-001-020

The FHWA must consider mitigation of a project's environmental impacts and must "identify and include in the action all relevant and reasonable mitigation measures that could improve the action."<sup>68</sup> The importance of mitigation is highlighted in CEQ's new guidance on mitigation under NEPA. This CEQ guidance urges agencies to adopt procedures that make "relevant funding, permitting, or other agency approvals . . . conditional on performance of mitigation commitments."<sup>69</sup>

Necessary mitigation has not yet been identified for the preferred alternative, and costs are still not known. Very little funding has been set aside in the project budget for mitigation; it may be grossly inadequate. Because WSDOT's funding plan rests on a shaky foundation, the first project components likely to be cut are mitigations of the tunnel's environmental impacts. The FHWA should require WSDOT to demonstrate, and make binding commitments, that it will adequately fund the measures identified in the FEIS as necessary to mitigate the tolled-tunnel alternative's environmental impacts.

**5. Both the State and the City refuse to guarantee the project's funding**

O-001-021

The State and the City of Seattle have both expressly disavowed any responsibility for costs in excess of budget. The State legis-

<sup>65</sup>See App'x, Doc. 29 at 8.

<sup>66</sup>See Nelson-Nygaard Report at ES-4.

<sup>67</sup>See *id.*

<sup>68</sup>FHWA, NEPA and Transportation Decisionmaking, <http://environment.fhwa.dot.gov/projdev/tdmmitig2.asp>.

<sup>69</sup>CEQ, Final Guidance for Federal Departments and Agencies on the Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact (Jan. 14, 2011), available at [http://ceq.hss.doe.gov/current\\_developments/docs/Mitigation\\_and\\_Monitoring\\_Guidance\\_14Jan2011.pdf](http://ceq.hss.doe.gov/current_developments/docs/Mitigation_and_Monitoring_Guidance_14Jan2011.pdf).

**O-001-020**

Cost estimates for the Bored Tunnel include mitigation commitments and contingency planning based on current best practices. FHWA is satisfied that all mitigation commitments can be met.

**O-001-021**

WSDOT has submitted a federally required finance plan to FHWA, entitled *Initial 2011 Financial Plan SR 99 Alaskan Way Viaduct Replacement Project*, which is currently under review. FHWA expects to complete its review and approve the finance plan following FHWA's authorization of this Record of Decision.

lature enacted a law stating that it would appropriate not a dime more than \$2.4 billion, and assigning liability for cost overruns to "property owners in the Seattle area who benefit from replacement of the existing viaduct with the deep bore tunnel."<sup>70</sup> The City, however, insisted in its recent agreements with WSDOT 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."<sup>71</sup> The project therefore lacks a financial guarantor. This is a major problem given the small margin for error. If any portion of the project were to go wrong, such as with tunnel boring, construction of the north tunnel portal, removal of the Viaduct, or reconnection of the surface streets, the project will be stalled pending further negotiations between the State and the City on additional funding. The FHWA should take the only reasonable step: withhold its approval of the project until the State and the City reach an accord regarding cost overruns, with at least some government entity financially guaranteeing the project.

#### V. CONCLUSION

WSDOT created a fatally flawed NEPA process by predetermining the outcome, failing to analyze all reasonable alternatives, and falling short of the objectivity and good-faith required by NEPA. Before finalizing the EIS, WSDOT and state officials made a de-facto final decision when they declared the bored tunnel alternative is a "done deal." WSDOT assumed an adversarial stance toward anyone who questioned their de-facto final decision, suing a citizen group to stop a valid referendum and punishing a cooperating agency for submitting comments regarding further study of an alternative. These actions are not those of an agency performing an objective and good-faith review of the project; they are the actions of an agency sacrificing an objective process in favor of ensuring their predetermined outcome is realized.

The FHWA should grant an extension of the FEIS review period in order to address the many significant technical and financial problems will surely be day-lighted by the release of the FEIS. The change to the preferred alternative will shed new light on the costs and benefits of this project. This is the last opportunity for decision-makers and the public to weigh the merits of a tolled tunnel and to negotiate solutions to unresolved problems with the project. Is usage by only 1/3 of present viaduct users enough to justify the project? How will the \$700 million funding gap be covered, and what will be cut if it is not? However, WSDOT has misled the public into believing it is too late to ask questions, too late to solve problems, and there are

<sup>70</sup>See Wash. Rev. Code § 47.01.402(6)(b).

<sup>71</sup>Seattle Ordinance No. 123542, Ex. A, MOA NO. GCA 6486 § 10.2.

no other alternatives. The FHWA must take action now to avoid ratifying WSDOT's missteps by issuing a ROD with these problems unaddressed.

The FHWA should exercise its discretion and extend the comment and review period for the FEIS to 90 days. This will allow for the necessary scrutiny of the FEIS in light of WSDOT's prejudice. If FHWA determines additional environmental study is required to cure the flawed FEIS this must be performed free of the bias already exhibited by WSDOT and be included in the ROD. The FHWA should conduct an investigation into WSDOT's violation of the regulations governing cooperating agency involvement and propose remedies. The ROD should be withheld until WSDOT produces a viable and cost-effective funding plan to complete the proposed tunnel project and actually implement adequate mitigation measures. Finally, FHWA should hold an informal hearing to take more evidence on WSDOT's prejudice and the lack of adequate funding for this project.

We hope this petition has informed you of the situation as it has developed in recent months and has made clear the serious concerns which our organizations share. We encourage the FHWA to correct the deficiencies created by WSDOT under your delegated authority, and ensure compliance with NEPA and its standards for informed decision-making and high-integrity participation with local jurisdictions. Please contact us if you have any questions regarding the matters raised.

Respectfully submitted,



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TIM R. GOULD  
Chair of Transportation and Land Use  
Committee  
Sierra Club Washington  
180 Nickerson Street, Suite 202  
Seattle, WA 98109  
(206) 378-0114

JULY 14, 2011

From: Albro [mailto:ktalbro@earthlink.net]  
Sent: Monday, July 18, 2011 12:20 PM  
To: WSDOT AWW 2011 FEIS Comments  
Cc: Gunn, Cecelia  
Subject: building located at 87 Virginia in the Market

O-002-001

Angela, I am the property manager for the above located building at the corner of Pike Place and Post alley and Virginia Street in the market. I have been forwarded a copy of your time line for the Pike Place Market and see that our building is NOT being reviewed for settlement issues during the staging times for the tunnel preparation work. Wondered if you could share with me why so that I can advise my owners the decision thinking that went on during the review process of this issue.

I look forward to hearing from you either via email or phone. I can be reached at 206-713-6181.

Thanks,  
Kathleen Albro  
Property Manager for the Pike & Virginia Building  
Pioneer Square Condominium Management | (206)713-6181  
PO Box 4696, Seattle, WA 98194-0696 | fax (425)671-0469

### O-002-001

FHWA understands that WSDOT coordinated with you both by phone and at a meeting on August 11, 2011. Historic resources, including buildings and districts, were carefully studied for potential effects from construction of the Bored Tunnel. This property is well outside of the area where settlement or other construction effects could occur. These effects are described in Chapter 6, Questions 13 and 19, of the Final EIS and in Appendix I, Historic, Cultural, and Archaeological Resources Discipline Report. Potentially affected historic buildings would be monitored for settlement effects as listed in the Memorandum of Agreement, which is included as Attachment C to Appendix I.



August 15, 2011

Angela Angove  
Alaskan Way Viaduct Project Office  
999 Third Avenue, Suite 2424  
Seattle, WA 98104

RE: Comments on Alaskan Way Viaduct Replacement Project Final EIS

Dear Mrs. Angove,

**O-003-001**

In December 2010, the Pike Place Market PDA submitted comments on the Supplement Draft A WVRP EIS. Since then, we have conducted several follow-up meetings with Project staff and directors and WSDOT representatives to address concerns and mitigate impacts to the Market. These meetings have been extremely productive and informative. In addition, we received your detailed response to our initial letter and want to convey our great appreciation for your consideration of the potential impacts that we feel may threaten current Market operations and character of this protected historic resource. Unfortunately, we do not think that the EIS analysis and mitigation is yet adequate to protect this treasured historic resource of Seattle.

After we reviewed and considered the correspondence mentioned above, a pronounced concern still remains for potential impacts on the Market. Given the historic nature and complexities inherent to the Market, we strongly urge that extensive consideration for mitigation should be granted. These complexities, as detailed within our Charter, consist of a large number of sensitive populations that include our Senior Center, Child Care and Preschool, Food Bank and low-income/HUD residential housing. In addition to potential construction impacts on our social services and vulnerable resident populations, the Market also supports a large number of small, marginal businesses that require constant vigilance and even the slightest disruption could potentially wreak havoc on their operations if impacted for even a short amount of time. Moreover, as a treasured National Register Historic District, we are disappointed that the potential impacts to the Market were overlooked in the EIS.

The Pike Place Market PDA respectfully urges the reconsideration of the impacts to the Market and mitigation to the following areas:

### **O-003-001**

Thank you for your acknowledgement of the collaboration and dialogue that we have had with the Pike Place Market PDA. FHWA has considered and documented expected impacts from the proposed action and we believe that the mitigation proposed in the Final EIS and Record of Decision is sufficient. Specific responses to the comments provided by the Pike Place Market PDA's requests are provided in the responses below.

O-003-002

1. **Parking and Traffic:** There will be a permanent loss of parking at two surface lots (Lenora and Blanchard) as well as long-term accessibility impacts to our parking garage from the waterfront. This begins with the demolition of the viaduct through substantial completion of waterfront improvements and planned construction of the Elliot and Western arterial/connector and designated freight corridor immediately adjacent to the western edge of the Market. The high volume of anticipated through traffic could impede pedestrian and vehicle access to the Market from the west, where the lower entrance (essential to ingress and egress) to our parking garage and elevator are located. Parking is critical to the service of guests and support of commercial and non-profit operations in the Market. Annual gross revenue from our surface lot operations alone (PC1N, Blanchard and Lenora) is in excess of \$600,000 without including any potential revenue from our garage.

O-003-003

2. **Cumulative Long-term Construction Impacts to Historic Resources:** The Alaskan Way and Viaduct Replacement Project and associated major construction projects in aggregate present several years of continuous and cumulative significant disruption, as well as economic and environmental impacts to the Market's small businesses and social functions. Though the Historic District was acknowledged in Appendix I, the assessment doesn't go nearly far enough in addressing the potential long-term cumulative impacts to the Market. Beyond the Viaduct demolition, the seawall replacement and other related construction projects constitute a full program of cumulative effects. Thus, the bored tunnel alternative does pose construction impacts contrary to the finding in Exhibit 6-1 of Appendix I which state "no construction effects." The Market should have been, and still should be, a party to any Memorandum of Understanding entered into under Section 4(f) and Section 106.

O-003-004

3. **Resident, Social Service and Business/Economic Impacts:** The functionality of the Market also includes a large number of senior residents, low-income residents, childcare services and multiple social service programs. In particular, the Market is very concerned about the impacts on our Child Care playground, Senior Center, and Food Bank, which are all located in close proximity to the Viaduct would all be adversely affected by the construction and demolition over extended periods.

O-003-005

4. **Proposed location, traffic volumes, freight corridor designation and configuration of the proposed Elliott and Western Connector to Alaskan Way surface arterial:** We concur with the statement made in the July 5, 2011 letter from WSDOT Director of Operations Kimberly Farley that, "...as we discussed, Seattle Department of Transportation (SDOT) will construct arterials that may have some impact. The Central Waterfront Project, which is currently in the planning stages, would repurpose the area after the viaduct is demolished. This work, lead by SDOT, has not undergone environmental review." We also note a potential for increased volumes of diversion traffic from tolling of the tunnel that would seek to use this corridor, yet no alternative transportation plan or mitigation have been proposed. We believe that this EIS should identify these

## O-003-002

The Project would not result in a permanent loss of parking in these surface lots (Blanchard/Lenora). After the viaduct demolition work over these lots is completed, these surface lots could be re-opened. The completion of all demolition activities in the Market area would occur in 2016 within a period of approximately 6 to 8 weeks.

Long-term accessibility impacts to the Pike Place Market parking garage are not expected. Access to this garage will not be affected during construction because of its location away from Bored Tunnel construction activities.

Traffic volumes in the project's built condition are not anticipated to impede pedestrian or vehicular access to the Market from the west; nor would access to the Market's parking garage or elevator be impeded.

## O-003-003

Construction effects are discussed in Chapter 6 and cumulative effects are discussed in Chapter 7 of the Final EIS. Cumulative effects specific to historic resources are discussed in Chapter 7, Question 12 of the Final EIS. Further discussion of cumulative effects specific to historic resources as a result of the Bored Tunnel Alternative can be found in Chapter 7 of Appendix I of the 2010 Supplemental Draft EIS.

WSDOT has met with the Pike Place Market PDA concerning this project on seven occasions. FHWA has received comments from the Pike Place Market PDA concerning the 2010 Supplemental Draft EIS, which described the Bored Tunnel as the preferred alternative. The Pike Place Market PDA never requested to become a Section 106 consulting party. During the Section 106 consultation process, FHWA and WSDOT approved every request received in writing to become a Section 106 consulting party. The City of Seattle, who chartered the Pike Place Market PDA and administers the Pike Place Market Historical

O-003-005

impacts now as part of the cumulative and induced effects required to be studied under NEPA and SEPA. We do not believe these related actions can be properly segmented from this environmental review. We are particularly concerned that no alternatives for the connector street project have been studied in this document. It is difficult to understand how the state and federal decision-makers relying on this EIS can make decisions without completion of the environmental review for the connector streets, as the impacts caused by the diversion of local and freight traffic is admittedly significant. We respectfully ask that supplemental environmental review be conducted now, and that the Market be part of the stakeholder group that is involved in the environmental review process.

O-003-006

The Pike Place Market PDA would like to reaffirm our support for the bored tunnel alternative and we do appreciate your consideration of our concerns. We understand the difficulties in correctly gauging the impacts of this massive project and know how intricate a balance it can be to please all entities involved. It is for this reason that we are making an assertive effort to illustrate our areas of concern that have not been thoroughly addressed to date. The Pike Place Market is one of the most-- if not *the* most--treasured asset of the City of Seattle. Protection of this resource must be of paramount importance during the environmental review and permitting process.

Sincerely,



Ben Franz-Knight  
Executive Director

cc: Pike Place Market PDA Councilmembers  
Market Historical Commission  
Director of SDOT – Peter Hahn  
Director of DPD – Diane Sugimura  
Director of DON – Bernie Matsuno  
T, Ryan Durkan, HCMP

Commission, is a Section 106 consulting party and the City Historic Preservation Officer is a concurring party to the Section 106 Memorandum of Agreement for the project.

**O-003-004**

For the Bored Tunnel Alternative, demolition of the viaduct would take approximately 9 months. The viaduct would be demolished in two-block segments, with each segment taking no more than 4 weeks. Construction of the bored tunnel in the vicinity of Pike Place Market would include tunnel boring, which would include underground activities. Access will be maintained to social resources during viaduct demolition. Please see Chapter 6, Questions 23 and 24 of the Final EIS for a discussion of effects on social resources and low-income and minority populations during project construction.

**O-003-005**

The Elliott/Western Connector is not part of the proposed project evaluated in the Final EIS. The Elliott/Western Connector is a separate, independent project as described in Chapter 2, Question 9 of the Final EIS that will be examined through a separate environmental process. The Final EIS evaluated the cumulative effects of other reasonably foreseeable projects, such as the Elliott/Western Connector in Chapter 7 of the Final EIS. Additionally, Appendix C, Transportation Discipline Report, Chapter 8 evaluates potential cumulative transportation effects of the proposed project in conjunction with other reasonably foreseeable projects, including the Elliott/Western Connector. More specifically, Section 8.2.4 of Appendix C discusses traffic operations at key intersections for the proposed project in conjunction with the Elliott/Western Connector and other reasonably foreseeable projects.

**O-003-006**

Thank you for your continued support and cooperation. We appreciate

your continued efforts and our responses to your concerns have been included in the Record of Decision.



The City of Seattle

## Pike Place Market Historical Commission

Mailing Address: PO Box 94649 Seattle WA 98124-4649  
Street Address: 700 5th Ave Suite 1700

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AUG 15 2011  
AWV Facilities Team  
NS

August 15, 2011

MHC 128/11

Angela Angove  
Alaskan Way Viaduct Project Office  
999 Third Avenue, Suite 2424  
Seattle, WA 98104

Dear Ms. Angove:

O-004-001

The Pike Place Market Historical Commission identified inadequate evaluation of potential adverse effects to the Pike Place Market Historic District (Attachment A) in the Alaskan Way Viaduct Replacement Project Final Environmental Impact Statement and requests that additional information be included in the Project's Record of Decision.

Constructive use of Pike Place Public Market under Section 4(f) of the National Transportation Act through construction activities at Victor Steinbrueck Park, the PC-1 Site, and Western Avenue due to Alaskan Way Viaduct demolition and Elliott/Western Connector work is not identified in the FEIS Exhibit 4(f)-2. Preliminary Elliott/Western Connector drawings prepared in 2009 by Boris Dramov for FHWA, WSDOT, and SDOT (Attachments B-E) were not identified in Appendix C (Exhibit 1-1, page 1-8) of the FEIS under transportation discussion.

The following points identify areas of insufficient information in the FEIS relative to the issue stated above and other impacts to the Pike Place Market Historical District anticipated by the Pike Place Market Historical Commission:

O-004-002

- 1) FEIS- Project Area, item 21 asks, "What community and social services serve these neighborhoods?" (Alaskan Way Viaduct Replacement Project Final EIS, p.103) While Pioneer Square and Belltown are rightfully mentioned due to the high number of social services available in these areas, services in the Pike Place Market are not. The concentration of social services within this comparatively small district include; the Pike Market Clinic, Food Bank, senior housing, and low-income residences. The Food Bank in particular operates very close to the existing Viaduct, and the senior housing, "Heritage House" is located immediately adjacent to the Viaduct. Low-income housing is located adjacent to Western Avenue in the LaSalle Addition and Leland Building. These social services should be listed in the Record of Decision.

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### O-004-001

FHWA has been fully involved and carefully reviewed the Final Section 4(f) Evaluation for this project, which is included with the Final EIS. This evaluation considers potential constructive use of the Section 4(f) resources, including the Pike Place Market Historic District, and concludes there are none (see Final EIS Section 4(f) Chapter, Question 9).

The 2009 drawings that show the Elliott/Western Connector are not drawings of the Bored Tunnel Alternative. Both the Cut-and-Cover Tunnel and Elevated Structure Alternatives include connections to Elliott and Western Avenues. However, the Elliott/Western Connector is not a part of the Bored Tunnel Alternative (see Appendix B, Alternatives Description and Construction Methods). Since the Elliott/Western Connector is not part of the Bored Tunnel, it is not included in the Section 4(f) evaluation of that alternative.

### O-004-002

The text in the Final EIS is a summary of the information contained in the discipline reports. The project acknowledges the presence of social resources in the Pike Place Market area, and they are discussed in the Final EIS Appendix H, Social Discipline Report, Chapter 4.

These resources will not be called out specifically in the Record of Decision; however, the mitigation measures described in the Project Commitments section of this Record of Decision to address effects on social resources and minority and low-income populations do apply to them.

O-004-003

2) On p. 124 in Appendix H, Social Discipline Report, it says, "Construction impacts that would affect minority and low-income populations in the project area include traffic congestion, reduced mobility, reduced transit service, increased air emissions, and increased noise." The Record of Decision needs to include mitigation measures that would be taken to protect the low-income population in the Market that lives adjacent to Western Avenue and on First Avenue.

O-004-004

3) On pp. 23-24 in Appendix M, Air Discipline Report, it says, "Exposure assessments are difficult because it is difficult to accurately calculate annual concentrations of MSATs near roadways and to determine the portion of a year that people are actually exposed to those concentrations at a specific location." Within the Market Historical District in the 1500 block of Western Avenue, in addition to the Market Clinic, Food Bank, senior and low-income housing, the Pike Market Childcare Center & Preschool's playground immediately adjacent to Western Avenue. The daycare includes low-income children. The low-income residences, food bank and daycare are important to preserving the Pike Place Market Historical District's history serving the low-income population in Seattle. On p. 34 in Appendix T 2010 SDEIS Comments and Responses, your response to concerns raised by the Dept of Ecology about the impact of the project on low-income residents, was that, "Currently available technical tools do not allow a prediction of the project-specific health effects that would result from the potential emission changes associated with a project." The Commission is concerned about the impact of increased vehicle exhaust, specifically Mobile Source Air Toxics (MSATs) on the low-income residents, senior residents, food bank users, and the daycare's playground, all adjacent to Western Avenue.

O-004-005

4) In Appendix M, the Air Discipline Report, you include information concerning the long-term effect of the Bored Tunnel on air quality. You seem to have mainly concentrated on seven intersections, (Yesler and 1<sup>st</sup> Ave, Columbia St and 1<sup>st</sup> Ave, Denny Way and Dexter Avenue, Denny Way and Aurora Ave northbound, Mercer St and Fairview Ave N, Mercer St and Westlake Ave N, Mercer St and Dexter Ave North). The entire project area is located within a "maintenance area," that is an area once classified as a non-attainment area, but which has since been demonstrated attainment of National Ambient Air Quality Standards, (NAAQS). Are the seven intersections, including the tunnel portals, the areas that you considered the most problematic? What of the long-term effects on air quality near the Pike Place Market, particularly in the vicinity of Western Avenue?

O-004-006

5) In Appendix B, on p. 46 there is a description of a rubble lot near Lenora Street where construction rubble will be dumped and stored. A map on p. 49 (Attachment F) shows the rubble lot northwest of Victor Steinbrueck Park. The Record of Decision needs to include information on how noise and dust will be controlled at the site so that it does not impact visitors at Victor Steinbrueck Park.

O-004-007

6) The map on p. 49 in Appendix B (Attachment F) appears to show staging areas in the Right of Way on Western Avenue, within the Pike Place Market Historical District. The staging areas within the District must be described in the Record of Decision along with

### O-004-003

The Record of Decision Project Commitments section includes mitigation measures to address effects on low-income and minority populations in the project area.

### O-004-004

FHWA understands your concern about MSATs affecting sensitive populations adjacent to Western Avenue. The Final EIS Appendix M, Air Discipline Report, discusses the results of the MSAT analysis during project operation in Chapter 5. For the Bored Tunnel Alternative, the conclusion states that future MSAT concentrations in the project area are projected to be lower than existing concentrations, even with increased VMT (due to EPA's national control programs). MSATs in the study area are predicted to substantially decrease in the future compared to existing conditions (Section 5.2.3 of Appendix M).

### O-004-005

Section 3.4.3 of the Final EIS Appendix M, Air Discipline Report, describes the process that lead to the selection of these seven intersections for analysis. First, major intersections in the project area that may be affected by the project were identified. Then these intersections were evaluated for traffic volumes and level of service under all the build alternatives for the design year 2030 and ranked according to the results. The highest ranked intersections for each condition were selected for analysis.

The air quality analysis for the project concludes that regional MSAT emissions are not expected to increase and no exceedances of the NAAQS are expected; therefore, no significant adverse effects on air quality are expected to result from the project.

- O-004-007** | any mitigation measures to be taken to protect residents, the Market Childcare & Preschool and businesses along Western Avenue within the District from the potential impacts of the staging areas.
- O-004-008** | 7) On p. 122 in Appendix H, Social Discipline Report, Western Avenue is listed as one of the streets on the construction-related truck haul routes. Will this include Western Avenue between Union and Virginia? If so, can the truck haul route be moved to an arterial outside of the Historical District?
- O-004-009** | 8) The FEIS indicates that there will be measures implemented to help business owners and neighborhoods maintain viability during construction, including: a communications plan, providing information for alternative transportation modes and parking, use of best practices, an assurance of continual access, and a construction schedule that considers peak and seasonal shopping periods.
- What is the process for Market tenants to directly receive reimbursement funds if their businesses are damaged due to Viaduct project-related activities?
- How will information about the construction process be communicated to Market businesses? When will outreach begin?
- Is there a budget to assure adequate public notification so people know in advance and can make plans?
- O-004-010** | 9) You show potential ground disturbance because of construction of the Bored Tunnel, as occurring between Yesler Way and S. Seneca St. Do you anticipate ground disturbance as a result of tunnel boring in the vicinity of the Pike Place Market?
- O-004-011** | 10) Measures to minimize harm to Victor Steinbrueck Park and supporting garage structure are not adequately described. The park is part of the Pike Place Public Market Historic District and subject to Pike Place Historical Commission review and Certificate of Approval requirements.
- O-004-012** | 11) The project's monitoring and enforcement program is inadequate since the Pike Place Public Market Historical District is not identified as a Section 4(f) resource, leaving undefined protection measures at Victor Steinbrueck Park for visitors. Victor Steinbrueck Park is an integral part of the market's function. Ongoing use of the parking garage beneath Victor Steinbrueck Park and the Desimone parking lot adjacent the garage is essential for Market visitors and vendors. Both are immediately adjacent the Alaskan Way Viaduct. The Record of Decision needs to include clarification as to whether or not demolition of the viaduct would require closure of these parking areas.
- O-004-013** | 12) Were all the areaways in the Pike Place Market Historical District physically inspected?
- O-004-014** | 13) What is the process for communicating about fixing buildings, structures or streets within the District that are damaged by the project?

#### **O-004-006**

The BNSF/Lenora Street Construction Zone discussed on page 73 of the Final EIS (and also page 49 of Appendix B) is a strip of right-of-way along the viaduct between about Pine Street and Bell Street. This area would be used during the last year of construction for viaduct demolition and resurfacing Alaskan Way. In Chapter 8 of the Final EIS, Question 11 discusses mitigation measures proposed for noise, and Question 24 discusses air quality effects. An MOA between WSDOT and the Puget Sound Clean Air Agency is in place to identify appropriate mitigation measures to help eliminate, confine, or reduce construction-related emissions, such as dust. WSDOT will create a plan for controlling fugitive dust during construction. This fugitive dust control plan will control fugitive dust generated during construction activities in order to minimize dust effects to neighbors and other projects.

Mitigation is discussed in the Project Commitments section of the Record of Decision.

#### **O-004-007**

Exhibit 3-1 in Appendix B of the Final EIS shows a construction staging area (labeled with the number 15) that is a strip of right-of-way along Alaskan Way parallel to the existing viaduct. This area would be used for demolition and removal of the viaduct structure. Mitigation measures for effects during construction are discussed in the Final EIS, Chapter 8, Questions 9 through 29 and in the Project Commitments section of the Record of Decision.

#### **O-004-008**

Haul routes will use City of Seattle designated truck routes and will be more specifically identified during final design. However, the project will not be using Western Avenue between Union and Virginia Streets as a haul route.

O-004-015

14) The following information in Appendix C, Transportation Discipline Report and Appendix I, Historic Cultural and Archaeological Resources Report, suggests that under the Deep Bore Tunnel Alternative there will be an increase in traffic on the waterfront and arterials near the waterfront:

On p. 1-11 it says, "The Bored Tunnel Alternative (non-tolled) is expected to result in the highest number of vehicle through-trips along the corridor of the three build alternatives and a noticeable increase in vehicles along arterials near the waterfront due to the lack of ramps at Elliott and Western Avenues."

On pp. 1-16 -1-17, Appendix C, it says, "under tolled conditions, vehicles would divert from SR 99 when tolling is implemented. For example, diversion from SR 99 under the Bored Tunnel Alternative with tolling is forecasted to be approximately 39 percent of daily vehicles compared to the Bored Tunnel Alternative without tolling. These diverted vehicle trips would instead be distributed across Alaskan Way, parallel arterials, and I-5."

On p. 1-21, Appendix C, it says, "Under the Bored Tunnel Alternative, Alaskan Way is expected to carry more vehicles than it would under the other alternatives because it would be the primary access route from SR 99 into downtown from the south, and it would accommodate traffic to 15th Avenue via Elliott and Western Avenues."

On p. 1-21, Appendix C, it says "The ability of Alaskan Way to serve as a primary travel corridor for Elliott/Western traffic is limited by the rail crossing at Broad Street and multiple cross streets. The Elliott/Western Connector, proposed as part of the Program, would address this issue."

On p. 100 in Appendix I, it says traffic will be increased in Pioneer Square. Since Western Avenue begins in Pioneer Square and feeds north through the Market, it is presumed that traffic will increase on Western Avenue in the Market as drivers cut through. On p. 101 it says that Pioneer Square was historically active with considerable traffic, therefore increased volume would not impact the integrity of the district. However Western Avenue where it cuts through the Pike Place Market Historical District is not currently congested and is described by SDOT staff as "sleepy".

Western Avenue is an arterial street that parallels Alaskan Way. The Pike Place Market Historical District includes Western Avenue from about Union Street to past Virginia Street (see enclosed map, Attachment A). This section of Western Avenue presently does not bring excessive traffic volume through the District and is slow-paced and pedestrian friendly. Given the statements as noted above from Appendix C, it seems fair to assume that there will be an increase in traffic on Western Avenue in the Historical District, coming from the south on Western from side streets that connect to Alaskan Way, from the new Elliott/Western Connector, and from southbound Elliott Avenue.

The Commission is charged with protecting the character and integrity of the Historical District as cited in SMC 25.24.01:

#### O-004-009

Measures to protect businesses and property owners during construction are described in Chapter 8 of the Final EIS and included in this Record of Decision in the Project Commitments section. Planning and evaluation of the Bored Tunnel Alternative shows that Pike Place Market tenants will not be damaged and therefore will not need compensation or remedy from the project. The communications program for the project will include tenants, property owners, and organizations at and around the Pike Place Market. This outreach will begin before construction effects occur. Fortunately for the Pike Place Market area, the majority of these effects will not happen until 2016 when the existing viaduct is scheduled for demolition. Budgets for the outreach effort have not been established separately from the overall project costs.

#### O-004-010

Potential ground disturbance between Yesler Way and Seneca Street would be the result of utility relocation and viaduct demolition rather than tunnel boring. As illustrated in Exhibit 2-3 of Appendix I of the Final EIS, potential ground disturbance as a result of utility relocation and viaduct demolition would also occur along surface Alaskan Way and within the footprint of the Alaskan Way Viaduct from Yesler Way to Battery Street. None of this ground disturbance is a result of tunnel boring.

Ground disturbance as a result of tunnel-induced settlement is discussed in Chapter 6, Question 13 of the Final EIS and Section 6.1.2 of Appendix I of the Final EIS. Ground disturbance as a result of tunnel-induced settlement would be negligible in the vicinity of the Pike Place Market Historic District. Only two historic properties would be adversely affected by tunnel-induced settlement, the Western and Polson buildings, both located in the Pioneer Square-Skid Road Historic District. No historic properties within or in the vicinity of the Pike Place Market Historic District would be adversely affected by tunnel-induced settlement.

O-004-015

"In order to promote the educational, cultural, farming, marketing, other economic resources, and the general welfare; and to assure the harmonious, orderly, and efficient growth and development of the municipality, it is deemed essential by the people of the City that the cultural, economic, and historical qualities relating to the Pike Place Markets and the surrounding area, and an harmonious outward appearance and market uses which preserve property values and attracts residents and tourists be preserved and encouraged.,,"

The Commission believes that the statements in Appendix C and Appendix I indicate that there will be an increase in traffic on Western Avenue in the Historical District. Seattle Municipal Code 25.24.040 Section D states that, "The District possesses integrity of location, original construction, use, and of feeling and association" and Section E states that, "Preservation of the District will retain a characteristic environment of a period of Seattle's history while continuing a vital cultural and economic aspect of the City." The Commission requests that mitigation measures be included in the Record of Decision to protect Western Avenue within the Historical District as a slow-paced, pedestrian friendly street that does not move excessive volumes of traffic through the District in order to protect the integrity of the District.

O-004-016

15) On p. 99 in Appendix I, Historic Cultural and Archaeological Resources Report, it says that an unusable Viaduct would result in "significantly increased traffic and congestion throughout the downtown area and also that it " could also result in loss of access and altered traffic patterns that could result in adverse effects due to degraded economic viability of the Pioneer Square Historic District and the Pike Place Market Historic District and interference with the continued use and maintenance of the historic buildings in these districts." Figures published elsewhere in the FEIS suggest that a tolled tunnel would produce the same amount of traffic due to drivers bypassing the tolled tunnel. How will this impact Western Avenue?

O-004-017

16) Portions of Western Avenue within the Pike Place Public Market Historic District would be subject to use under Section 4(f) under the preferred alternative through the Elliott/Western Connector work. FHWA responsibility for the Elliott/Western Connector Section 4(f) evaluation remains unclear. These were not identified in the FEIS Exhibit 4(f)-2.

O-004-018

17) Anticipated traffic volumes along the Western Avenue through the Pike Place Public Market Historic District are needed to determine potential impacts to the historic district. Discussion of the Bored Tunnel Alternative starting on page 244 of the FEIS Section (4)f Evaluation does not mention the Elliott/Western Connector, even though these are identified in Appendix C (Exhibit 1-1, page 1-8) of the FEIS under transportation discussion, particularly under tolled conditions.

O-004-019

18) On pp. 82 and 84 of Appendix D, it says, "The potential visual effects of the new Elliott/Western Connector are discussed in the Final EIS, Chapter 7, Cumulative Effects Analysis." However, there is no additional information on the impact of the Connector on views in Chapter 7 and no information is provided in Appendix B or in FEIS Chapter 7 on the height of the new Elliott/Western Connector as it relates to

#### O-004-011

The Pike Place Market Historic District and Victor Steinbrueck Park were both identified as Section 4(f) resources that were evaluated for potential use in the Final EIS as shown in Exhibit 4(f)-5 on pages 259 through 261. Victor Steinbrueck Park is discussed in Chapter 6, Question 21 of the Final EIS as one of the resources that would experience indirect effects from increased traffic congestion during construction.

Transportation mitigation measures are described in Chapter 8, Question 9 of the Final EIS and in the Project Commitments section of the Record of Decision. Parking affected during construction is described in the Final EIS Chapter 6, Question 18 (and shown in Exhibit 6-22) as well as in Appendix C, Transportation Discipline Report, Section 6.9. The Bored Tunnel Alternative is not expected to directly effect the Public Market Garage.

#### O-004-012

The Pike Place Market Historic District and Victor Steinbrueck Park were both identified as Section 4(f) resources that were evaluated for potential use in the Final EIS as shown in Exhibit 4(f)-5 on pages 259 through 261. The public parking affected during construction is described in the Final EIS Chapter 6, Question 18 (and shown in Exhibit 6-22) as well as in Appendix C, Transportation Discipline Report, Section 6.9. There are no affected public parking lots or garages directly adjacent to Pike Place Market.

#### O-004-013

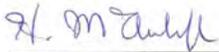
All accessible areaways within the zone of influence (settlement trough) within the Pike Place Market Historic District were evaluated as part of a building assessment. The areaway condition was observed during site visits and observations were noted on each of the building assessment forms.

O-004-019

Victor Steinbrueck Park, therefore the Commission is not able to determine whether or not the Connector, included as part of the Deep Bore Tunnel Program, will impact views from the Park.

Sincerely,

Spencer Howard, Commission Chair  
By:



Heather McAuliffe, Commission Coordinator  
Pike Place Market Historical Commission

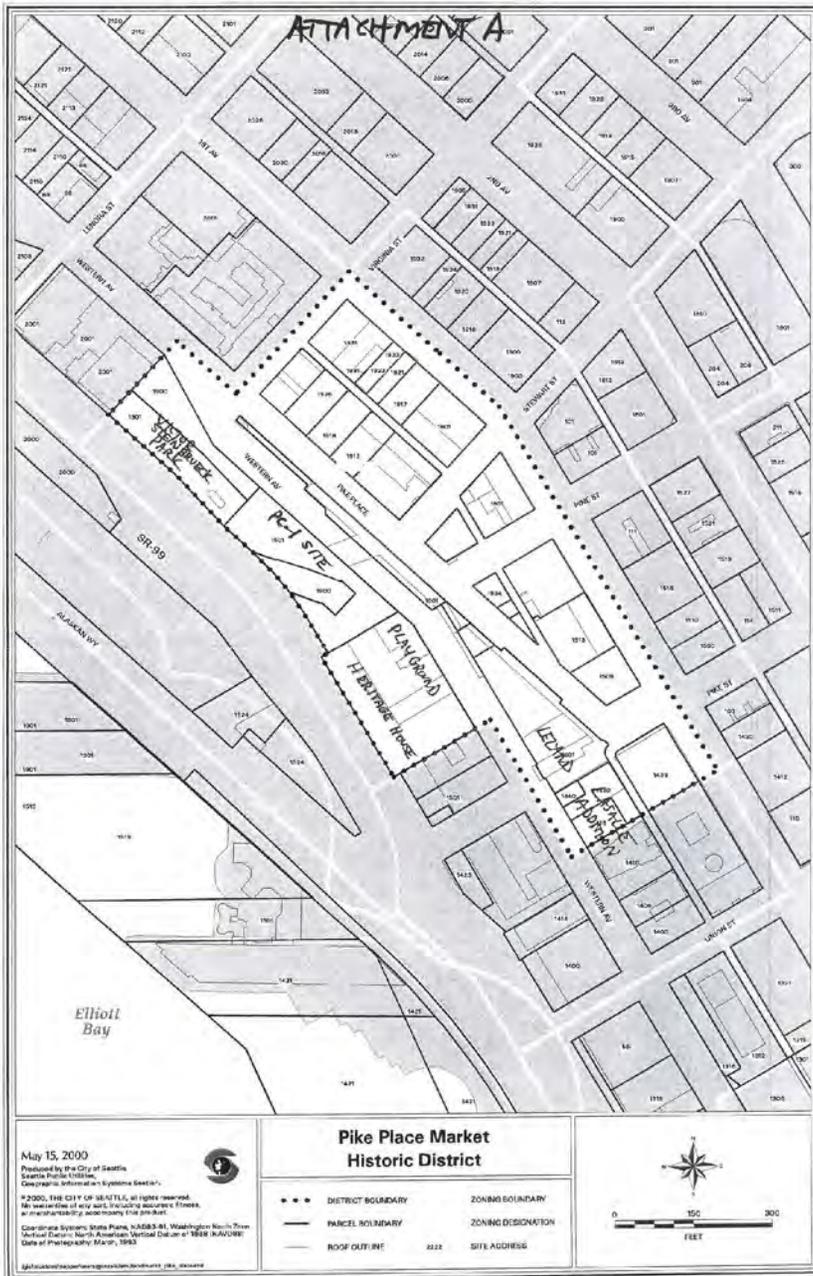
Cc: Ben Franz-Knight, Pike Place Market Preservation & Development Authority

#### O-004-014

The claims and repair process by which owners of buildings, including historic buildings, can file claims for damages to their properties that may result from construction of this project are discussed in Chapter 8, Questions 17 and 28 of the Final EIS, and Appendix I, Section 6.1.2 and Attachment C. WSDOT, in consultation with the State Historic Preservation Officer and the Department of Archaeology and Historic Preservation, will develop a claims and repair process, which will include: the damage claim submittal process; the process by which damage claims will be inspected and evaluated; the process for and personnel involved in preparing damage evaluations, repair cost estimates, findings and recommendations; the process for making and documenting repairs based on the reported cost estimates and recommendations; and, the process for making appeals. WSDOT will ensure that an architect meeting the Secretary of the Interior's Standards for historic architecture will participate in the claims and repair process for any historic buildings and that all work on such buildings will follow the Secretary of the Interior's Standards for the Treatment of Historic Properties and will be done in compliance with the City of Seattle's Municipal Code, including review and approval by the Pike Place Market Historic Commission, as required. This claims and repair process was a commitment made by FHWA and WSDOT within the Section 106 Memorandum of Agreement for this project, which is included with this Record of Decision.

#### O-004-015

Information related to level of service and intersection delay expected at several intersections along Western Avenue with the proposed action is provided in the Final EIS Exhibits 5-12 and 5-13, and Appendix C, Transportation Discipline Report, specifically Sections 5.3 and 7.4 and Exhibits 5-28 and 7-57. These data indicate that intersection delay at intersections along Western Avenue are expected to be similar between the Tolloed and Non-Tolloed Bored Tunnel. Furthermore, as shown in



Exhibits 5-12 and 5-13 of the Final EIS intersections near the Pike Place Market are not expected to be congested or highly congested during peak travel hours for any of the alternatives examined, with or without tolls. As discussed in the Final EIS and Appendix C, traffic that diverts to other routes due to tolling are expected to divert to Alaskan Way; First, Second, and Fourth Avenues; and I-5. While vehicle volumes are expected to increase on Alaskan Way with the Tolloled Bored Tunnel as compared to the Non-Tolloled Bored Tunnel, that these increases in vehicle volumes are not expected to substantially increase intersection congestion or delay during peak travel hours as indicated in Chapter 5, Question 10 of the Final EIS.

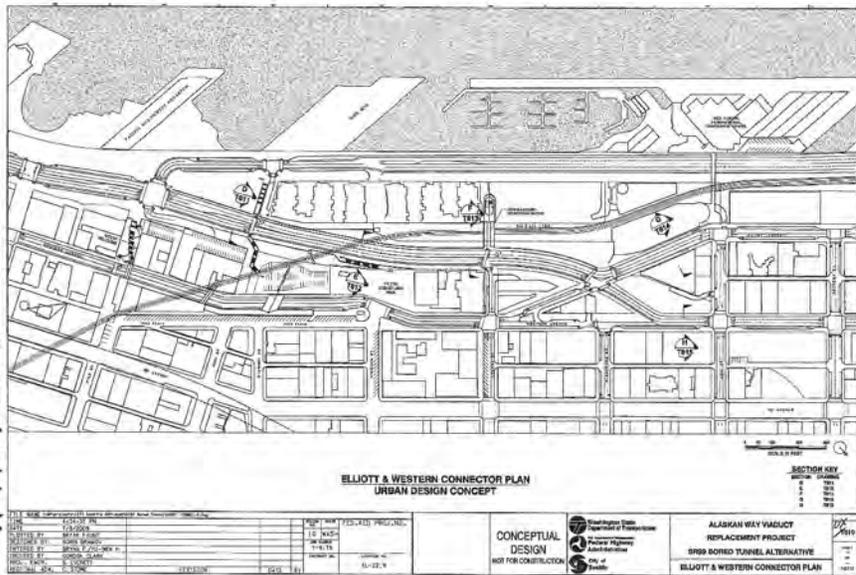
**O-004-016**

Information related to level of service and intersection delay at several intersections along Western Avenue is provided in the Final EIS Exhibits 5-12 and 5-13, and Appendix C, Transportation Discipline Report, specifically Sections 5.3 and 7.4 and Exhibits 5-28 and 7-57. These data indicate that intersection delay at intersections along Western Avenue are expected to be similar among the Tolloled and Non-Tolloled Bored Tunnel. Tolling the Bored Tunnel is not expected to increase the number of congested intersections near the Pike Place Market Historic District as shown in Exhibits 5-12 and 5-13 of the Final EIS and Exhibits 5-28 and 7-57 of Appendix C, Transportation Discipline Report.

**O-004-017**

The Section 4(f) discussion does not discuss effects of the Elliott/Western Connector because it is not part of the proposed project evaluated in the Final EIS. The Elliott/Western Connector is a separate, independent project as described in Chapter 2, Question 9 that will be examined through a separate environmental process. The Final EIS evaluated the cumulative effects of other reasonably foreseeable projects, such as the Elliott/Western Connector in Chapter 7 of the Final EIS.

ATTACHMENT B



**O-004-018**

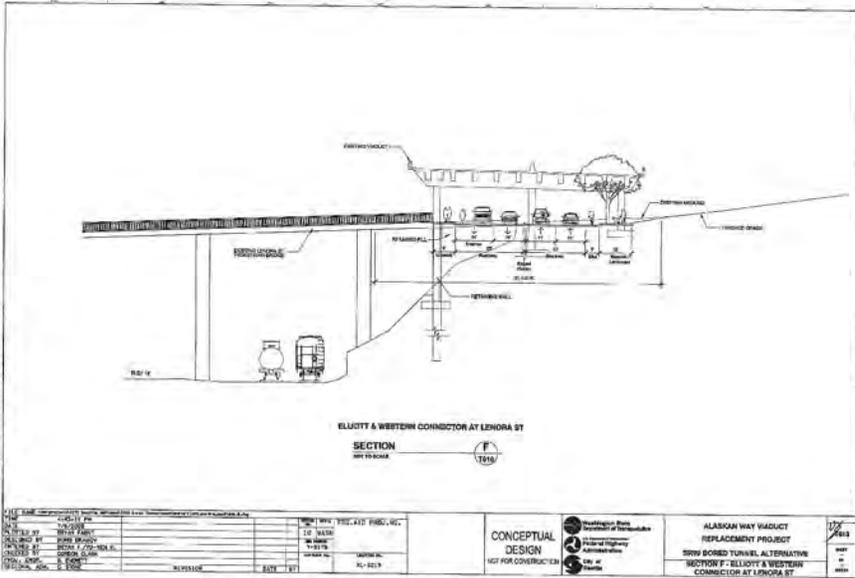
The Section 4(f) analysis in the Final EIS does not consider the Elliott/Western Connector because it is not part of the proposed action. The Elliott/Western Connector is an independent project that will be evaluated through its own environmental review process. Information related to level of service and intersection delay expected at several intersections along Western Avenue with the proposed action is provided in the Final EIS Exhibits 5-12 and 5-13, and Appendix C, Transportation Discipline Report, specifically Sections 5.3 and 7.4 and Exhibits 5-28 and 7-57. These data indicate that intersection delay at intersections along Western Avenue are expected to be similar between the Tolloed and Non-Tolloed Bored Tunnel.

**O-004-019**

The Final EIS evaluated the cumulative effects of other reasonably foreseeable projects, such as the Elliott/Western Connector in Chapter 7 of the Final EIS. Specific details, such as the height of the Elliott/Western Connector are unknown at this time. The effects of the Elliott/Western Connector project will be evaluated through a separate environmental process.



ATTACHMENT D





# ATTACHMENT F



54791



Staging Areas

Exhibit 3-1  
Construction Staging Areas

# Friends of Seattle

For the green, urban city we need

## Via Email

August 15, 2011

Angela Angove  
Alaskan Way Viaduct Replacement Project Office  
999 Third Avenue, Suite 2424  
Seattle, WA 98104-4019  
awv2011FEIScomments@wsdot.wa.gov

Dear Ms. Angove,

On behalf of the organization Friends of Seattle, I write to comment on the Final Environmental Impact Statement (FEIS) for the Alaskan Way Viaduct Replacement Project. Friends of Seattle is a citizen's group organized as a nonprofit corporation under the laws of Washington. Its principal office is located in Seattle, Washington.

## Segmentation

The definitions of the Project and the reasonable alternatives improperly exclude the Elliott-Western Connector that is slated for construction within the existing footprint of the Alaskan Way Viaduct. This improper segmentation of the Project violates the National Environmental Policy Act (NEPA), regulations of the Council on Environmental Quality (CEQ), and the State Environmental Policy Act (SEPA). An environmental impact statement (EIS) is inadequate if it does not adequately consider the significant individual and cumulative environmental impacts resulting from a Project. Stated another way, by artificially breaking off pieces of the project that is the subject of the EIS, an EIS fails to give policy makers and the public a complete view of a project's significant environmental impacts.

This sort of segmentation is expressly outlawed by 40 C.F.R. § 1508.25. This regulation, concerning the required scope of an EIS, requires that a single EIS be prepared for "[c]onnected actions, which means that they are closely related and therefore should be discussed in the same impact statement." 40 C.F.R. § 1508.25(a)(1). Actions are defined as "connected" when they "[a]utomatically trigger other actions which may require environmental impact statements," 40 C.F.R. § 1508.25(a)(1)(i), "[c]annot or will not proceed unless other actions are taken previously or simultaneously," 40 C.F.R. § 1508.25(a)(1)(ii), or "[a]re interdependent parts of a larger action and depend on the larger action for their justification," 40 C.F.R. § 1508.25(a)(1)(iii).

434 Maple Leaf Pl #201, Seattle, WA 98115

## O-005-001

The Bored Tunnel Alternative as defined in the Final EIS does not include the Elliott/Western Connector. The Elliott/Western Connector is an independent project that will be evaluated through its own environmental review process. The Final EIS does describe the Elliott/Western Connector in Chapter 2, Question 9 and cumulative effects of the Elliott/Western Connector and other projects are provided in Chapter 7 of the Final EIS. The detailed transportation cumulative effects analysis is provided in Chapter 8 of Appendix C, Transportation Discipline Report. The purpose of providing both the transportation analysis of the proposed action (the Bored Tunnel Alternative) and the proposed action with other projects identified as part of the broader Alaskan Way Viaduct and Seawall Replacement Program was to meet FHWA's requirements under NEPA for cumulative effects analysis.

Each of the build alternatives evaluated in the Final EIS has independent utility and would meet the purpose and need (see Final EIS Chapter 5, Question 37).

O-005-001

O-005-001

The Elliott/Western Connector is described on page 60 of the FEIS and there defined as an “independent” project, for which the co-lead agency City of Seattle will prepare a separate EIS. As the map of the Connector shows on page 58 of the FEIS, the Connector would sit in the footprint of the Viaduct, creating a road passing over the railroad and connecting the waterfront street with Elliott and Western above. This connection is critical for local access and providing freight mobility between the industrial areas in Ballard and SoDo–Duwamish. The Viaduct replacement cannot or will not proceed unless the Connector is built. Likewise, the Connector depends on the larger action—tearing down and replacing the Viaduct—for its justification. There is no adequate justification for excluding the Connector from the FEIS.

By failing to properly include the Connector within the scope of the FEIS, the co-lead agencies have created an inadequate FEIS. When environmental review is segmented in this way, the FEIS is too narrow in scope. The potential environmental impacts of the excluded project segment are not studied. And, for those portions of the project segments that are included, the environmental impacts are misstated because the impacts are different when the segments are properly analyzed as a whole. Consider, for example, that the tolling diversion—and consequential environmental impacts—from the bored-tunnel alternative could be much worse when the Connector is accounted for. This likelihood is discussed in the FEIS Appendix V, pages ES-4 and 2-2 to -4. The analysis comes from a report prepared by Nelson-Nygaard, and it notes WSDOT tolling data that found traffic diversion caused by tolling would be much worse were the Connector included. It is not enough to tuck an analysis of the entire program into chapter 8 of the Transportation Discipline Report, as the FEIS does. Rather, the Connector should be incorporated into the entire FEIS, and the environmental impacts should be examined from all perspectives, not just traffic flow.

To remedy this defect, at the very least, the lead agencies must prepare a supplemental EIS (SEIS) encompassing the environmental effects that would result from construction of the Elliott-Western Connector. An SEIS must be prepared if “[t]he agency makes substantial changes in the proposed action that are relevant to environmental concerns,” 40 C.F.R. § 1502.9(c)(1)(i), or if “[t]here are significant new circumstances or information relevant to environmental concerns and bearing upon the proposed action or its impacts,” 40 C.F.R. § 1502.9(c)(1)(ii).

#### **Traffic Model and Presentation of Traffic Data**

O-005-002

The FEIS’s traffic modeling and presentation of the resulting data is so badly limited, for three reasons, that the FEIS is inadequate. First, the model that underlies the FEIS, as discussed in chapter 2 of the Transportation Discipline Report, does not utilize the latest innovations espoused by researchers from the University of Washington’s Center for Statistics and the Social Sciences. In a 2009 study they prepared, entitled “Assessing Uncertainty About the Benefits of Transportation Infrastructure Projects Using Bayesian Melding: Application Seattle’s Alaskan Way Viaduct,” the UW researchers prepared their own models of Alaskan Way Viaduct replacement alternatives. (A copy of the report is attached to this letter as Exhibit A.)

#### **O-005-002**

The transportation modeling completed for this project uses current models developed by the Puget Sound Regional Council and the City of Seattle Department of Transportation. The modeling techniques employed are consistent with current professional practice and have been reviewed and approved by FHWA staff at the division and headquarters levels. WSDOT has conducted additional review of the attachments to this comment letter and its analysis is included in the project file. This analysis confirms that the traffic forecasts in the Final EIS are sufficient for purposes of NEPA analysis.

O-005-002

You will see that they criticize the Puget Sound Regional Council model that underlies WSDOT's environmental review of the Alaskan Way Viaduct Replacement Project. As documented in this study, the traffic model used to support the FEIS fails to adequately account for the interrelationship between changes in land use and transportation system. Thus the FEIS fails to give an adequate view of the environmental impacts of each alternative, and it fails to adequately consider alternatives that do not rely as much on vehicular capacity.

The second flaw in the FEIS's traffic model is that it uses unrealistic and outdated assumptions of the level of vehicle miles traveled in the model years studied. As discussed in the series of articles by Sightline in Exhibits B through F, and the state Office of Finance and Management's traffic projections discussed in Exhibit G, annual growth in vehicle miles traveled has tapered off and even dropped. The data show that this trend began before the recent economic recession. The FEIS, however, appears to indicate that its traffic model relied on very outdated forecast data for its assumptions of future travel demand. These flawed assumptions have created an inadequate FEIS, and they also helped result in WSDOT's mistaken conclusion that alternatives that relied on transit and systematic street improvements would be insufficient to meet the project needs. A supplemental FIS is necessary to give policy makers and the public a realistic view of the environmental impacts, and to reassess the I-5/surface/transit alternatives using accurate data about future travel demand.

The third flaw in the FEIS traffic analysis stems from its presentation of the data produced by its traffic model. The results of traffic models in the FEIS are presented without any indication of the statistical uncertainty that underlies the data. When UW researchers looked at a previous WSDOT study that presented data from traffic models in the same way as the FEIS, the researchers concluded, "These point estimates ignore any uncertainty involved in the models used to generate them, and thus could mislead the public into having an unwarranted degree of confidence in the benefits of making these investments." (Ex. A, "Assessing Uncertainty," p. 18.) As the UW researchers explain, policy choices about infrastructure "depend on information that is uncertain, and the public has a direct interest in better understanding how likely it is that spending several billion dollars will actually solve a problem they care about." (*Id.*, p. 2.) By properly accounting for the statistical uncertainty inherent in traffic models, "the expectations of benefits from maintaining the current level of traffic capacity in the viaduct corridor may be higher than can be scientifically supported by the available models and evidence." (*Id.*, p. 18.) As this UW report shows, WSDOT's failure to present the statistic uncertainty creates a misleading and unreasonable picture of the environmental impacts and reasonableness of each alternative.

The UW researchers' model, which more effectively accounted for land uses and statistical uncertainty, led the researchers to conclude as follows:

What our results suggest, in short, is that even using a worst-case scenario and comparing it to a capacity-neutral replacement of the Alaskan Way Viaduct, the travel time benefits of the higher capacity alternative are modest, and fairly localized to the viaduct corridor.

O-005-002

There does not appear to be much effect on longer commutes or on I-5 in the vicinity of downtown, as evidenced by the overlapping distributions of the predicted travel times. Further, our combined analysis of land use and transportation reveals considerably more adaptive capacity than the analysis done by the WSDOT, which considers only travel changes and excludes by assumption any adaptation in location choices of households, firms and real estate development. Accounting for uncertainty, in short, the expectations of benefits from maintaining the current level of traffic capacity in the viaduct corridor may be higher than can be scientifically supported by the available models and evidence.

(Ex. A, "Assessing Uncertainty," p. 18.) The FEIS should have employed these same techniques, and its failure to do so has rendered it inadequate.

**An SEIS Must Be Done If Another Tolling Scenario Is Chosen**

O-005-003

The tolling scenarios range from A - E with significant differences in the effective tolling rate. There would be commensurate variations in the rates of traffic diversion for each tolled alternative. However, the FEIS assumes for all tolled alternatives that tolling scenario C would be implemented. It does not analyze the alternatives with the other tolling scenarios. Traffic diversion would significantly affect transit, the environment, noise, and air quality. The ROD should identify which tolling scenario will be implemented so that the environmental effects of this project are known. Further, if WSDOT proposes to implement a tolling scenario different from tolling scenario C, a supplemental EIS would be necessary. *See* 40 C.F.R. § 1502.9(c)(1)(ii).

**Change in Statement of Purpose and Need**

O-005-004

The change in the statement of purpose and need still has not been explained sufficiently.

**A. A Good Reason for the Change Has Not Been Given**

In the 2006 Alaskan Way Viaduct & Seawall Replacement Project Supplemental Draft Environmental Impact Statement ("2006 SDEIS"), the purpose-and-need statement was as follows:

The main purpose of the proposed action is to provide a transportation facility and seawall with improved earthquake resistance. The project will maintain or improve mobility, accessibility, and traffic safety for people and goods along the existing Alaskan Way Viaduct Corridor as well as improve access to and from SR 99 from the Battery Street Tunnel north to Roy Street.

Notably, the project goal was a broad statement favoring the movement of people and goods; capacity for vehicles was not an end to itself, although obviously it could be one means of achieving that goal.

**O-005-003**

The tolling scenario selected for evaluation in the Final EIS, scenario C, is conservative in that it would result in greater impacts than the other scenarios. Since the other potential tolling scenarios would have fewer impacts, a supplemental EIS would not be required.

**O-005-004**

All three lead agencies (FHWA, WSDOT, and SDOT) jointly evaluated public comments and information developed during the Partnership Process and concluded the project's purpose and need statement should be revised. The changes to the statement were made with full participation by FHWA, WSDOT, and SDOT and were completed in July 2009. The changes are grounded on careful analysis and public comment.

O-005-004

In 2008, WSDOT convened a Stakeholder Advisory Committee and worked together with the city and county transportation departments (“Partnership Process”) to develop alternatives for replacing the Viaduct after Seattle voters, in an advisory vote, rejected both prior alternatives, a four-lane tunnel and an elevated highway. These three agencies established Guiding Principles for the Partnership Process and the Committee’s work, and the second such principle echoed the 2006 statement of purpose and needs:

Provide efficient movement of people and goods now and in the future. Any solution to the Alaskan Way Viaduct must optimize the ability to move people and goods today and in the future in and through Seattle in an efficient manner, including access to businesses, port and rail facilities during and after construction.

After the governor made her decision in early 2009, however, the 2010 SDEIS subtly changed these prior two statements of the project’s goals, as follows:

The purpose of the proposed action is to provide a replacement transportation facility that will:

- Reduce the risk of catastrophic failure in an earth-quake by providing a facility that meets current seismic safety standards.
- Improve traffic safety.
- Provide capacity for automobiles, freight, and transit to efficiently move people and goods to and through downtown Seattle.
- Provide linkages to the regional transportation system and to and from downtown Seattle and the local street system.

The reasons for this change have not been explained by the lead agencies. The federal Administrative Procedure Act requires the lead agencies to articulate a good reason for this change in policy course.<sup>1</sup> As the U.S. Supreme Court has stated, a federal agency may not “depart from a prior policy sub silentio.”<sup>2</sup> Rather, “the agency must show that there are good reasons for the new policy.”<sup>3</sup> We doubt that such good reasons appear in the agency record, nor can we conceive any facts or community needs that changed between 2006 and 2010 to justify the change. The change appears arbitrary and capricious, especially in light of WSDOT adopting guiding principles for the project in 2008 that did not include bare “capacity” for vehicles. Perhaps a transportation department is justified in stating that a highway-replacement project needs to supply capacity for vehicles. But WSDOT, and by extension the other lead agencies for this project, did not start there initially. It was new for the lead agencies to say the project needs to create “capacity” for “automobiles” and “freight.” Thus, a good reason for the change was necessary. The FEIS, in appendix T, C-013-001, did offer an explanation of the differences from the old and the revised statement of purpose and need. But it did not explain the *good reason* for making the change.

The lead agencies’ action also appears contrived to exclude consideration of the alternatives that rely more significantly on transit and had been recommended by

<sup>1</sup>See, e.g., *Motor Veh. Mfrs. Ass’n v. State Farm Ins.*, 463 U.S. 29, 42 (1983)

<sup>2</sup>*FCC v. Fox Television Stations, Inc.*, 129 S. Ct. 1800, 1811 (2009).

<sup>3</sup>*Id.* (emphasis added).

O-005-004

WSDOT in December 2008. It potentially excludes alternatives that rely on transit, demand management, and system-wide mobility improvements to the flow of people and goods.

**B. The Revised Statement Violates State Law**

O-005-005

The FEIS did not respond to Friends of Seattle's comment on the SDEIS regarding the statement of purpose and need's conflict with state laws regarding VMT reductions. Under state law, WSDOT is required to focus on the movement of people and goods, not vehicles, and it must develop strategies for reducing vehicle-miles traveled statewide. For instance, the statute setting forth the goals for the state's transportation system does not mention capacity for vehicles. Rather, it states the goal of "improv[ing] the predictable movement of goods and people throughout Washington state," RCW 47.04.280(1)(d), and "[t]o promote and develop transportation systems that stimulate, support, and enhance the movement of people and goods to ensure a prosperous economy," RCW 47.04.280(1)(a). Capacity for vehicles is not one of the goals. To the contrary, the Legislature has required WSDOT to "[d]evelop strategies to gradually reduce the per capita vehicle miles traveled based on consideration of a range of reduction methods." RCW 47.01.078(4). More specifically, the Legislature has required WSDOT to develop and implement goals for reducing vehicle miles traveled statewide by 18% by 2020, 30% by 2035, and 50% by 2050. RCW 47.01.440(1). Therefore, WSDOT's statement of purpose and need is unreasonably narrow and contrary to law if it specifically requires capacity for automobiles.

The lead agencies should take all steps necessary to change back the statement of purpose and need, and then to revisit its analysis of the project alternatives.

O-005-006

**Failure to Fully Study a Reasonable Alternative**

The lead agencies still have not adequately explained the rationale for excluding full study of "surface-transit" and other alternatives that rely on transit and other mobility improvements. Especially in light of WSDOT's obligations under state laws concerning VMT and carbon-emission reductions, it was unreasonable to exclude such alternatives from the FEIS.

**Section 4(f)**

O-005-007

The FEIS's Section 4(f) evaluation improperly views the Pioneer Square Historic District as a collection of protected properties, rather than as a whole district. The bored-tunnel alternative would "use" the streets of the Pioneer Square Historic District by channeling traffic through Pioneer Square, and by directly using portions of the streets for the alternative's network of on- and off-ramps. By failing to view the District, with its legally protected streets, as a whole, the Section 4(f) evaluation falls short. Additionally, the Section 4(f) evaluation improperly failed to determine that the increased levels of traffic on Pioneer Square streets would result in a "constructive use" of the adjacent buildings and frontages. These objections to

**O-005-005**

WSDOT has provided the following response:

"The law setting the VMT benchmarks directs WSDOT to "adopt broad statewide goals to reduce annual per capita vehicle miles traveled by 2050 consistent with the stated goals of Executive Order 07-02." The state law does not require individual projects to set VMT reductions. WSDOT is working on this task and related tasks in Executive Order 09-05 in conjunction with a working group established for this purpose. The cumulative greenhouse gas impacts of transportation projects are best addressed at a system-wide level where multiple projects can be analyzed in aggregate, such as in regional transportation plans. The Alaskan Way Viaduct Replacement Project is included in PSRC's Regional Transportation Plan, *Transportation 2040*, which considered greenhouse gas emissions along with other transportation objectives."

**O-005-006**

In the Final EIS Chapter 2 describes the development of alternatives. Additional information can be found in Appendix W, Screening Reports.

**O-005-007**

The Final Section 4(f) Evaluation, included with the Final EIS, appropriately considers the potential effects ("uses") to historic and other resources subject to Section 4(f) regulations. For this project, all reasonable alternatives involve the use of at least one Section 4(f) resource. This means there is no avoidance alternative. FHWA has carefully reviewed the alternatives and concludes that the Bored Tunnel Alternative is the alternative with the least overall harm. The evaluation, just briefly summarized here, is included in the Final EIS with supporting materials provided in Appendix J. See also responses to O-005-008 through O-005-014.

Ms. Angela Argove  
August 15, 2011  
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the Section 4(f) evaluation were discussed in a letter to the FWH/A dated June 14, 2011, from Protect Seattle Now and Bill Speidel Enterprises, and that letter (attached as Exhibit H) is fully incorporated here by reference.

Thank you for this opportunity to comment.

Sincerely,



Gary Manca, President

CC: Daniel Mathis, Federal Highway Administration  
Peter Hahn, Seattle Department of Transportation

**Ex. A**

# Assessing Uncertainty About the Benefits of Transportation Infrastructure Projects Using Bayesian Melding: Application to Seattle's Alaskan Way Viaduct

Hana Ševčíková, Adrian E. Raftery and Paul A. Waddell  
University of Washington

## Abstract

Uncertainty is inherent in major infrastructure projects, yet standard practice ignores it. We investigate the uncertainty about the future effects of tearing down the Alaskan Way Viaduct in downtown Seattle, using an integrated housing, jobs, land use and transportation model, on outcomes including average commute times. Our methodology combines the urban simulation model UrbanSim with the travel model Emme/3. We assess uncertainty using Bayesian melding, yielding a full predictive distribution of average commute times on 22 different routes in 2020. Of these routes, 14 do not include the viaduct and eight do. For the 14 base routes that do not include the viaduct, the predictive distributions overlap substantially, and so there is no indication that removing the viaduct would increase commute times for these routes. For each of the eight routes that do include the viaduct, the 95% predictive interval for the difference in average travel times between the two scenarios includes zero, so there is not strong statistical support for the conclusion that removing the viaduct would lead to any increase in travel times. However, the median predicted increase is positive for each of these routes, with an average of 6 minutes, suggesting that there may be some measurable increase in travel time for drivers that use the viaduct as a core component of their commute.

## 1 Introduction

Major infrastructure investments routinely cost billions of dollars to construct, and are rife with political conflict over the costs, the benefits, and their distribution over often competing stakeholders. Transportation projects such as highways, bridges, and light rail systems are lightning rods for political controversy. One would imagine that with the advanced state of the art in modeling travel behavior and traffic flow dynamics, these questions would be relatively straightforward to address using metrics to measure the benefit of the project in terms of its effects on travel times, for example, as compared to the costs of the project. The state of the practice is substantially less informed than this, unfortunately.

We use a motivating case study that will be a central part of this paper to illustrate. The Alaskan Way Viaduct, an elevated highway constructed in the 1950's along the downtown Seattle waterfront, is often compared to a similarly designed elevated Embarcadero Freeway along the waterfront of downtown San Francisco that was eventually demolished in 1991 after being damaged by the Loma Prieta earthquake in 1989. The Alaskan Way Viaduct was damaged by the 2001 Nisqually earthquake and has been for the past several years a point of controversy among government officials ranging from the Mayor of Seattle to the Governor of Washington, about how to eliminate the risk of catastrophe

from a collapse of the elevated highway in the next earthquake, and how to replace the facility in a way that appeases competing interests. It will be a costly project, with estimates ranging from \$2.5 billion to well over \$4 billion for various options. In January 2009, the Mayor, King County Executive and Governor jointly announced an agreement to replace the viaduct with a tunnel option that would cost approximately \$4.25 billion.

But whether we need as much, or more, transportation capacity as is now carried by the viaduct, has been a point of contention with environmentalists and transit advocates, and may be at odds with other objectives adopted in state policy, such as achieving a dramatic reduction in greenhouse gas emissions over the next several decades. Other advocates claim that if we replace the viaduct with any alternative that has less capacity to move high volumes of traffic past the downtown area, as an alternative to the I-5 corridor, the highway system will be slowed to a crawl, with massive costs in delays to commuters and to businesses that depend on this access.

No one questions whether the viaduct should be removed and replaced with some kind of facility. The debate is over what the replacement should be, and how much capacity it should carry. At the heart of this debate, then, are quantities that are uncertain: the benefits in terms of travel time, and the costs of alternative projects. While there is a reasonable basis for assessing uncertainty about costs, there is relatively little guidance on how to assess the uncertainty about benefits. In fact, the models used to predict travel patterns based on alternative transportation networks, are designed to run to a deterministic equilibrium, and traffic modelers rely heavily on the certainty that repeated runs of the model produce consistent results — in other words, that they contain no uncertainty (Boyce 1984).

In fact, these decisions depend on information that is uncertain, and the public has a direct interest in better understanding how likely it is that spending several billion dollars will actually solve a problem they care about. Our paper contributes to this debate and provides a foundation for further work to incorporate uncertainty more systematically into the planning process, and into public deliberation about large, expensive projects with long-term impacts. There is limited prior work that examines the issue of uncertainty in the context of integrated transportation and land use models (Kockleman 2002; 2003, Clay and Johnston 2006, Ševčíková et al. 2007), and in network capacity and design (Sumalee et al. 2009). Our paper extends the literature in this area by using a principled statistical method to calibrate uncertainty in an integrated land use and transportation model system, and hence to assess the uncertainty of specific metrics that reflect the potential benefits of a major transportation facility. To our knowledge, this is the first research to use Bayesian melding to assess the uncertainty about the travel time impacts of alternative investments in major transportation facilities.

The debate centers on the question of whether it is possible to reduce capacity by removing a waterfront highway such as the Alaskan Way Viaduct, without greatly increasing travel times for commuters and commercial vehicles. On its face this seems unlikely to be possible, but some of the literature that addresses induced demand from capacity expansion, such as Downs (2004), suggests an argument that it may be. Downs coined the term 'triple-convergence' to describe the propensity for commuters to take advantage of increases in roadway capacity and temporarily faster speeds by changing routes, times of travel and modes of travel, in order to take advantage of the relative increase in speed of travel on the improved highway at peak hour by single-occupancy vehicles. The question of induced demand has rarely been raised in the context of a capacity reduction, but there is nothing

inherent in the reasoning that would prevent it from applying to such a case. In the event of a capacity reduction, such as the loss of a highway, travelers would presumably make short-term choices that would shift away from the relatively higher cost route, time and mode to those that become relatively less expensive. Consider this a case of 'reduced demand'.

In the longer term, of course, persons, households and businesses can adapt to changes in accessibility by changing their locations. These longer-term induced demand or reduced demand effects may be at least as big as the short term effects described by triple-convergence (Downs 2004). In this paper, we set out to explore these questions using a land use model, UrbanSim (Waddell 2002, Waddell et al. 2003; 2007), coupled with a four-step transportation model implemented by the Puget Sound Regional Council (PSRC). The approach we develop is Bayesian melding, a methodology initially developed to calibrate uncertainty in deterministic model systems by Raftery et al. (1992; 1995) and Poole and Raftery (2000), and recently adapted to stochastic models by Ševčíková et al. (2007).

Our contribution is to harness the Bayesian melding approach to calibrate uncertainty in a combined land use and transportation model system, and to use the calibrated system to make inferences about the effects on travel times of two different alternatives of the Alaskan Way Viaduct. As the objective of this paper is not to make a definitive assessment of the specifics of the viaduct project design, we approximate the alternatives by modeling one as having the same capacity as the existing viaduct, and the other as a worst-case scenario in which the viaduct is simply removed, and no mitigation is done in terms of local street configuration and operations or of transit service in this corridor. The intent is to demonstrate on a real-world, and still timely case, the use of uncertainty analysis to inform the policy debate such as this. It should be broadly applicable as a methodology to a much wider set of problems.

The paper proceeds with a brief description of the models, since their internal construction is not the focus of this paper, and details of the models used in the analysis are available in the provided citations. We then present the Bayesian melding approach developed for application to this case study, and close with a discussion of the results and implications for further research.

## 2 UrbanSim with Integrated Travel Model

### 2.1 Land Use Models

UrbanSim is an urban simulation model operational in several urban areas in the United States (Waddell 2002, Waddell et al. 2003; 2007). The system is implemented as a set of interacting models that represent the major actors and choices in the urban system, including households choosing residential locations, business choices of employment location, worker choices of jobs and developer choices of locations and types of real estate development. The model system microsimulates the annual evolution in locations of individual households and jobs, including the connection between them, and the evolution of the real estate within each individual geography as the result of actions by real estate developers.

Our application of UrbanSim operates on parcel level. It is configured to run the following models:

1. **Real estate price model:** predicts prices of parcels, using a hedonic regression model.

2. **Expected sale price model:** predicts prices of possible real estate proposals, using a hedonic regression model.
3. **Development proposal choice model:** chooses real estate proposals to be built (including redevelopment), using weighted random sampling based on a predicted return on investment (ROI).
4. **Building construction model:** demolishes buildings (for redevelopment) and builds new buildings according to the chosen proposals.
5. **Household transition model:** creates and removes households and updates the set of persons accordingly. It is based on random sampling and is driven by macroeconomic predictions.
6. **Employment transition model:** creates and removes jobs, using random sampling, and is driven by macroeconomic predictions.
7. **Household relocation choice model:** determines households for moving, using a logit model.
8. **Household location choice model:** locates moving households into buildings, using a multinomial logit model.
9. **Employment relocation model:** determines jobs for moving using weighted random sampling.
10. **Employment location choice model:** locates moving jobs into buildings, using a multinomial logit model.
11. **Work at home choice model:** simulates workers decision to work at home or out of home. It is based on a logit model.
12. **Workplace relocation choice model:** simulates workers decision to change job. It is based on a logit model.
13. **Workplace choice model:** assigns jobs to workers, using a multinomial logit model with sampling alternatives.

Several of the models require coefficients which are obtain by estimating using observed data and Maximum Likelihood Estimation (MLE) of multinomial logit models based on a Random Utility Maximization framework (McFadden 1974; 1978; 1981). Most of the models are stochastic, and involve Monte Carlo sampling of choice outcomes conditional on a probability generated from a Multinomial Logit Model (MNL). A simulation starts to operate on observed data (so called base year data) about households, persons, jobs, buildings, parcels, zones etc. Each iteration of the model system modifies the data and is considered as a prediction for the particular year.

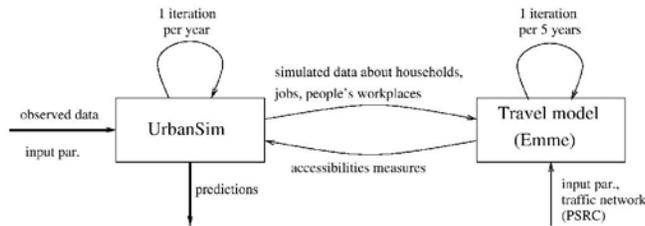


Figure 1: Integrated use of UrbanSim and the Travel Model.

## 2.2 Travel Model

The travel model used by the PSRC is a state of the practice four-step travel model, in the early stages of transition to a full activity-based travel model system. So far, only the trip generation step has been replaced by an activity generation model, and the rest of the model system operates as a traditional aggregate travel model with destination choice implemented as a gravity model, mode choice as a multinomial logit model, and assignment using Emme/3, with feedback of congested travel times to mode choice. Full documentation of the base model system is available from the PSRC web site ([www.psrc.org](http://www.psrc.org)).

The travel model runs on a zonal system that contains approximately 1,000 zones to cover the Central Puget Sound, consisting of King, Kitsap, Pierce and Snohomish Counties. It is implemented in the Emme/3 software platform, and requires approximately 16 hours to complete one simulation year, including iteration for convergence on assignment, on a high-end desktop computer.

## 2.3 Integrated Land Use and Travel Model

The integration of UrbanSim and the Travel Model can be explained using Figure 1. UrbanSim is run on an annual basis, i.e. one iteration of the full set of models simulates a land use evolution in one year. Due to the very high run times of the travel model, we run Emme/3 only once in five years of UrbanSim runs. The travel model uses the output from UrbanSim about households, jobs and people's workplaces. In addition, it has its own input parameters and it operates on a network provided by the PSRC. In turn, several UrbanSim models use accessibilities measures computed by the travel model, such as travel times or log sums. They are used mainly as predictive variables in the Employment location choice model.



Figure 2: Seattle's Alaskan Way Viaduct.

### 3 Policy Question: Seattle's Alaskan Way Viaduct Replacement

The Alaskan Way Viaduct, built in 1953, is an elevated section of State Route 99 that runs along the Elliott Bay waterfront in Seattle's Industrial District and downtown Seattle (see Figure 2). In Figure 4, the viaduct is shown as a black solid line. The viaduct was damaged in the 2001 Nisqually earthquake and since then continuing settlement damage has been discovered (WSDOT 2005). In 2002, the Washington State Department of Transportation (WSDOT) together with the City of Seattle, the Federal Highway Administration and King County have launched a program that would lead to a replacement of the viaduct (WSDOT 2004). Since then, many replacement concepts and designs have been evaluated, and these were narrowed down in 2008 into three hybrid solutions:

- Surface and transit option: the viaduct is removed; significant improvements in surface and transit conditions.
- Elevated structure: the viaduct is rebuilt, but with current design standards which would require a larger structure.

- Tunnel option: a four-lane 2-mile underground tunnel with improvements to the seawall and other streets.

One of the main objections raised by critics of the surface transit option has been a fear that it would produce traffic jams and drastically increased travel times on routes along the viaduct, as well as on I-5, which runs parallel to the viaduct on the east side of downtown. Though proponents of the surface transit option have pointed out that the demolition of the Embarcadero Freeway in San Francisco did not cause significant traffic problems, the viaduct carries considerably more traffic. The viaduct carries approximately 110,000 cars per day, whereas the Embarcadero Freeway carried around 70,000 cars per day before its demolition. Further, the geography of Seattle, constrained by water on its east and west sides, means that the I-5 corridor is the only major north-south freeway through Seattle. It is thus legitimate to ask whether reducing capacity on the viaduct would make the already bad I-5 traffic much worse.

WSDOT released a study that compared various transportation measures for eight different scenarios, see WSDOT (2008) and WSDOT (2007) (meetings from November 13 and November 24 2008). These measures included traffic volume, pattern and modes of travel as well as the quality of those trips as measured by forecast travel times during various periods of the day. The baseline was set to the year 2015 and the study area was limited to the city center of Seattle. The land use data used as inputs for the travel model incorporated a growth in the downtown area. Their key findings in terms of travel time were that a trip through the city from the north to the south side at an AM peak would be approximately 10 minutes longer if there is the surface option implemented as opposed to an elevated structure. Their model did not take into account changes in land use over time, including changes in real estate prices. Moreover, it provides point predictions without any sense about the uncertainty of the results.

In January 2009, the Washington State Governor together with the Mayor of Seattle announced an agreement to pursue the tunnel option. Though a decision on the alternative appears to have been concluded (there have been several changes in the decision process along the way, so this may or may not be the final outcome), we think this case is still relevant for our study, as it highlights the issue of uncertain benefits from large-scale infrastructure projects.

We are interested in comparing changes in travel times over time resulting from different viaduct replacement options. Since our motivation is the development of a better method to inform such decisions, we are less interested in the fine points of the design of the alternatives. Rather, we develop two alternatives that should provide a suitable bracket for the alternatives that have been considered. For simplicity, we use as a base alternative a network that matches the current capacity of the existing viaduct. Whether it comes in the form of a tunnel or a replacement elevated structure is not material to this analysis.

For the other alternative, we take a worst-case scenario that should be dramatically worse in terms of effects on travel times than the surface transit option that has been under consideration: for this worst-case scenario, we simply remove the viaduct in 2010, and provide no mitigation in terms of improved transit service, or improvements to local streets in downtown. It is truly an unrealistically worst case. The rationale for this is that we want to examine whether there is a large enough difference in travel times between these two cases to offset the uncertainty in the analysis of the travel time

benefits. One would like to think that the results generate confidence that the investment of more than \$4 billion would improve travel times, over the alternative that was used in the Embarcadero case: simply removing the elevated highway and connecting downtown to the waterfront.

Thus, to summarize, we compare two scenarios:

1. **Capacity-Neutral Replacement** which is our baseline. We use the travel model networks provided by PSRC for years 2005, 2010, 2015 and 2020. In terms of travel times, this scenario approximates a situation in which either the viaduct is rebuilt or a tunnel is built.
2. **Worst-Case: Demolish Viaduct** in 2010. Here we remove links from the 2010, 2015 and 2020 networks that represent the viaduct.

## 4 Bayesian Melding Method and its Application

### 4.1 Bayesian Melding Method

Bayesian melding was proposed by Raftery et al. (1992; 1995) and Poole and Raftery (2000) as a way of putting the analysis of deterministic simulation models on a solid statistical basis. The method was modified and applied to stochastic models by Ševčíková et al. (2007), specifically to urban simulation models.

A simple version of the original method for deterministic models is summarized in Figure 3. There is a prior distribution of model inputs  $q(\Theta)$  from which we draw input values  $\Theta_i$  for  $i = 1, \dots, I$ . The model runs  $I$  times from the starting point to the present and for each input  $\Theta_i$  it produces as output the quantity of interest,  $\Phi_i$ . The model can be viewed as a mapping,  $M$ , from the space of inputs to the space of outputs, which we denote by  $\Phi = M_\Phi(\Theta)$ . The “present” time is defined as a time point for which we have observed data available. We use the observed data, denoted by  $y$ , to compute a weight  $w_i$  for each input  $\Theta_i$ :  $w_i = L(\Phi_i)$ . Here,  $L(\Phi_i)$  is the likelihood of the model outputs given the observed data,  $L(\Phi_i) = \text{Prob}(y|\Phi_i)$ . For each of the  $I$  runs, the model is run forward until a future time for which we make a prediction. The results of the  $i$ th model run are denoted by  $\Psi_i$ . The posterior distribution of  $\Psi$  is approximated by a discrete distribution with values  $\Psi_i$  having probabilities proportional to  $w_i$ .

The method was extended to stochastic mechanistic models such as UrbanSim by Ševčíková et al. (2007). The main change was that the conditional distribution of the model outputs  $\Phi$  given the model inputs  $\Theta$ , which is a point mass at  $M_\Phi(\Theta)$  for deterministic models, became a probability distribution. This distribution had two components, one reflecting the stochastic nature of the model outputs, and the second reflecting model error. Details can be found in Ševčíková et al. (2007).

### 4.2 Results from Prior Research

In Ševčíková et al. (2007) we applied the method to an UrbanSim application for the Eugene, Oregon region. We were able to determine the posterior predictive distribution of the numbers of households

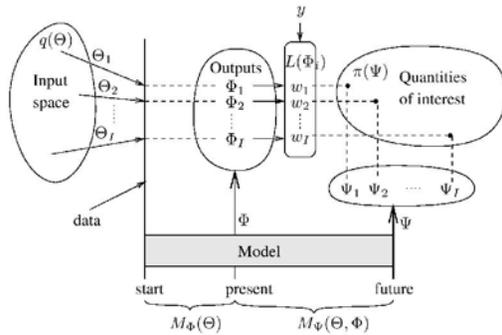


Figure 3: Illustration of the Bayesian melding method for deterministic models. The uncertain model inputs,  $\Theta$ , refer to the starting time of the simulation, and the outputs,  $\Phi$  and the data relevant to the outputs,  $y$ , are observed at the “present” time, while the quantities of interest,  $\Psi$ , refer to the future. The quantities  $\Theta_i$ ,  $\Phi_i$  and  $\Psi_i$  refer to the  $i$ -th simulated values of inputs, outputs and quantities of interest, respectively.

in each of the 295 traffic analysis zones and in any aggregation of those<sup>1</sup>. Our starting point was the year 1980, the “present” time was 1994 and the “future” time was 2000. Using observed data in 2000 we were able to validate the results. Our main conclusions were:

- The Bayesian melding approach provided well calibrated results, while simple multiple runs (reflecting the stochastic variation in model output, but not model error) underestimated uncertainty.
- A square root transformation of the quantity of interest (number of households) yielded an approximately constant variance of the model error.
- Variation of the model inputs and random seed did not account for much of the uncertainty.

### 4.3 Data

Our simulation region is the Puget Sound area, and our starting point, or base year, is 2000. We have detailed information about the Puget Sound area 2000, which includes 1,282,940 households,

<sup>1</sup>In that research, the travel model was not included in the analysis, whereas this current research incorporates both the land use and transportation model components, and extends the method to the assessment of uncertainty in evaluation of infrastructure alternatives.



Figure 4: Seven commuter routes none of which includes the Alaskan Way Viaduct. The viaduct is shown in black.

1,608,426 workers, 1,849,447 jobs, 1,008,869 buildings, 1,177,140 parcels, and 938 traffic analysis zones (TAZ).

We also have less detailed data observed in 2005, taken as the “present” time. This includes the numbers of households in each TAZ and the numbers of jobs in each TAZ divided into 8 groups: mining; construction; manufacturing; wholesale trade, transportation, and utilities (wctu); retail trade; financial, professional, health and other services (fires); education; and government. These will be our calibration data  $y$  for the land use model.

In order to calibrate the travel model output, we obtained observed travel times for selected routes in 2005 from the Washington State Department of Transportation (<http://depts.washington.edu/hov>). These are annual averages over weekdays in five-minute periods, which we averaged over the AM peak (6:00am - 9:00am) in order to do a direct comparison with the travel model outputs. We chose 7 non-overlapping popular commuter routes, i.e. 14 trips, for which average travel times were available; see Figure 4.

#### 4.4 Prior, Likelihood and Posterior distribution of the Land Use Model

We first extend the statistical model of Ševčíková et al. (2007) on which the likelihood function  $L(\Phi_i) = \text{Prob}(y/\Phi_i)$  is based, for use with multiple quantities of interest, as follows:

$$(y_{kl}|\Theta = \Theta_i) = \mu_{ikl} + a_l + \epsilon_{ikl}, \text{ where } \epsilon_{ikl} \stackrel{iid}{\sim} N(0, \sigma_{il}^2), \quad (1)$$

for  $i = 1, \dots, I$ ,  $k = 1, \dots, K$  and  $l = 1, \dots, L$ . Here  $i$  indexes the simulation run,  $k$  indexes the zone, and the index  $l$  refers to the  $l$ -th quantity of interest. The quantity  $\mu_{ikl}$  is the expected value of  $y_{kl}$  under the model given  $\Theta_i$ ,  $\epsilon_{ikl}$  denotes the model error, and  $a_l$  is the overall bias in the model predictions of the  $l$ th output. The variance  $\sigma_{il}^2$  and bias  $a_l$  are estimated by their sample equivalents:  $\hat{\sigma}_{il}^2 = \frac{1}{K} \sum_k (y_{kl} - \hat{a}_l - \hat{\mu}_{ikl})^2$ , and  $\hat{a}_l = \frac{1}{IK} \sum_{i,k} (y_{kl} - \hat{\mu}_{ikl})$ , where  $\hat{\mu}_{ikl}$  is the predicted value of  $y_{kl}$  from the  $i$ th simulation run.

This yields a conditional predictive distribution of our quantity of interest:

$$y_{kl}|\Theta_i \sim N(\hat{a}_l + \hat{\mu}_{ikl}, \hat{\sigma}_{il}^2). \quad (2)$$

We then have

$$w_i \propto p(y|\Theta_i) = \prod_{l=1}^L \prod_{k=1}^K \frac{1}{\sqrt{2\pi\hat{\sigma}_{il}^2}} \exp\left[-\frac{1/2(y_{kl} - \hat{a}_l - \hat{\mu}_{ikl})^2}{\hat{\sigma}_{il}^2}\right]. \quad (3)$$

The quantities  $\hat{\sigma}_{il}^2$  and  $\hat{a}_l$  are estimated at the “present” time  $t_1 = 2005$ . The marginal distribution of the  $l$ -th quantity of interest,  $\Psi_{kl}$ , in the year  $t_2 = 2020$ , is given by a mixture of normal distributions, as follows:

$$\pi(\Psi_{kl}) = \sum_{i=1}^I w_i N(\hat{a}_l b_a + \Psi_{ikl}, \hat{\sigma}_{il}^2 b_v), \quad k = 1, \dots, K, l = 1, \dots, L. \quad (4)$$

Here,  $b_a$  and  $b_v$  denote propagation factors of the bias and the variance over the time period  $[t_1, t_2]$ .

In this application, the long runtime of the travel model made it infeasible to do a large number of runs of the travel model. Also, we found that the results of UrbanSim for numbers of households and jobs were relatively insensitive to the values of  $\Theta_i$  drawn from the prior (results not shown). Thus the contribution of uncertainty about the UrbanSim inputs  $\Theta$  to overall uncertainty about average travel times was small. In particular, the variation in  $\sigma_{il}^2$  between runs was small, and so we used a single estimate,  $\hat{\sigma}^2$ , using the run based on the prior mean of  $\Theta$ , estimated from external data. Results (computed on the square root scale) are shown in Table 1.

In addition, we were interested in comparisons between scenarios, and assuming that the propagation factors were the same for both scenarios allowed us to ignore them and set them both equal to 1. Together, these considerations allowed us to approximate (4) by the simpler equation

$$\pi(\Psi_{kl}) = \frac{1}{I} \sum_{i=1}^I N(\hat{a}_l + \Psi_{ikl}, \hat{\sigma}^2), \quad k = 1, \dots, K, l = 1, \dots, L. \quad (5)$$

For priors, we used the same approach as Ševčíková et al. (2007). For input parameters that were estimated by multinomial logistic regression or by hedonic regression from external data, we used the

$l$	measure	$\hat{a}_l$	$\hat{\sigma}_{1l}^2$
1	households	-0.02	7.2
2	mining	-0.21	4.9
3	construction	0.25	20.2
4	manufacture	-0.80	15.4
5	wtcu	-0.08	24.8
6	retail	0.07	21.0
7	fires	0.38	35.4
8	education	-0.57	28.7
9	government	0.39	37.5

Table 1: Estimates for bias and variance, respectively, obtained from the run based on the prior mean of  $\Theta$ .

multivariate normal distribution  $MVN(\hat{\Theta}, SE(\hat{\Theta})^2)$ , with mean  $\hat{\Theta}$ , the estimator of  $\Theta$ , and with as variance matrix the diagonal matrix with diagonal entries equal to the squares of the standard errors of the parameters. For mobility rates used in the Employment relocation model, we used the normal distribution  $N(\hat{r}, (\frac{\hat{r}(1-\hat{r})^2}{n}))$ , truncated at zero, where  $\hat{r}$  is an estimate of the rate  $r$  and  $n$  is the number of observations from which  $\hat{r}$  was obtained.

The land use model uses regional control totals for number of households and jobs obtained from external sources. We kept the control totals constant, and so the results are conditioned on these totals.

#### 4.5 Calibration of the Travel model

Due to the complexity of the input parameters and the long run-times of the travel model, we assessed uncertainty about the travel model by a simple calibration procedure. In Figure 5, we plotted the simulated average travel times for the different commutes in  $t_1 = 2005$  against the observed average travel times (obtained as described in Section 4.3). As can be seen, the travel model overestimates the travel times.

We found that, given the simulated average travel time  $T_{sim}$ , the conditional distribution of the observed average travel time,  $T$ , was well represented by a normal distribution on the logarithmic scale with an additive bias:

$$\log(T) \sim N(\log(T_{sim}) - 0.70, 0.14^2). \quad (6)$$

## 5 Results from Integrated Land Use and Travel Model

The posterior distribution of the resulting travel time  $T$  is given by

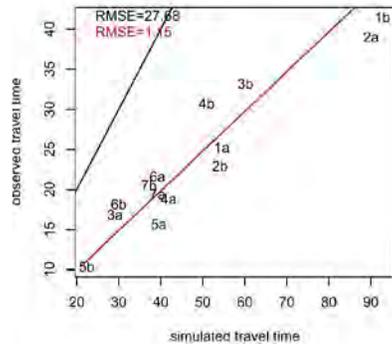


Figure 5: Calibration of the travel times. The solid line is the  $y = x$  diagonal; the dashed line is  $y = e^{-0.70x}$ , corresponding to the calibration in equation (6). The points are numbered according to the routes in Figure 4.

$$\pi(T) = \int p(T|\Psi, \Theta) p(\Psi|\Theta) p(\Theta) d\Theta d\Psi, \quad (7)$$

where  $p(T|\Psi, \Theta)$  is given by (6) and  $p(\Psi|\Theta)$  is simulated from by running UrbanSim with inputs  $\Theta$  and applying equation (5). Because we are interested in comparisons between scenarios, we ignore the propagation factors in (4), which we assume will be the same for both scenarios.

For both the baseline (viaduct) scenario and the no-viaduct scenario, we evaluated the integral in (7) by simulation, using the nested simulation scheme depicted in Figure 6. Given the long time needed to run the travel model, we approximated the integral over  $\Theta$  by simulating a small number,  $I$ , of values of  $\Theta$  from its prior distribution, and approximating the integral by an equally-weighted discrete distribution over  $(I + 1)$  values of  $\Theta$ , namely the  $I$  simulated values and the point estimate from external data, as in equation (5). As discussed above, this may overestimate this source of uncertainty, since it does not allow for the additional information about  $\Theta$  from the 2005 data, but the estimated uncertainty from this source was small in any event, and so we found this approximation adequate.

To simulate a value of the outputs  $\Psi$  given a value of  $\Theta$ , we ran UrbanSim for the first five years

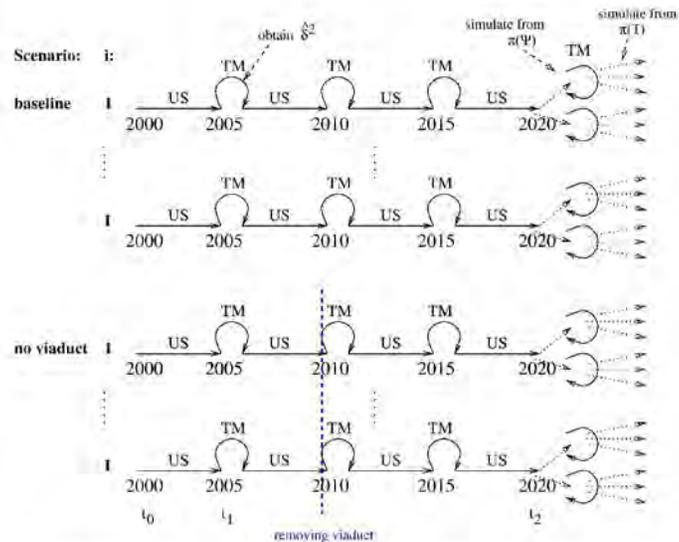


Figure 6: Nested simulation scheme for simulating the posterior distribution of average travel time in 2020 by Bayesian melding.

of the simulation period (2000–2005), and then we ran the travel model. This was repeated for each five-year period until 2020.

For each simulated value of  $\Theta$ , we simulated  $J$  values of the set of outputs  $\Psi$  (numbers of households and jobs for each zone in 2020) by the method described in Section 4. Finally, for each simulated value of  $\Psi$ , we simulated  $N$  values of  $T$  from (6). We used  $J = 3$ ,  $J = 5$  and  $N = 1,000$ . Note that  $\sigma^2$  was obtained only once, from the run with the prior mean for  $\Theta$  estimated from the external data, and reused in all remaining runs.

Results are shown in Figures 8 and 9. The figures show the posterior distributions of average travel times for the two scenarios: baseline in grey, no-viaduct in red. Figure 8 contains the seven routes (in both directions) from Figure 4 that do not contain the viaduct. Figure 9 contains eight additional routes that go (or would go) directly through the viaduct as shown in Figure 7.

From Figure 8 it is clear that the posterior predictive distributions of average travel times under the two scenarios overlap substantially, so that our analysis does not indicate that removing the viaduct



Figure 7: Routes that include the Alaskan Way Viaduct. Route 11 (shown in black) is the viaduct itself: 11a goes from the north end to the south end of the viaduct, while 11b goes from south to north.

would have any effect on average travel times for commuter routes that do not include the viaduct. For the routes that do include the viaduct, Figure 9 shows that the posterior distributions still overlap, but not completely.

To investigate further whether our results indicate an effect of removing the viaduct on average travel times, we calculated the posterior predictive distribution of the *difference* between average travel times under the two scenarios in 2020. These are shown for all routes considered in Figure 10. The seven base commutes that do not include the viaduct are in the upper part of the figure, and it is again clear that our analysis does not indicate any effect of removing the viaduct for these routes, since zero is close to the center of all the distributions.

For the routes that do include the viaduct the situation is less clear. The 95% predictive intervals for all of these routes includes zero, so our simulation results do not clearly indicate an effect of removing the viaduct. On the other hand, the median change for all eight routes that contain the viaduct is positive, ranging from 1.5 to 9.2 minutes, and averaging 6.1 minutes. The median predicted

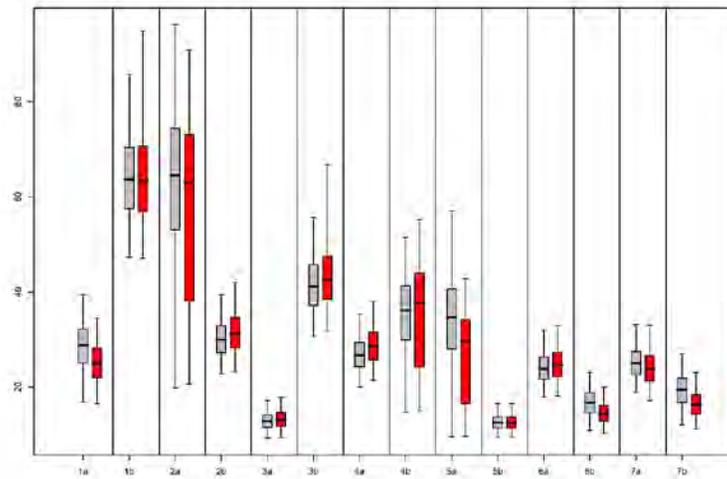


Figure 8: Posterior predictive distributions of average travel times in 2020 for each of the seven routes from Figure 4 in both directions. The posterior distributions are represented by boxplots, with the box containing the interquartile range with the median marked in the middle, and the whiskers covering the 95% posterior confidence interval. The baseline scenario is shown in grey and the no-viaduct scenario in red.

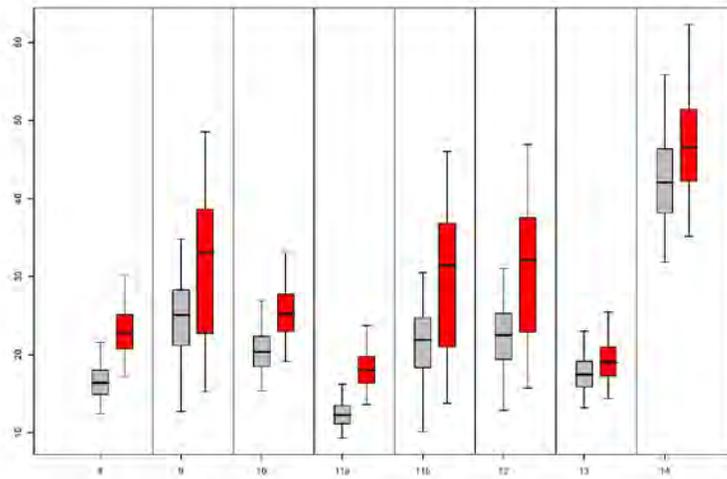


Figure 9: Posterior predictive distributions of average travel times in 2020 for additional routes that directly involve the viaduct. The posterior distributions are represented by boxplots, with the box containing the interquartile range with the median marked, and the whiskers covering the 95% posterior confidence interval. The baseline scenario is shown in grey and the no-viaduct scenario in red.

change for traveling the viaduct alone from north to south (route 11a) is 5.7 minutes, but the predictive interval contains zero.<sup>2</sup>

## 6 Discussion

In the Seattle Times of November 14, 2008 an article of Gilmore (2008) reported on the WSDOT (2008) study. It indicated that if the viaduct were replaced by another elevated highway in 2015, drivers going from Greenwood in North Seattle to SeaTac International Airport (our route 14) would arrive 10 minutes sooner than if the replacement were a surface boulevard. Furthermore, from Ballard to south of Downtown (our route 13) would be 13 minutes faster and drivers on our route 12 would save 10 minutes on an elevated highway. These point estimates ignore any uncertainty involved in the models used to generate them, and thus could mislead the public into having an unwarranted degree of confidence in the benefits of making these investments. The point estimates for routes 12 and 14 fall into our prediction interval (Figure 10), whereas the 13 minutes for route 13 falls outside our 95% confidence interval.

We should make clear that our analysis is not directly comparable with the WSDOT study. Not only are the prediction years different, but more importantly, the WSDOT study does not consider the long-term changes that occur when transportation projects change patterns of accessibility: households can relocate to be closer to their jobs, workers can change jobs to reduce their commute, businesses can relocate to take advantage of better access at different locations, and real estate developers can respond to new opportunities to develop housing and non-residential space. Our analysis integrates these forms of long-term adaptation, in addition to the short-term adaptations that travelers have when accessibility patterns change: they can change destinations, times of travel, modes of travel, and routes. The collection of these kinds of adaptive behaviors provides a reservoir of flexibility that has not previously been thoroughly examined. In instances such as a temporary or even long-term closure of a major transportation facility, the reality in terms of traffic conditions is often far better than transportation officials expect. These kinds of adaptive behaviors provide a plausible explanation, though many other factors could also contribute.

What our results suggest, in short, is that even using a worst-case scenario and comparing it to a capacity-neutral replacement of the Alaskan Way Viaduct, the travel time benefits of the higher capacity alternative are modest, and fairly localized to the viaduct corridor. There does not appear to be much effect on longer commutes or on I-5 in the vicinity of downtown, as evidenced by the overlapping distributions of the predicted travel times. Further, our combined analysis of land use and transportation reveals considerably more adaptive capacity than the analysis done by the WSDOT, which considers only travel changes and excludes by assumption any adaptation in location choices of households, firms and real estate development. Accounting for uncertainty, in short, the expectations of benefits from maintaining the current level of traffic capacity in the viaduct corridor may be higher than can be scientifically supported by the available models and evidence.

<sup>2</sup>Note that the routes that contain the viaduct all overlap, in some cases substantially, and so the posterior predictive distributions for different routes are not independent. As a result, it is not possible to view these eight posterior predictive distributions as independent samples from a distribution and carry out a standard statistical test on the average value.

In future research, we hope to further develop the methodology described in this paper, and to incorporate refinements in the current generation of models used in supporting the decision-making process on large-scale infrastructure projects such as the Alaskan Way Viaduct.

## **7 Acknowledgments**

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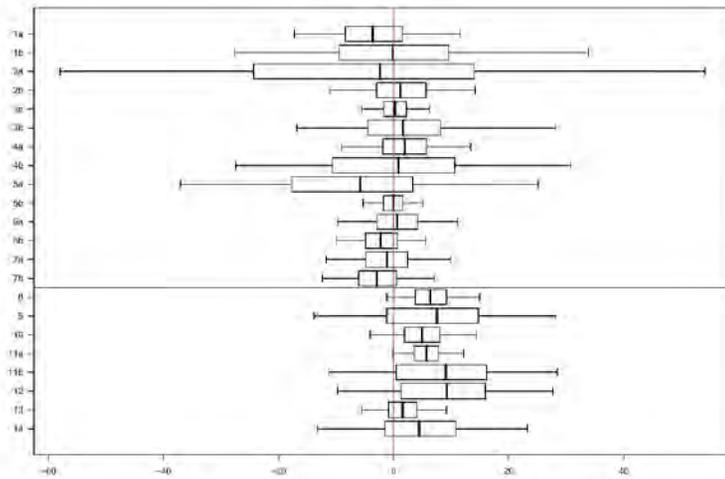


Figure 10: Posterior predictive distributions of differences between average travel times for the two scenarios for all routes. The difference are equal to average travel time for the no-viaduct scenario minus that for the baseline (viaduct) scenario. The posterior distributions are represented by boxplots, with the box containing the interquartile range with the median marked, and the whiskers covering the 95% posterior confidence interval. The routes above the horizontal line are those shown in Figure 4 that do not include the viaduct, while the routes below the line are those that do contain the viaduct.

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## **Ex. B**

Home Blog News About Sightline

## Washington's 20 Billion Mile Diet

State traffic forecasts have changed radically in just three years.

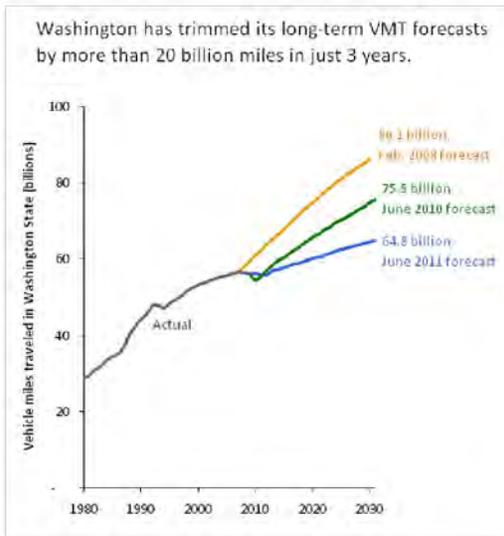
Clark Williams-Derry on August 2, 2011 at 11:32 am



This post is 13 in the series: [Dude, Where Are My Cars?](#)

According to the [most recent forecasts](#) from the Washington State Office of Financial Management, drivers in Washington State will rack up about 65 billion miles on the highways in 2031.

I have no idea if that number is anywhere close to accurate. Nobody does. But what I do know is that that number is 21 billion miles [lower](#) than the forecast that OFM made [3 years ago](#), and more than 10 billion miles lower than their [forecast from just last year](#). The chart has the details:



It's awfully tempting to suggest this chart shows that OFM is gradually groping towards more realistic traffic projections.

But does it, really? I honestly don't know if the blue line is more "realistic" than the orange line. Sure, the blue line is more consistent with the actual traffic trends over the last decade—a period when annual VMT growth slowed to a crawl. But I don't have a crystal ball to

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know which line is actually a "realistic" depiction of the future.

Instead, I think the real lessons of the chart lie elsewhere.

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The first lesson is this: *nobody has any special insight into the future.* Future VMT trends aren't a feature of objective reality that smart people can sit in a room and puzzle out. They're just *guesses*. Sometimes new information comes in, and the guesses change. Sometimes they change radically, enough to make the best guesses from a year earlier look ludicrous. So it's important to remember that even if particular forecast matches up with your world view, *it's still just a guess.*

Which leads to a second lesson: *nobody should take official VMT forecasts too seriously.* Three years ago, the "official" guess was that there would be lots of new demand for road space, and lots of new gas tax revenue to pay for it. Today, the "official" guess is that [statewide gas consumption peaked in 2002 or 2003](#), never to rise again; that gas tax revenues are going to decline unless the state ramps up the tax rate; and that the demand for new road space is going to slow to a crawl. Those are two completely contradictory views from the same agency in the same political administration. So all the hot air that was spewed about the dire need for new transportation megaprojects to avoid the near-certainty of a trafficpocalypse showed nothing more than hubris, overconfidence, and a dismal understanding of how forecasting actually works.

And there's a third lesson here: *forecasts can be dangerous.* People have a tendency to take official forecasts awfully seriously. But the decisions we made three years ago that we "had" to put lots of new megaprojects into the pipeline, based on forecasts of massive gridlock in 20 years, could very easily turn out to be dreadfully costly mistakes. When we place too much confidence in any one forecast, we can wind up making terrible decisions.

To me, the rapid change in traffic forecasts argues for a new way to think about transportation investments: that we make them smaller, more versatile, more nimble, more creative, and less likely to lock us into huge long-term expenses for projects that we might not actually need. In short, it argues for an approach that's the *exact opposite* of all the multi-billion dollar bridges, tunnels, and highway expansions that are on the docket in the Northwest.

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Great post as usual.

As a side note to actual state VMT, the most conservative estimate of the unrecovered costs of driving is \$0.15/mile (source: FHWA) (a subsidy by any other name, but anyway...). If we were to assess just the most direct costs, Washington state and its communities would receive \$9.75bn every year. That money would go a long way toward dealing with pavement condition, structurally deficient bridges, and even Sen Haugen's beloved ferries — and would reduce a bit of VMT to boot.

[Reply](#)

Jim says:

August 2, 2011 at 10:14 pm

I've seen this graph before and it used to justify why we don't need the vast road infrastructure that the state is planning. I take the point that the WSDOT estimates are based on models and are just projections, but the obvious point hasn't been made. I don't know whether its justifiable, but I'll make the point anyway.

Doesn't the "rapid change in traffic forecasts" seem to correspond nicely to the drop in our economy and the shedding of jobs? Would it therefore suggest that these traffic improvements are not unnecessary when the economy returns, jobs return, and people begin commuting to work again?

[Reply](#)



Clark Williams-Derry says:

August 3, 2011 at 6:51 am

Jim-

The economy is definitely a major force in the trends from 2008.

It's possible that forecasters are feeling gloomy, and their long-term GDP growth forecasts have been affected by the short-term economic woes.

But reading the numbers, VMT growth slowed WAY before the economy cratered. As I read things, it looks like the forecasts are moving towards a belief that "things in the future will look like they did from 2001-2007, rather than from 1992 through 2000." In some ways, what's happening is that an OLD vintage of super-over-optimistic forecasts that seemed reasonable in the 1990s is going away, and a NEW vintage of semi-optimistic forecasts that match the early 2000's is coming into force.

Here's what I think has changed in the models:

1) Forecasters now think that oil prices are going to remain high. As recently as 2008, ALL of the major oil forecasts showed oil prices at ~\$30/barrel and roughly flat/declining as far as the eye can see. The runup that started in 2005 was seen as a temporary blip. But even though the economy is still struggling mightily, oil prices are high — so high & ascending oil prices are now built into the models. (Incidentally, from what I've seen the models are based on assumptions that gas will be ~\$3 per gallon).

2) Forecasters now better understand how consumers react to high gas prices. For a couple of decades, gas price blips had no appreciable effect on demand. When gas prices went from \$1 to \$1.20, nobody batted an eye—everyone kept buying. So the "professional" opinion was that gas price elasticity was incredibly low — people would continue to drive no matter how high prices got. But it seems that gas at \$4 a gallon has really made a dent in people's appetite for travel. Elasticity is higher than

people thought. Couple that with higher than expected gas prices, and you get a significant dampening effect on driving.

3) The understanding of demographics – seniors driving less, fewer teens and young people working – may have changed, altering long-term estimates of trip generation.

There are probably other factors. The important thing, though, is that the long-term projections now show that the future will be like 2001-2007, not like the roaring 1990s. That may still be too optimistic! But it's not "just" that the sour economy in 2011 is changing expectations for economic growth in 2030; it's also that the models are catching up to the reality of what was happening in the early 2000s.

[Reply](#)

Steve Erickson says:

August 3, 2011 at 10:25 am

These sorts of grossly inflated forecasts have disastrous consequences for long term planning and economics. Right now there are two different sewer projects being planned on Whidbey Island that are based on straight line projections of 10 year old OFM "high-mid" population forecasts that are demonstrably way higher than has actually occurred. This is the result of a combination of the lag in updating the County's GMA population forecasts, attributable to the lack of planning dollars available right now, and the boomers previously in power consistently choosing from the high end of OFM population forecasts, despite hindsight consistently showing that the reality was different. So, now Oak Harbor (current population: about 23,000) is planning a \$60 million new sewage plant and the non-municipal urban growth area of Freeland (current population: about 4,000) is planning a \$40 million sewer.

Looking at census data since 1970 reveals that since 1980 the rate of population increase has dropped by about 50% for each succeeding decade. If this long term trend continues the 2010-2020 population increase rate will be close to 0%. In fact, Island County has actually lost population (a bit over 3%) in the last 3 years. So, Whidbey and Camano Island may be about to achieve a steady state population or decline. This is something boomers just can't comprehend.

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# Ex. C

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News & Views for a Sustainable Northwest

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## WSDOT vs. Reality

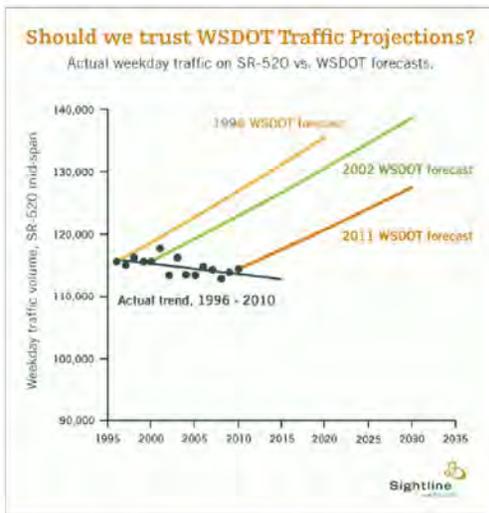
Puget Sound traffic forecasts don't even pass the laugh test.

Clark Williams-Derry on July 13, 2011 at 4:35 am



This post is 12 in the series: [Dude, Where Are My Cars?](#)

I wish I were making this up. The Washington State Department of Transportation continues to insist that traffic volumes on the SR-520 bridge across Lake Washington are going up up up—even though actual traffic volumes have been flat or declining for more than a decade! Here's a chart that makes the point.



In a charitable mood, you could forgive the 1996 projections. Back then, rapid traffic growth on SR-520 was a recent memory: up through about 1988, traffic growth was both steady and rapid.

By 2011, however, it should have been perfectly obvious that the old predictions were proving inaccurate. Yet WSDOT just kept doubling down on their mistakes—insisting that their vision of the future remained clear, even as their track record was looking worse and worse. So now they've wound up with an official traffic forecast, in the [final Environmental Impact Statement](#) no less, that doesn't even pass the laugh test.

It would be funny—if the state weren't planning billions in new highway investments in greater

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Seattle, based largely on the perceived "need" to accommodate all the new traffic that the models are predicting will show up, any day now.

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In case you don't believe me about the numbers, feel free to check out the sources directly. I'd be happy to be corrected.

The data on recent traffic volumes—the dark green dots—come from three sources. I start with WSDOT's biennial [Ramp and Roadway Report](#). Then, to add in the missing years I factor in data from the [Annual Traffic Report](#) series and Seattle's [Traffic Flow Data](#). The blue trend line is just the basic linear regression of the blue dots, as calculated by Excel.

The light orange line is based on a projection that dates back to 1996, which was mentioned in WSDOT's 1999 Trans-Lake Washington Study. Since that report is only available on CD-ROM, but not online, I'll quote the report directly:

Under the No Action solution set, Trans-Lake travel [on SR-522, SR-520, and I-90] is expected to increase by about 168,000 daily person-trips...in the year 2020...Because capacity is limited on SR 520, only about 20,000 additional vehicle...trips are expected there.

(If current trends hold, the projections of 20,000 additional vehicle trips will be off by about 20,000 additional vehicle trips.)

The green line is from the 2002 Trans-Lake Washington Project report, also available on CD-ROM, which projected that traffic under the "No-Action Alternative" would grow by 20 percent through 2030.

The dark orange line - 127,400 cars by 2030 - is from the recently released Final Environmental Impact Statement for the SR-520 bridge replacement project. It's based on the projections described in [part 1](#) of the "transportation discipline report" (see Exhibit 5-3 on p. 92 of the pdf, and the projections for SR-520 at Midspan under the 2030 No Build Alternative: 127,400 vehicles by 2030).

I could have included another projection from the 2006 Draft Environmental Impact Statement - 127,860 vehicles per day by 2030, as claimed in Exhibit 10-8 in [Appendix R part 6](#). But it was getting hard to fit all the wrongness on a single chart.

Now, I know that total traffic volumes aren't the only traffic trends worth paying attention to. The traffic models make projections about peak-hour delays as well, which are probably what commuters care most about. But given that the models have proven so stubbornly and preposterously wrong about traffic volume trends, it's hard to believe that they have much of value to say about future traffic delays.

*[Thanks to Jake Kennon and Pam MacRae for help with the numbers!]*

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Cheryl dos Remedios says:

July 13, 2011 at 11:36 am

This is WSDOT's reality: a 12-lane highway cutting through the Arboretum's wetlands, from Montlake to Foster Island.

It breaks down like this: 3 lanes of traffic + 2 lanes of ramps + 1 lane of shoulder x 2 = 12.

I'm not sure how to reconcile the traffic data above with what I know about this project, so Clark, I could use your help.

During peak hours, my understanding is that I-5 cannot handle the increased traffic of a 6-lane bridge, so WSDOT is planning 4 lanes of ramps in the Arboretum's wetlands to store cars as they try to merge onto I-5. This will prevent back-ups into the Montlake neighborhood and at the I-5 interchange itself.

Word on the street is that the "ramps will be removed from the Arboretum," but this just isn't true. It is true that the existing ramps that peel off and connect to Lake Washington Boulevard (LWB) will be eliminated, yet the negative impacts to the Arboretum increase. Here's how: WSDOT is planning for the new ramps placed in the wetlands to connect back into LWB, just at a point that is technically outside of the Arboretum. WSDOT expects highway traffic to increase through the heart of the Arboretum along LWB.

Under current federal regulations, we should not be able to bisect a historic park with highway traffic at all, but WSDOT leans on the site's "pre-existing conditions."

Watch this video and please pay especially close attention to 3:40 - 3:50 and 4:14 - 4:30:

<http://www.youtube.com/watch?v=nCV7COUS0k>

And next time you are on I-5, count the lanes and imagine that swath pavement cutting through the Arboretum. Imagine kayaking in the Arboretum with 12 lanes of highway overhead.

12 lanes of highway to store idling cars in Seattle's most pristine wetlands. . . this is WSDOT's reality? This is insane.

[Reply](#)

Randy says:

July 13, 2011 at 1:01 pm

Bottom line, Seattle and WSDOT have no clue what they're doing. If you think effective traffic management is creating HOV lanes in on ramps and going from 6 lanes to 2 lanes downtown is effective, you're high. Even the express lanes aren't express any more. When it takes 45 minutes to get across either the 90 or 520 bridge, it is obvious there is no planning. There was no plan for traffic management in Seattle and I've lived in much larger cities where traffic wasn't half as aggravating. Add to the poor planning drivers who have NO clue how to drive and it all becomes a pile of mess.

I challenge anyone to figure out how to get the appropriate amount of traffic across any highway in this town all the while focusing on the environment. It can't be both ways. We can't expect to fix traffic issues and keep ALL environmentalists happy. It seems to me all the idling I do on the highway is worse for the environment.

## **Ex. D**

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## Where Are My Cars: I-5 Through Seattle

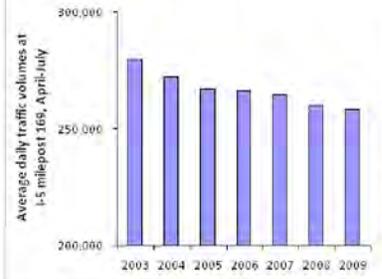
Traffic volumes on I-5 through Seattle started to fall in 2003.

Clark Williams-Derry on May 7, 2011 at 12:45 pm



This post is 5 in the series: [Dude, Where Are My Cars?](#)

### Traffic volumes on I-5 through Seattle started to decline long before gas prices soared.



Remarkably enough, [state figures show](#) that traffic on I-5 through Seattle declined pretty steadily from 2003 through 2009. Take a look at the chart to the right. In total, traffic volumes on I-5 across the ship canal bridge fell by well over 7 percent. Remember, this is total traffic, not per capita. The per capita trends have been even more dramatic.

The state didn't report express lane data for 2010, but it looks like traffic

volumes on the regular lanes inched back up a bit in 2010, to roughly their 2007 levels. So the downward trend from the chart may not have continued. (As the investment industry is so careful to point out, past performance is no guarantee of future results.)

But here's the thing: I have it on good authority that **the models used to predict future traffic volumes in the Puget Sound would never have predicted the actual traffic trends seen on I-5 through Seattle.** Most traffic models simply assume that car trips increase more or less in step with population and the economy: more people earning more money means more trips. But that's the opposite of what's happened: traffic counts fell, even as population and economic activity increased. (Yes, I know, I know, the economy faltered in 2008—but the downward trend started much earlier.)

Why does this matter? Because the supporters of big highway megaprojects in the Pacific Northwest (and beyond) typically claim that there's a "need" to accommodate all the traffic that's being predicted by traffic models. But those predictions aren't facts: more than anything, they're simply assumptions built into the models themselves!

In effect, then, the models simply assume what they're trying to prove. And in this case, as in [many, many](#) others, the assumption that traffic volumes are on the rise, always and everywhere, is proving to be a serious—and potentially costly—mistake.

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**Ex. E**

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## Washington's 20 Billion Mile Diet

State traffic forecasts have changed radically in just three years.

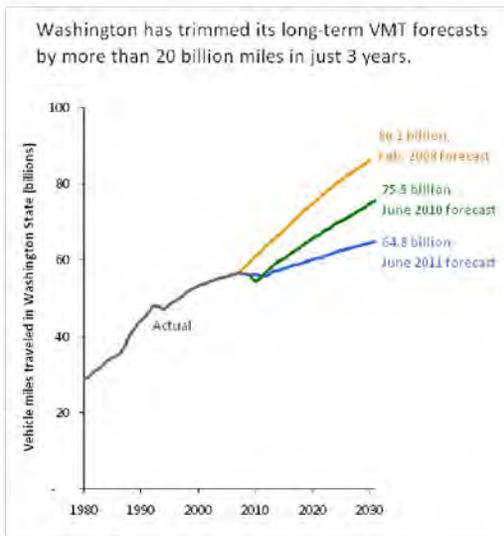
Clark Williams-Derry on August 2, 2011 at 11:32 am



This post is 13 in the series: [Dude, Where Are My Cars?](#)

According to the [most recent forecasts](#) from the Washington State Office of Financial Management, drivers in Washington State will rack up about 65 billion miles on the highways in 2031.

I have no idea if that number is anywhere close to accurate. Nobody does. But what I do know is that that number is 21 billion miles [lower](#) than the forecast that OFM made [3 years ago](#), and more than 10 billion miles lower than their [forecast from just last year](#). The chart has the details:



It's awfully tempting to suggest this chart shows that OFM is gradually groping towards more realistic traffic projections.

But does it, really? I honestly don't know if the blue line is more "realistic" than the orange line. Sure, the blue line is more consistent with the actual traffic trends over the last decade—a period when annual VMT growth slowed to a crawl. But I don't have a crystal ball to

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know which line is actually a "realistic" depiction of the future.

Instead, I think the real lessons of the chart lie elsewhere.

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The first lesson is this: *nobody has any special insight into the future.* Future VMT trends aren't a feature of objective reality that smart people can sit in a room and puzzle out. They're just *guesses*. Sometimes new information comes in, and the guesses change. Sometimes they change radically, enough to make the best guesses from a year earlier look ludicrous. So it's important to remember that even if particular forecast matches up with your world view, *it's still just a guess.*

Which leads to a second lesson: *nobody should take official VMT forecasts too seriously.* Three years ago, the "official" guess was that there would be lots of new demand for road space, and lots of new gas tax revenue to pay for it. Today, the "official" guess is that [statewide gas consumption peaked in 2002 or 2003](#), never to rise again; that gas tax revenues are going to decline unless the state ramps up the tax rate; and that the demand for new road space is going to slow to a crawl. Those are two completely contradictory views from the same agency in the same political administration. So all the hot air that was spewed about the dire need for new transportation megaprojects to avoid the near-certainty of a trafficpocalypse showed nothing more than hubris, overconfidence, and a dismal understanding of how forecasting actually works.

And there's a third lesson here: *forecasts can be dangerous.* People have a tendency to take official forecasts awfully seriously. But the decisions we made three years ago that we "had" to put lots of new megaprojects into the pipeline, based on forecasts of massive gridlock in 20 years, could very easily turn out to be dreadfully costly mistakes. When we place too much confidence in any one forecast, we can wind up making terrible decisions.

To me, the rapid change in traffic forecasts argues for a new way to think about transportation investments: that we make them smaller, more versatile, more nimble, more creative, and less likely to lock us into huge long-term expenses for projects that we might not actually need. In short, it argues for an approach that's the *exact opposite* of all the multi-billion dollar bridges, tunnels, and highway expansions that are on the docket in the Northwest.

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Southender says:

August 2, 2011 at 11:50 am

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## Where Are My Cars: King County

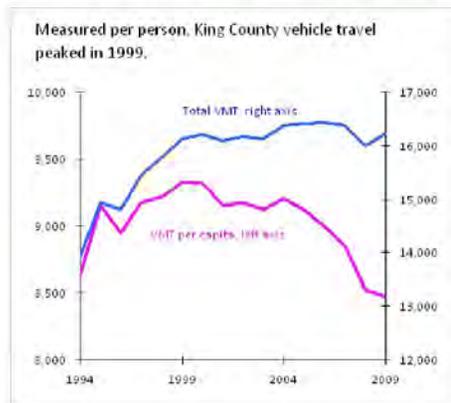
A 9 percent decline in driving over a decade.

Clark Williams-Derry on June 8, 2011 at 1:30 pm



This post is **9** in the series: [Dude, Where Are My Cars?](#)

I said I wouldn't post a new one for a while, but apparently I just can't help myself. Here's a chart of VMT per capita in King County, Washington, based on data provided by the state department of transportation. (Here's the [VMT data](#), and the [population counts](#).)



As you can see, total vehicle travel in the county was basically flat from 1999 to 2009. But the county's population grew over the same period, meaning that vehicle travel per capita fell by 9 percent.

I'll say it again: transportation models say this sort of thing simply doesn't happen. Yes, we've been through a couple of recessions over the last decade. Yet population and the region's economic output grew, and traffic volumes *still* remained flat. And the per capita decline started before gas prices soared, and well before the economy cratered. So to me, it's hard to avoid the notion that transportation planners have to abandon their assumptions of endless traffic growth. About a decade ago, something, or more likely some combination of things — demographics, psychographics, fuel prices, frustration with congestion, development patterns, and basic economics — started changing our relationship with our cars.

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## Comments

Alf Hanna says:

June 10, 2011 at 2:01 pm

Where are the calculations behind this? The city site doesn't actually call it out.

[Reply](#)

sara says:

July 9, 2011 at 8:13 pm

AGREE with comment above. Also would like more/clearer explanation re what VTM per capita, purple left axis means as opposed to blue VTM, right axis... Thanks.

[Reply](#)



Clark Williams-Derry says:

July 9, 2011 at 9:14 pm

Yikes, I should have labeled the right axis better.

The purple line is just the exact same VMT per capita data that was reported by King County, on a different scale and as a line chart rather than a bar chart.

The blue line is VMT per capita multiplied by population. But (my bad!) it should be labeled as millions of miles. That is, the right axis should range from 12 billion to 17 billion total vehicle miles traveled per year. That's a lot, I know, but it's what happens when you have almost 2 million people driving well over 8,000 miles per capita.

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Forecast Council  
June 2011 Transportation  
Economic and Revenue Forecasts**

**Volume IV: Alternative Forecast Tables**

**Transportation Revenue  
Forecast Council  
June 2011**

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Adopted June 16, 2011

IV - 2

**REVENUE AND RIDERSHIP PROJECTIONS**  
**JUNE 2011 FORECAST**  
**FISCAL YEARS 2011-2027**

Prepared for  
Washington State Ferries  
for Presentation to the  
Transportation Revenue  
Forecast Council  
June 18, 2011 Meeting

Prepared by  
Parsons Brinckerhoff  
June 15, 2011  
Revised June 17, 2011\*

\* No change in forecast values  
IV - 3



WASH STATE FERRIES

Adopted June 16, 2011



**Washington State Ferries**  
**June 2011 Revenue and Ridership Forecasts — Fiscal Years 2011-2027**

**JUNE 2011 FORECAST NOTES**

The fare revenue and ridership forecasts for Washington State Ferries (WSF) are completed in four stages. First, monthly ridership projections by six fare categories are prepared for each route using time series analysis methods, with a forecast horizon from the present through fiscal year (FY) 2027.

The second stage of the process generates system-wide ridership projections. Econometric models combine ferry fare scenarios and state economic variables to produce system-wide unconstrained ridership forecasts by six fare categories through FY 2027. Within each fare category, the individual route forecasts are then calibrated to match the system-wide forecast totals from the econometric models.

The third stage of the process consists of adjusting the calibrated passenger and vehicle ridership by route to reflect seasonal vehicle capacity constraints, changes in service hours, and/or the net impacts from adding or eliminating service.

Last, appropriate fares and average fare realizations are applied to the calibrated, capacity-constrained ridership forecasts for each route by fare category. This yields monthly and annual revenue forecasts by route for six fare categories.

Three scenarios differing in fare assumptions were prepared for the March Forecast:

- **Baseline Forecast** – assumes no changes in the posted fares through the forecast horizon, resulting in a declining real fares trend due to inflation;
- **Alternative 1 Forecast** – assumes consecutive 2.5% increases each October, from 2011 through 2026 (FY 2012-27), which results in slightly increasing real fares given that inflation, as measured by the Implicit Price Deflator for Personal Consumption, is projected to average 1.9% over the forecast horizon.
- **Alternative 2 Forecast** – combines the 2.5% increases of Alternative 1 with a 25¢ capital fare surcharge applied to all fares, per recent legislation (ESSB 5742). The surcharge is applied to each fare sold, regardless of whether the fare is collected in both directions or only in one direction for a round-trip.

The June 2011 Forecast results for FY 2011 include actual ridership counts through April 2011 and actual revenue collections through May 2011. In addition, they also capture the actual effects of reduced Mukilteo-Clinton service due to terminal construction closures during three weekends in the late winter / early spring of 2011.

**Washington State Ferries**

**June 2011 Revenue and Ridership Forecasts — Fiscal Years 2011-2027**

**Ridership Impacts**

The June 2011 ridership demand forecasts reflect the latest ridership data and updated economic variable projections produced by the State and Global Insight. The following points summarize the updated ridership forecasts:

- The June forecast for employment has been revised lower through FY 2017, and then noticeably higher thereafter, compared with the March forecast. Real personal income shares a similar trend, with a small downward revision through FY 2021 and an upward revision thereafter. Collectively, these factors contribute to a downward revision in ridership until FY 2020, and an upward revision thereafter through FY 2027, compared with March.
- The forecast for real gasoline prices are materially higher than projected in March, which tends to suppress vehicle demand throughout the forecast horizon.
- Overall, the ridership projections are lower in the early years of the forecast and higher in the later years. However, the increase in the later years is driven by higher passenger ridership; the higher fare vehicle/driver ridership remains a bit below the March forecast levels.
- The capital fare surcharge in Alternative 2 would initially reduce ridership demand by up to 1.3%, with the effect gradually reducing to 0.8% by the end of the forecast period.

**Revenue Impacts**

- Revenues under both the Baseline and Alternative 1 Forecasts for the 2009/11 biennium are projected at \$294.2 M, or \$0.2 M (0.1%) higher than March.
- The Baseline Forecast fare revenue projections are 1.4% lower in the 2011/13 biennium, 1.2% lower in the 2013/15 biennium, and thereafter less than 1% lower by the end of the forecast horizon, relative to March.
- The Alternative 1 Forecast fare revenue projections are also 1.4% lower in the 2011/13 biennium, and 1.2% lower in the 2013/15 biennium, but then taper off to very small differences both up and down relative to March.
- The 25¢ capital surcharge in Alternative 2 generates a net increase in revenue of \$4.1 M in the 2011/13 biennium over Alternative 1, after accounting for the reduction in demand due to effectively higher fares.
- A projected total of \$6.4 M in surcharge revenues would be transferred to the capital program in the 2011/13 biennium. This transfer is projected to result in a \$2.3 M reduction in revenues available to support the operating program, relative to Alternative 1.

### Washington State Ferries REVENUE PROJECTIONS ~ BASELINE FORECAST No Changes in the Current Posted Fares<sup>1</sup>

#### June 2011 Forecast - Fiscal Years 2011-2027

Fiscal Year	June 2011 Capacity-Constrained Revenue Forecast	Fiscal Year Annual Growth Rate	June Biennium Total	June vs. March Forecast		March 2011 Baseline	
				% Change by Fiscal Year	\$ Change and % Change by Biennium	Capacity-Constrained Revenue Forecast	Biennium Total
2008 <sup>2</sup>	\$148,379,626	-1.1%	\$292,920,081				
2009 <sup>2</sup>	\$144,540,455	(2.6%)					
2010 <sup>2</sup>	\$147,009,545	1.7%		0.0%	\$235,000	\$147,009,545	\$293,922,545
2011 <sup>2</sup>	\$147,148,000	0.1%	\$294,157,545	0.2%	\$235,000	\$146,913,000	\$293,922,545
2012	\$148,508,000	0.9%		(1.5%)		\$150,813,000	
2013	\$152,888,000	2.8%	\$301,196,000	(1.4%)	(\$4,419,000)	\$154,802,000	\$305,615,000
2014	\$157,168,000	2.9%		(1.4%)		\$159,353,000	
2015	\$161,728,000	2.9%	\$318,896,000	(1.1%)	(\$4,011,000)	\$163,554,000	\$322,907,000
2016	\$165,793,000	2.5%		(1.0%)		\$167,452,000	
2017	\$169,675,000	2.3%	\$335,468,000	(0.9%)	(\$3,192,000)	\$171,208,000	\$338,660,000
2018	\$173,454,000	2.2%		(0.5%)		\$174,401,000	
2019	\$176,794,000	1.9%	\$350,248,000	(0.4%)	(\$1,653,000)	\$177,500,000	\$351,901,000
2020	\$179,592,000	1.6%		(0.2%)		\$180,018,000	
2021	\$181,881,000	1.3%	\$361,473,000	(0.2%)	(\$704,000)	\$182,159,000	\$362,177,000
2022	\$183,886,000	1.1%		(0.3%)		\$184,364,000	
2023	\$185,624,000	0.9%	\$369,510,000	(0.4%)	(\$1,295,000)	\$186,441,000	\$370,805,000
2024	\$187,301,000	0.9%		(0.6%)		\$188,454,000	
2025	\$188,807,000	0.8%	\$376,109,000	(0.9%)	(\$2,818,000)	\$190,472,000	\$378,928,000
2026	\$190,330,000	0.8%		(0.8%)		\$191,940,000	
2027	\$191,798,000	0.8%	\$382,128,000	(0.9%)	(\$3,288,000)	\$193,476,000	\$385,416,000

<sup>1</sup> The Baseline Forecast includes the recent 2.5% fare increase on January 1, 2011, but assumes no further changes to the current nominal fares thereafter. The loads to developing real fares, over the forecast horizon. The Baseline Forecast also reflects the current programmed level of service subject to capacity constraints.

<sup>2</sup> Reflects/updates historical data.

### Washington State Ferries REVENUE PROJECTIONS ~ ALTERNATIVE 1 FORECAST

#### June 2011 Forecast - Fiscal Years 2011-2027

Fiscal Year	June 2011 Capacity-Constrained Revenue Forecast	Fiscal Year Annual Growth Rate	June Biennium Total	June vs. March Forecast		March 2011 Alternative	
				% Change by Fiscal Year	\$ Change and % Change by Biennium	Capacity-Constrained Revenue Forecast	Biennium Total
2008 <sup>2</sup>	\$148,379,626	1.1%	\$292,920,081				
2009 <sup>2</sup>	\$144,540,455	(2.6%)					
2010 <sup>2</sup>	\$147,009,545	1.7%		0.0%	\$235,000	\$147,009,545	\$293,922,545
2011 <sup>2</sup>	\$147,148,000	0.1%	\$294,157,545	0.2%	\$235,000	\$146,913,000	\$293,922,545
2012	\$150,587,000	2.3%		(1.5%)		\$152,945,000	
2013	\$157,657,000	4.7%	\$308,244,000	(1.4%)	(\$4,516,000)	\$159,815,000	\$312,760,000
2014	\$165,216,000	4.8%		(1.3%)	(\$4,516,000)	\$167,436,000	
2015	\$173,041,000	4.7%	\$338,257,000	(1.1%)	(\$4,133,000)	\$174,954,000	\$342,390,000
2016	\$180,517,000	4.3%		(1.0%)	(\$3,345,000)	\$182,281,000	
2017	\$188,300,000	4.3%	\$368,817,000	(0.8%)	(\$3,345,000)	\$189,881,000	\$372,162,000
2018	\$196,674,000	4.4%		(0.5%)		\$197,638,000	
2019	\$205,397,000	4.4%	\$402,071,000	(0.2%)	(\$1,389,000)	\$205,922,000	\$403,460,000
2020	\$214,205,000	4.3%		0.1%		\$214,021,000	
2021	\$222,750,000	4.0%	\$436,955,000	0.3%	\$913,000	\$222,021,000	\$436,042,000
2022	\$230,859,000	3.6%		0.3%		\$230,068,000	
2023	\$239,073,000	3.6%	\$469,932,000	0.2%	\$1,343,000	\$238,521,000	\$468,589,000
2024	\$247,554,000	3.5%		0.2%		\$247,123,000	
2025	\$256,090,000	3.4%	\$503,644,000	0.0%	\$471,000	\$256,050,000	\$503,173,000
2026	\$264,753,000	3.4%		0.0%		\$264,725,000	
2027	\$273,646,000	3.4%	\$538,399,000	(0.1%)	(\$192,000)	\$273,866,000	\$538,591,000

<sup>1</sup> The Alternative 1 Forecast includes the record 2.5% fare increase on January 1, 2011, followed by annual 2.5% fare increases with fiscal up-rounding each October 1 through 2026 (FY 2012-27). This yields increasing real fares under the current inflation projection. The Alternative 1 Forecast also reflects the current programmed level of services subject to capacity constraints.

<sup>2</sup> Reflects/updates historical data.

**Washington State Ferries**  
**REVENUE PROJECTIONS ~ ALTERNATIVE 2 FORECAST**  
**25¢ "Capital Surcharge" per Fare Sold in Addition to 2.5% Annual Fare Increases FY 2012-27<sup>1</sup>**

June 2011 Forecast – Fiscal Years 2011-2027

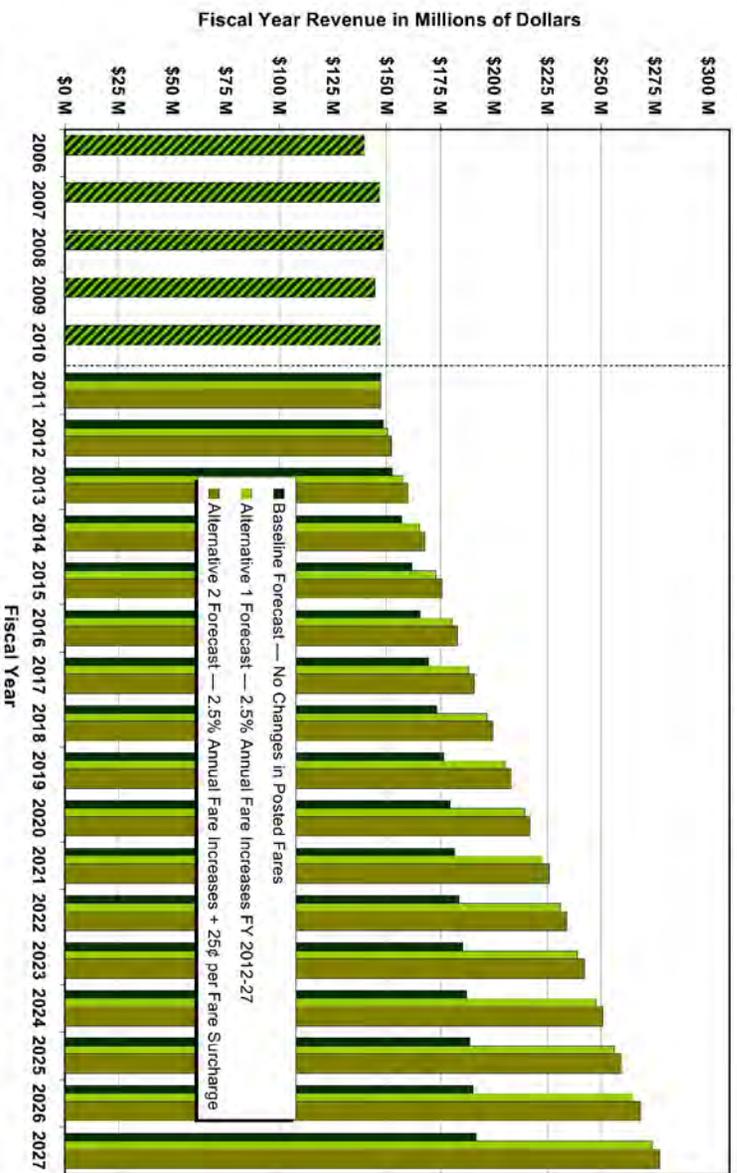
Fiscal Year	June 2011 Capacity- Constrained Revenue Forecast	Fiscal Year Annual Growth Rate	June Blantium Total	25¢ Surcharge Revenue Impact		Distribution of Fare Revenue with Surcharge		
				Net Additional Revenue from 25¢ Surcharge per Fare	% Increase over Alt. 1	Surcharge Revenue for Capital Program	Fare Revenue Remaining for Operating Program	Operating Revenue Loss Compared to Alternative 1 <sup>1</sup>
2008 <sup>2</sup>	\$148,379,626	1.1%	\$292,920,081					
2009 <sup>2</sup>	\$144,540,455	(2.6%)						
2010 <sup>2</sup>	\$147,009,545	1.7%						
2011 <sup>2</sup>	\$147,148,000	0.1%	\$294,157,545					
2012	\$152,235,000	3.5%		\$1,648,000	1.1%	\$2,581,000	\$149,654,000	(\$933,000)
2013	\$160,075,000	5.1%	\$312,310,000	\$2,418,000	1.5%	\$3,801,000	\$156,274,000	(\$1,383,000)
2014	\$167,689,000	4.8%		\$2,473,000	1.5%	\$3,888,000	\$163,801,000	(\$1,415,000)
2015	\$175,571,000	4.7%	\$343,260,000	\$2,530,000	1.5%	\$3,979,000	\$171,592,000	(\$1,449,000)
2016	\$183,104,000	4.3%		\$2,597,000	1.4%	\$4,050,000	\$179,054,000	(\$1,463,000)
2017	\$190,931,000	4.3%	\$374,035,000	\$2,631,000	1.4%	\$4,120,000	\$186,811,000	(\$1,489,000)
2018	\$199,351,000	4.4%		\$2,677,000	1.4%	\$4,192,000	\$195,159,000	(\$1,515,000)
2019	\$208,246,000	4.5%	\$407,597,000	\$2,849,000	1.4%	\$4,268,000	\$203,978,000	(\$1,419,000)
2020	\$217,129,000	4.3%		\$2,924,000	1.4%	\$4,340,000	\$212,789,000	(\$1,416,000)
2021	\$225,849,000	4.0%	\$442,978,000	\$3,099,000	1.4%	\$4,406,000	\$221,443,000	(\$1,307,000)
2022	\$234,007,000	3.6%		\$3,148,000	1.4%	\$4,460,000	\$229,547,000	(\$1,312,000)
2023	\$242,293,000	3.5%	\$478,300,000	\$3,220,000	1.3%	\$4,511,000	\$237,782,000	(\$1,291,000)
2024	\$250,891,000	3.5%		\$3,337,000	1.3%	\$4,564,000	\$246,327,000	(\$1,227,000)
2025	\$259,599,000	3.5%	\$610,490,000	\$3,509,000	1.4%	\$4,613,000	\$254,966,000	(\$1,104,000)
2026	\$268,347,000	3.4%		\$3,594,000	1.4%	\$4,659,000	\$263,688,000	(\$1,065,000)
2027	\$277,283,000	3.3%	\$545,630,000	\$3,637,000	1.3%	\$4,704,000	\$272,579,000	(\$1,067,000)

<sup>1</sup> The Alternative 2 Forecast includes the annual 2.5% fare increases of Alternative Forecast 1, combined with a 25¢ capital surcharge on each fare sold beginning October 1, 2011. This surcharge would be applied to renewals and round-trip fares equally. The Alternative 2 Forecast also reflects the current programmed level of service subject to capacity constraints.

<sup>2</sup> Patches indicate historical data.

<sup>3</sup> Implementation of the surcharge reduces overall ridership demand slightly, as a result, lowering the full surcharge amount for capital uses leaves less revenue for operating uses than Alternative 1.

**Washington State Ferries — Revenue History and Forecast Trends**  
 June 2011 Forecast Scenarios – Fiscal Years 2006-2027



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Brinckerhoff

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## Washington State Ferries RIDERSHIP PROJECTIONS – BASELINE FORECAST

### No Changes in the Current Posted Fares<sup>1</sup>

#### June 2011 Forecast – Fiscal Years 2011-2027

Fiscal Year	June 2011 Unconstrained Demand Forecast	June 2011 Capacity Constrained Projections			Annual Rate of Growth	March 2011 Projections Total Ridership	Jun. % Chg from Mar.
		Passenger Ridership	Vehicle/Driver Ridership	Total Ridership			
2008 <sup>2</sup>	23,281,551	12,889,403	10,392,148	23,281,551	(2.9%)	22,587,537	0.0%
2009 <sup>2</sup>	22,477,473	12,572,707	9,904,766	22,477,473	(3.5%)	22,282,000	(0.3%)
2010 <sup>2</sup>	22,587,537	12,453,226	10,134,311	22,587,537	0.5%	22,282,000	(0.3%)
2011 <sup>2</sup>	22,215,000	12,264,000	9,931,000	22,215,000	(1.6%)	22,861,000	(0.9%)
2012	22,447,000	12,510,000	9,937,000	22,447,000	1.0%	23,409,000	(1.0%)
2013	23,168,000	12,939,000	10,229,000	23,168,000	3.2%	24,226,000	(1.1%)
2014	23,960,000	13,437,000	10,523,000	23,960,000	3.4%	25,001,000	(0.9%)
2015	24,785,000	13,960,000	10,820,000	24,780,000	3.4%	25,857,000	(0.8%)
2016	25,454,000	14,341,000	11,106,000	25,447,000	2.7%	26,280,000	(0.7%)
2017	26,144,000	14,739,000	11,362,000	26,101,000	2.6%	26,859,000	(0.4%)
2018	26,866,000	15,148,000	11,611,000	26,759,000	2.5%	27,423,000	(0.1%)
2019	27,624,000	15,578,000	11,819,000	27,397,000	2.4%	27,949,000	0.2%
2020	28,413,000	16,020,000	11,986,000	28,006,000	2.2%	28,443,000	0.4%
2021	29,205,000	16,471,000	12,096,000	28,567,000	2.0%	28,933,000	0.6%
2022	29,946,000	16,928,000	12,171,000	29,099,000	1.9%	29,427,000	0.6%
2023	30,670,000	17,392,000	12,231,000	29,593,000	1.7%	29,935,000	0.6%
2024	31,451,000	17,830,000	12,280,000	30,110,000	1.7%	30,455,000	0.6%
2025	32,272,000	18,333,000	12,304,000	30,637,000	1.8%	30,959,000	0.7%
2026	33,118,000	18,859,000	12,317,000	31,176,000	1.8%	31,470,000	0.8%
2027	33,998,000	19,399,000	12,332,000	31,731,000	1.8%		

<sup>1</sup> The Baseline Forecast includes the recent 2.5% fare increase on January 1, 2011, but assumes no further changes to the current normal fares thereafter. This leads to declining real fares over the forecast horizon. The Baseline Forecast also reflects the current program level of service subject to capacity constraints. This leads to declining

<sup>2</sup> Historical ridership data.

**Washington State Ferries  
RIDERSHIP PROJECTIONS ~ ALTERNATIVE 1 FORECAST  
2.5% Annual Fare Increases FY 2012-27<sup>1</sup>**

**June 2011 Forecast – Fiscal Years 2011-2027**

Fiscal Year	June 2011		June 2011 Capacity Constrained Projections			March 2011 Projections	
	Unconstrained Demand Forecast	Passenger Ridership	Vehicle/Driver Ridership	Total Ridership	Annual Rate of Growth	Total Ridership	Jun. % CIG from Mar.
2008 <sup>2</sup>	23,281,551	12,889,403	10,392,148	23,281,551	(2.9%)	22,587,537	0.0%
2009 <sup>2</sup>	22,477,473	12,572,707	9,904,766	22,477,473	(3.5%)	22,587,537	0.0%
2010 <sup>2</sup>	22,587,537	12,453,226	10,134,311	22,587,537	0.5%	22,587,537	0.0%
2011 <sup>2</sup>	22,215,000	12,264,000	9,931,000	22,215,000	(1.6%)	22,282,000	(0.3%)
2012	22,318,000	12,447,000	9,871,000	22,318,000	0.5%	22,532,000	(0.9%)
2013	22,812,000	12,744,000	10,068,000	22,812,000	2.2%	23,046,000	(1.0%)
2014	23,369,000	13,099,000	10,270,000	23,369,000	2.4%	23,624,000	(1.1%)
2015	23,953,000	13,475,000	10,478,000	23,953,000	2.5%	24,171,000	(0.9%)
2016	24,379,000	13,708,000	10,669,000	24,377,000	1.8%	24,589,000	(0.9%)
2017	24,805,000	13,937,000	10,863,000	24,800,000	1.7%	24,975,000	(0.7%)
2018	25,242,000	14,166,000	11,068,000	25,234,000	1.8%	25,335,000	(0.4%)
2019	25,704,000	14,414,000	11,263,000	25,677,000	1.8%	25,695,000	(0.1%)
2020	26,185,000	14,662,000	11,455,000	26,117,000	1.7%	26,043,000	0.3%
2021	26,661,000	14,905,000	11,616,000	26,521,000	1.5%	26,364,000	0.6%
2022	27,084,000	15,150,000	11,725,000	26,875,000	1.3%	26,663,000	0.8%
2023	27,493,000	15,374,000	11,825,000	27,199,000	1.2%	26,976,000	0.8%
2024	27,926,000	15,626,000	11,919,000	27,545,000	1.3%	27,299,000	0.9%
2025	28,384,000	15,894,000	11,981,000	27,875,000	1.2%	27,617,000	0.9%
2026	28,847,000	16,165,000	12,034,000	28,169,000	1.2%	27,921,000	1.0%
2027	29,320,000	16,446,000	12,079,000	28,525,000	1.2%	28,222,000	1.1%

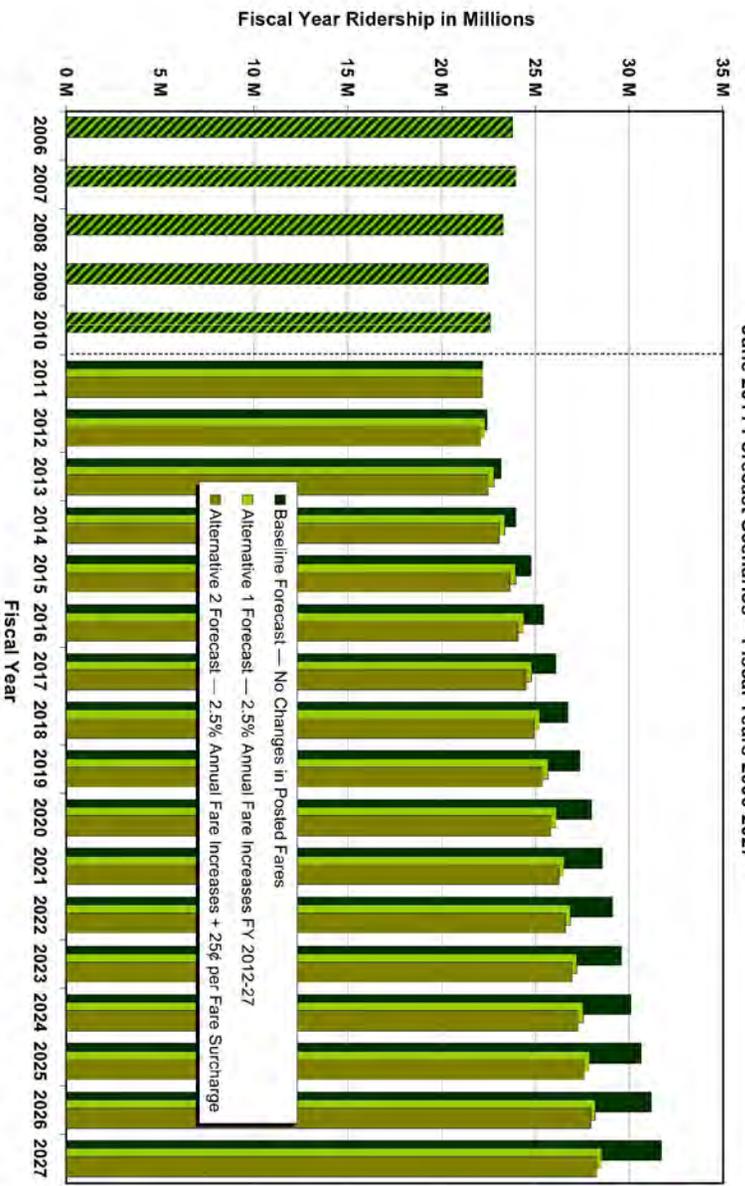
<sup>1</sup> The Alternative 1 Forecast includes the recent 2.5% fare increases on January 1, 2011, followed by annual 2.5% fare increases with model up-rounding from October 1 through 2026 (FY 2012-27). This yields increasing real fares under the current inflation projection. The Alternative 1 Forecast also reflects the current programmed level of service subject to capacity constraints.  
<sup>2</sup> Ridership includes historical data.

**Washington State Ferries  
RIDERSHIP PROJECTIONS ~ ALTERNATIVE 2 FORECAST  
25¢ "Capital Surcharge" per Fare Sold in Addition to 2.5% Annual Fare Increases FY 2012-27<sup>1</sup>  
June 2011 Forecast – Fiscal Years 2011-2027**

Fiscal Year	June 2011		June 2011 Capacity Constrained Projections			Annual Rate of Growth	25¢ Surcharge Ridership Impact % Decrease over Alternative 1	Net Decrease In Ridership <sup>1</sup>
	Unconstrained Demand Forecast	Passenger Ridership	Passenger Ridership	Vehicle/Driver Ridership	Total Ridership			
2008 <sup>2</sup>	23,281,551	12,889,403	10,392,148	23,281,551	(2.9%)			
2009 <sup>2</sup>	22,477,473	12,572,707	9,904,766	22,477,473	(3.5%)			
2010 <sup>2</sup>	22,587,537	12,453,226	10,134,311	22,587,537	0.5%			
2011 <sup>2,3</sup>	22,215,000	12,264,000	9,931,000	22,215,000	(1.6%)	0.0%	0	
2012	22,104,000	12,286,000	9,818,000	22,104,000	(0.5%)	(1.0%)	(214,000)	
2013	22,505,000	12,508,000	9,997,000	22,505,000	1.8%	(1.3%)	(307,000)	
2014	23,062,000	12,863,000	10,199,000	23,062,000	2.5%	(1.3%)	(307,000)	
2015	23,645,000	13,237,000	10,407,000	23,644,000	2.5%	(1.3%)	(309,000)	
2016	24,075,000	13,473,000	10,600,000	24,073,000	1.8%	(1.2%)	(304,000)	
2017	24,503,000	13,705,000	10,795,000	24,500,000	1.8%	(1.2%)	(300,000)	
2018	24,943,000	13,936,000	11,000,000	24,936,000	1.8%	(1.2%)	(298,000)	
2019	25,408,000	14,185,000	11,210,000	25,395,000	1.8%	(1.1%)	(282,000)	
2020	25,892,000	14,435,000	11,403,000	25,838,000	1.7%	(1.1%)	(279,000)	
2021	26,371,000	14,680,000	11,575,000	26,255,000	1.6%	(1.0%)	(266,000)	
2022	26,796,000	14,928,000	11,685,000	26,613,000	1.4%	(1.0%)	(262,000)	
2023	27,198,000	15,185,000	11,789,000	26,944,000	1.2%	(0.9%)	(255,000)	
2024	27,644,000	15,407,000	11,891,000	27,298,000	1.3%	(0.9%)	(247,000)	
2025	28,105,000	15,676,000	11,962,000	27,638,000	1.2%	(0.9%)	(237,000)	
2026	28,571,000	15,960,000	12,019,000	27,969,000	1.2%	(0.8%)	(230,000)	
2027	29,047,000	16,233,000	12,085,000	28,298,000	1.2%	(0.8%)	(227,000)	

<sup>1</sup> This Alternative 2 Forecast includes the annual 2.5% fare increase of Alternative Forecast 1, combined with a 25¢ capital surcharge on each fare sold beginning October 1, 2011. The surcharge would be applied to one-way and round-trip fares equally. The Alternative 2 Forecast also reflects the current programmed level of service subject to capacity constraints.  
<sup>2</sup> Ridership includes historical data.  
<sup>3</sup> Implementation of the surcharge reduces overall ridership demand slightly relative to the Alternative 1 Forecast.

**Washington State Ferries — Ridership History and Forecast Trends**  
 June 2011 Forecast Scenarios – Fiscal Years 2006-2027



Parsons  
Brinckerhoff

Adopted June 16, 2011

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Washington State Ferries

**Vehicle Miles Traveled Forecast  
(Preliminary)  
June 2011**

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Adopted June 16, 2011

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#### WSDOT VEHICLE MILES TRAVELLED FORECAST (PRELIMINARY)

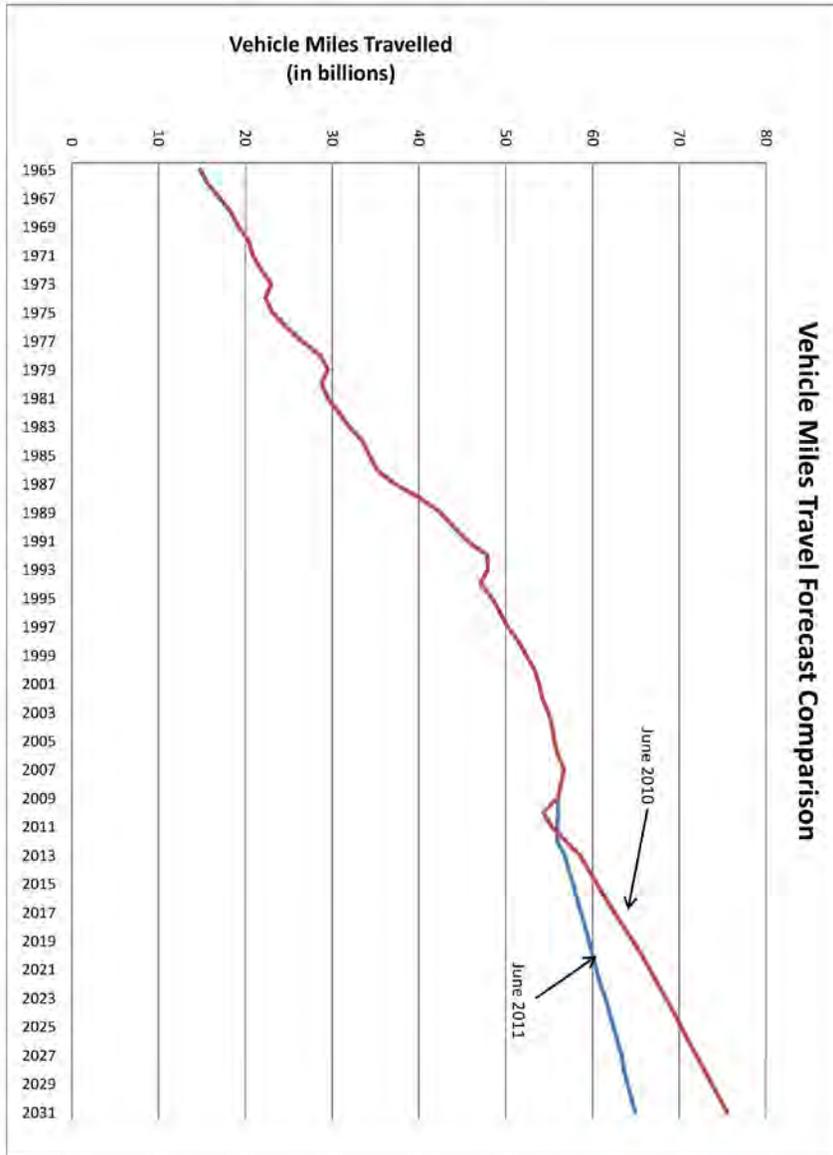
- WSDOT has produced a statewide VMT forecast for more than twenty years
- Through February 2008, the VMT forecast was a byproduct of the fuel consumption forecast
- WSDOT convened a multagency work group in 2009 and 2010 to select a better statewide VMT forecast model
- This is a preliminary forecast. While all independent variables have been updated from the latest data, WSDOT Statewide Travel & Collision Data Office (STCDO) is still updating actual Vehicle Miles Travelled data for calendar year 2010.
- The current forecast is above the previous forecast in the first two years. This is due primarily to better employment projections and a faster recovery of vehicle registrations. However, in the out-years, VMT is significantly lower due to much lower employment projections.

#### STATEWIDE VMT FORECAST METHODOLOGY

- The Statewide VMT model is of log-log functional form which includes log of the following independent variables:
  - Washington employment
  - Washington motor vehicle registrations
  - Washington gas prices
- The forecast model considers three separate types of impacts on VMT: economic activity, vehicles registered, and gas prices
- This model had the best overall fit, most significant t-statistics, and other critical statistics were better than other models
- Each of the independent variables has their own separate and distinct forecast which can be used to project statewide VMT

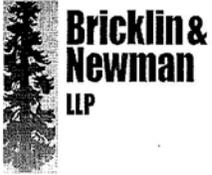
#### SOURCE OF INDEPENDENT FORECASTED VARIABLES

- Washington employment – Economic and Revenue Forecast Council June 2011 forecast in the near-term and from OFM's 2010 long-term non-farm employment projections for Washington.
- Washington motorized vehicle registrations –WSDOT-Economic Analysis section for the Transportation Revenue Council June 2011 forecast
- Washington gasoline prices –WSDOT forecast for the Transportation Revenue Council June 2011 forecast





# Ex. H



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Reply to: Seattle Office

June 14, 2011

*VIA EMAIL AND U.S. MAIL*

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Dear Ms. Naber, Dr. Toothman, and Mr. Westberg,

On behalf of Bill Speidel Enterprises, Inc. and the citizens' group Protect Seattle Now, we would like to share with you our grave concern for the Pioneer Square Historic District in Seattle. We believe this district, listed on the National Register of Historic Places and designated as a City of Seattle historic district, is under threat from the Washington State Department of Transportation's (WSDOT) proposal to locate a massive highway interchange and the world's largest bored tunnel next to the district.

**O-005-008** WSDOT's preferred alternative for the SR99 viaduct replacement project will "use" land from the Pioneer Square Historic District within the meaning of Section 4(f). WSDOT's tunnel design provides only a single access point for all of downtown Seattle: a huge interchange at Pioneer Square. This interchange would sprawl across 14 lanes of concrete. It would commandeer the narrow, pedestrian-oriented, and physically fragile streets of the Historic District as highway access routes for huge volumes of vehicular traffic. Pioneer Square's streets would become feeder streets for a network of on- and off-ramps for WSDOT's tunnel. Pioneer Square's streets, however, are an essential component of the historic resource and specifically protected under the City's ordinance for Pioneer Square. The use of Pioneer Square streets for high capacity highway access unquestionably will compromise the Historic District.

WSDOT has been aware of the Pioneer Square traffic problems caused by the location of this mega-interchange for over 18 months. Many local organizations and community groups have diligently requested WSDOT to identify solutions that avoid these harms via the environmental review process. However, the problems remain unsolved and unmitigated, even at this late hour.

**O-005-009** A feasible and prudent alternative to the bored tunnel that avoids these harms exists. It involves investments in transit, surface streets, and nearby Interstate 5. This alternative has been recognized by WSDOT, the City, and King County as one of the two best options to be evaluated. But WSDOT has refused to consider this alternative in detail, without adequate explanation.

Section 4(f) and the National Environmental Policy Act (NEPA) require the Federal Highway Administration (FHWA)—and WSDOT as the state agency to which the FHWA delegated its responsibilities—to analyze in detail alternatives that either pursue a less harmful alternative, or to provide solutions or mitigation that would prevent harm to the Historic District. Section 4(f), of course, also requires that the alternative that avoids impacting the Historic District actually be selected, unless it is not feasible or prudent. By disregarding avoidance alternatives, leaving significant problems unsettled in its planning process and unfunded in its budget, WSDOT is compromising the integrity of the Pioneer Square Historic District and violating federal law.

We urge you to fully protect the Pioneer Square Historic District under Section 4(f) of the Department of Transportation Act of 1966.

## I. BACKGROUND

### A. Bill Speidel Enterprises, Inc. and Protect Seattle Now

Bill Speidel Enterprises is the family-owned company that operates the Underground Tour in the Pioneer Square Historic District. For nearly five decades, the Underground Tour has been a steward of and advocate for the Pioneer Square Historic District. The Underground Tour would lose business if the FHWA permits WSDOT to proceed with its preferred alternative for replacing the Viaduct, as the inevitable increase in vehicular traffic and damage to the District's pedestrian environment would decrease pedestrian activity and the number of customers interested in the Underground Tour.

### O-005-008

FHWA responded to this letter on July 15, 2011. The following responses incorporate information from that response and provide additional information contained in the Final EIS and supporting technical reports. The Section 4(f) Evaluation in the Final EIS considered the potential for a use of the Pioneer Square Historic District. The Section 4(f) Evaluation concluded that the Tolled Bored Tunnel alternative would result in a "use" of the District, but the use would be confined to the area of the Western Building, which is a contributing resource to the District. While the Tolled Bored Tunnel would increase traffic volumes in the District, it was determined through Section 106 consultation under the National Historic Preservation Act that the increased traffic would not result in an "adverse effect" on the District (Appendix I, Historic, Cultural, and Archaeological Resources Discipline Report, Section 7.1). Based on that finding, FHWA concluded that the "use" of the District is confined to the area of the Western Building.

### O-005-009

The Section 4(f) Evaluation in the Final EIS analyzed alternatives for avoiding or minimizing harm to the Pioneer Square Historic District, and concluded that there are no prudent and feasible avoidance alternatives. The Section 4(f) Evaluation specifically considered the Surface/Transit/I-5 Hybrid alternative and concluded that it is not a feasible and prudent alternative for avoiding the use of historic resources because it would not meet the purpose and need of the project.

Protect Seattle Now is an association of citizens, including people who work in Pioneer Square, enjoy spending leisure time in the District, and pay the state and federal taxes and fees that would be used to pay for the bored tunnel. The purposes of Protect Seattle Now include educating the public about the bored tunnel, advocating for alternatives that pose fewer environmental and financial risks, and ensuring that government agencies comply with their legal obligations for the Viaduct replacement project.

#### B. The Pioneer Square Historic District

O-005-010

Pioneer Square was the City's original business district. It was designated a historic district in 1970. According to the City of Seattle,

Pioneer Square marks Seattle's original downtown, dating back to 1852. Rebuilt after the devastating "Great Fire" of 1889, the district is characterized by late nineteenth century brick and stone buildings and one of the nation's best surviving collections of Romanesque Revival style urban architecture. Established as both a National historic district and a local preservation district in 1970, Pioneer Square is protected by an ordinance and design guidelines focused on preserving its unique historic and architectural character, assuring the sensitive rehabilitation of buildings, promoting development of residential uses for all income levels, and enhancing the district's economic climate for residents, employers, workers, and visitors.

<http://www.seattle.gov/neighborhoods/preservation/pioneersquare.htm>.

Protections for the Pioneer Square Historic District are defined in Seattle Municipal Code (SMC) 23.66.100. Protection of its quiet local streets and its pedestrian character are some of the fundamental reasons for the establishment of the special review district:

- "to avoid a proliferation of vehicular parking and vehicular-oriented uses," SMC 23.66.100.A;
- "to encourage the use of transportation modes other than the private automobile," *id.*;
- "and to encourage pedestrian uses," *id.*

The Pioneer Square Historic District is more than just individual buildings. The overall urban design, and specifically the interplay between the streets, sidewalks, underground areaways, and buildings create the unique character and historic value of Pioneer Square. In order to protect the streets, with their quiet traffic and pedestrian character, one of the prohibited uses in the Historic District is defined in SMC 23.66.122:

- "Transportation facilities, except passenger terminals, rail transit facilities, parking garages, and streetcar maintenance bases"

#### O-005-010

The historic features of the Pioneer Square Historic District were thoroughly evaluated and documented in accordance with Section 106 of the National Historic Preservation Act. The Section 106 process includes identification and evaluation of historic properties that are listed in or eligible for the National Register of Historic Places. As part of that process, FHWA considered the historic features of the Pioneer Square Historic District as documented in the National Register nomination form for this district. The nomination form describes the historically significant features of the Pioneer Square Historic District as follows:

"The district is being nominated based on the following National Register Criteria: "A. Property is associated with events that have made a significant contribution to the broad patterns of history"; and criterion C: "Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction." The district is clearly associated with the "broad patterns" of United States History, beginning with 1889, after the Great Fire and ending with the Second Avenue Extension, which had a far-reaching effect on both the buildings and the streetscape of the district until 1931. In terms of Criterion C, the district presents many examples of buildings that are architecturally distinctive and are the work of a large number of well known, although local architects. In addition, the district has several public squares and a small collection of artifacts of significance. The areas of significance for the district, based on National Register categories, are: architecture, commerce, community planning and development, engineering, industry, landscape architecture, politics/government, social history and transportation."

Please see the map of the Pioneer Square Historic District for reference on the accompanying CD-ROM, and here: [http://www.seattle.gov/neighborhoods/preservation/pioneersquare\\_map.htm](http://www.seattle.gov/neighborhoods/preservation/pioneersquare_map.htm)

### C. The Alaskan Way Viaduct Replacement Project

The current Alaskan Way Viaduct is an elevated road traveling next to the Pioneer Square Historic District and along Seattle's waterfront. This portion of SR-99 carries up to 100,000 cars a day, and offers seven on- and off-ramps to allow travelers access to and from the commercial core of downtown Seattle. It was damaged in 2001 Nisqually earthquake, and planning for replacement has been underway since then.

## II. ANALYSIS

As you know, Section 4(f)<sup>1</sup> of the Department of Transportation Act of 1966 creates substantive protections for our nation's most cherished parks, natural resources, and historic sites. It announces a policy that the United States government should undertake "special effort" in order to "preserve" the country's "historic sites." 49 U.S.C. § 303(a). Section 4(f) is triggered when a "transportation program or project" will "use" any "land of an historic site of national, state, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site)." 49 U.S.C. § 303(c). FHWA may not approve any such transportation project unless the applicant agency establishes, and the FHWA finds, that the two strict standards of Section 4(f) are met: First, "there is *no* prudent and feasible alternative to using that land." 49 U.S.C. § 303(c)(1) (emphasis added). Second, "the program or project includes *all* possible planning to minimize harm to the . . . historic site resulting from the use." 49 U.S.C. § 303(c)(2) (emphasis added).

The cultural resources that enjoy protection under Section 4(f) include national and local treasures such as the Pioneer Square Historic District in Seattle. WSDOT, however, has fallen short of meeting both elements of Section 4(f). According to WSDOT's own technical studies, there is an alternative that would effectively move people and goods into and through the central city, while minimizing the use of the Pioneer Square Historic District by distributing vehicle trips away from that area. Yet WSDOT has refused to analyze this alternative in detail in its EIS. WSDOT has also failed to adequately plan for the harm that a tunnel alternative will cause to Pioneer Square.

### A. The Pioneer Square Historic District, as Defined by City Law, Is Protected Under Section 4(f)

**O-005-011** The Pioneer Square Historic District is on the National Register of Historic Places. City law recognizes that the area is "an area of great historical and cultural significance," and therefore the City has designated it as a "special review district" subject to rigorous use and development

<sup>1</sup> This letter uses the term "Section 4(f)" in the same way that the term is defined in the USDOT regulations, 23 C.F.R. § 771.107(e), namely as the identical statutory obligations imposed on the FHWA by 49 U.S.C. § 303 and 23 U.S.C. § 138.

The description of this resource in the National Register nomination form is used as the basis for FHWA's evaluation of effects under Section 106 and evaluation of "use" under Section 4(f). See FHWA Section 4(f) Policy Paper Question 3C (<http://www.environment.fhwa.dot.gov/projdev/4fpolicy.pdf>).

### O-005-011

The Section 4(f) Evaluation in the Final EIS recognizes that the Pioneer Square Historic District is listed in the National Register of Historic Places and therefore is a Section 4(f) resources. The District's status under local ordinances does not confer protection under Section 4(f), nor does it change the way the District is treated for purposes of compliance with Section 4(f).

**O-005-011** restrictions. SMC 23.66.100.A. Therefore, the full protections of Section 4(f) attach to this historic area.

**B. The Project Would “Use” the Pioneer Square Historic District**

**O-005-012** We urge you to determine that the bored-tunnel alternative for replacing the Viaduct would “use” the Pioneer Square Historic District within the meaning of Section 4(f) and the FHWA’s rules, 23 C.F.R. 774.15 and 23 C.F.R. § 774.17. We believe this “use” determination is compelled by the evidence summarized below and detailed in the 2010 supplemental draft environmental impact statement (SDEIS) and the documents attached to the hard copy of this letter, especially the April 2011 Nelson-Nygaard Draft Full Report to the Seattle Department of Transportation entitled, “Additional Review of the Impacts of the Deep Bored Tunnel Tolling Diversion on City Streets; Identification of Mitigation.” (Nelson-Nygaard Report)

The proposed bored tunnel alternative replaces the seven existing on- and off-ramps for the downtown area with a single mega-interchange, immediately adjacent to the Pioneer Square Historic District. Project officials expect at least 50,000 cars, trucks, and buses to use this interchange each day for the non-tolled alternative. High tolls are expected to motivate an additional 20,000 potential users to exit the road to bypass the tolled portion, which undoubtedly would increase volumes at the Pioneer Square interchange. (WSDOT refused to study the impact of tolling diversion on Pioneer Square streets in their 2010 SDEIS.)

Many community organizations, historic preservation professionals, local businesses, professional groups, and agencies have raised concerns about the risks to the Historic District caused by the proposed bored tunnel alternative. See the comment letters on the DEIS sent in November and December 2010 by the following entities:

- Seattle Department of Transportation,
- American Institute of Architects, Seattle Chapter,
- Historic Seattle,
- Bill Speidel Enterprises (The Underground Tour), and
- People’s Waterfront Coalition.

These letters are available online at [www.tunnelfacts.com/eis/](http://www.tunnelfacts.com/eis/), and we have also included electronic copies on the CD-ROM accompanying the hard copy of this letter.

WSDOT’s plan does not designate access routes for this huge volume of traffic, nor fund any improvements to city streets to manage this volume, nor mitigate the volume with transit or demand management. Instead, WSDOT’s plan expects drivers to “use” Pioneer Square streets for highway access. This creates significant, unresolved problems for the Pioneer Square Historic District.

- In the 2010 SDEIS for their proposed tunnel project, WSDOT admits that the high volume of traffic causes “unacceptable” congestion on local city streets. See 2010 SDEIS at 214-15. But it does not offer any other solutions or mitigation funding to provide

**O-005-012**

The Section 4(f) Evaluation in the Final EIS considered the potential for a use of the Pioneer Square Historic District. The Section 4(f) Evaluation concluded that the Tolled Bored Tunnel alternative would result in a “use” of the District, but the use would be confined to the area of the Western Building, which is a contributing resource to the District. While the Tolled Bored Tunnel would increase traffic volumes in the District, it was determined through Section 106 consultation under the National Historic Preservation Act that the increased traffic would not result in an “adverse effect” on the District (see Appendix I, Historic, Cultural, and Archaeological Resources Discipline Report, Section 7.1). Based on that finding, FHWA concluded that the “use” of the District is confined to the area of the Western Building.

In determining that the Tolled Bored Tunnel alternative would not have an “adverse effect” on the District, and therefore would not “use” the District, FHWA considered the comprehensive analysis conducted as part of Section 106 consultation, including the following facts (summarized from the Final EIS Appendix I, Historic, Cultural, and Archaeological Resources Discipline Report):

- The District is located in an urban area, directly adjacent to a large elevated highway (the Alaskan Way Viaduct) and an industrial waterfront district.
- The portal for the Tolled Bored Tunnel is located outside of the Pioneer Square Historic District boundaries. (See Final EIS Exhibits 4-10 and 4(f)-1).
- Under current conditions, traffic on city streets through the district is heavy at certain times of day, and during special events. The increased traffic volumes - which will occur on some streets in the historic district, at some times during the day - may be noticeable, but are not out of character with a historic district in an urban area.
- Traffic in Pioneer Square is controlled by traffic signals; with

O-005-012

alternatives.

- There is not enough room on historic district streets to accommodate the expected concentration of increased bus traffic. Modeling from the 2010 SDEIS shows unacceptable levels of congestion and a severe degradation of transit reliability. The congestion forecasts will undoubtedly be worse when a model is run that includes tolling and the expectation that large numbers of drivers will exit at the last off-ramp before the toll—Pioneer Square.
- Pioneer Square streets are built upon old and decaying underground infrastructure and low-quality fill from the reconstruction of city streets over 100 years ago. Streets and sidewalks were raised one story, and are structurally supported by an unusual and fragile system of retaining walls and underground “areaways”, the now-underground former sidewalks. Can streets physically withstand the high volumes of traffic and heavy loads expected? Shouldn't this answer be known before WSDOT is given approval to overload the streets?

To the extent that WSDOT has been willing to acknowledge this problem at all, it has suggested that the adverse impacts can be resolved later. This, of course, is contrary to NEPA's command that impacts and potential mitigation be analyzed before decisions are made, not afterwards. That need to study in advance is particularly critical here because the problem of too much traffic in this area turns out to be very difficult—perhaps impossible—to solve.

The Pioneer Square Historic District is boxed in by two stadiums, the train station, and the Port of Seattle terminals. If WSDOT insists on a mega-interchange near Pioneer Square, use of Historic District streets is inevitable. WSDOT may have no choice but to increase capacity on protected streets to accommodate this high volume of generated traffic. The City's ordinance prohibiting “transportation facilities” within the Historic District creates a significant obstacle: Will the Pioneer Square ordinance allow tearing out the central median strips, removing the mature London Plane street trees, removing on-street parking, or destroying the protected underground areaways if these are necessary to accommodate this traffic?

If WSDOT's project requires changes or “improvements” to these unique and historic streets to make room for an expected huge increase in cars, trucks and buses, WSDOT must identify these changes, ensure changes comply with the Pioneer Square ordinance, get approval from the Pioneer Square Preservation Board, and show sufficient funding—before the FEIS is signed and the tunnel project is approved.

#### C. Inadequate Funds for Solutions and Mitigation

O-005-013

We have serious doubts that WSDOT's funding plan ensures “all possible planning” can be undertaken to mitigate the harm to the Pioneer Square Historic District from the bored tunnel's use. See 49 U.S.C. 303(c)(2); 23 C.F.R. § 774.3(a)(2). As you know, 23 C.F.R. § 774.17 states, “All possible planning means that all reasonable measures identified in the Section 4(f) evaluation to minimize harm or mitigate for adverse impacts and effects *must be included in the*

increased volumes, traffic speeds will be reduced. Therefore, while tolling may cause an increase in traffic volumes within the District, the increased traffic volume is not expected to affect the pedestrian character of the area or make it more difficult to walk to shops or restaurants.

- While the project will cause some impacts on the historic district, the project also will benefit the historic district by removing the overhead Alaskan Way Viaduct structure, which today results in both noise and visual impacts to the district. The existing structure separates the historic district from the waterfront, which was an important connection during the period of significance. By removing the Viaduct, the project actually helps to restore an important aspect of the historic character of the district.

FHWA is satisfied that the record supports a determination that the Tolloed Bored Tunnel alternative does not result in an “adverse effect” on, and does not “use”, the Pioneer Square Historic District.

#### O-005-013

The Section 4(f) Evaluation in the Final EIS considers measures to minimize harm to Section 4(f) resources that would be used by the project, including Pioneer Square Historic District. Because the area of use of the District under the Tolloed Bored Tunnel alternative would be confined to the area of the Western Building, the measures to minimize harm are focused on the Western Building. However, although not required as measures to minimize harm under Section 4(f), mitigation is discussed in the Final EIS for general effects including effects related to tolling. As you will see in Chapter 8 of the Final EIS, entitled “Mitigation,” WSDOT has committed to establishing a Tolling Advisory Committee, which would work to develop mitigation strategies to minimize the effects of diversion due to tolling on affected areas, including the Pioneer Square Historic District.

**O-005-013** *project.*" (Emphasis added.) Without adequate funding, reasonable mitigation measures are illusory and will not be included in the construction and operation of the bored tunnel.

The project budget is already stretched thin. WSDOT acknowledges a \$300 to \$700 million shortfall of secured funds. Of course, if funding remains short, it likely will be mitigation—certainly not the tunnel itself—that is cut short. Yet WSDOT has refused to address this issue either, in particular with regard to the impact it would have on the (yet to be determined) mitigation measures for Pioneer Square. According to Seattle Department of Transportation's (DOT) December 2010 SDEIS comment letter:

The contingencies set aside in this budget may be too low, and there is little included in the budget for mitigation. The potential impacts of the project running over budget or the Port of Seattle not providing the \$300 million needed for the project are not addressed. There is significant concern to the City of Seattle, as we can only assume the elements important to the City.... would be the first to be eliminated from the project. We believe that the EIS should identify and examine the potential impacts of the project if significant elements are underfunded.

It is quite possible that no funds will be available for necessary solutions or mitigation to protect the Historic District later if solutions are not negotiated and funding set aside now.

Furthermore, the state's financial commitment to mitigation and future needs has already shrunk, with the contingency fund of \$415 million cut down to \$160 million in order to give incentives to the tunnel contractor. Some of the sub-contingency funds within that \$160 million are tied to only certain designated risks, with any leftovers given to the contractor rather than reserved for unanticipated risks.

As part of your scrutiny of this project under Section 4(f), therefore, we believe you should require WSDOT to demonstrate that it has adequate funding to actually implement the reasonable mitigation measures that would be required.

#### **D. Feasible and Prudent Avoidance Alternatives**

**O-005-014** To date, WSDOT has not included any "I-5/Surface/Transit" alternative in its analysis of the Viaduct replacement project under NEPA. Such an alternative is a feasible and prudent alternative to the bored-tunnel alternative, and thus a Section 4(f) statement must include it.

In 2008, a year-long collaborative process between transportation agencies of the State of Washington, King County, and the City of Seattle compared eight options, and recommended two as viable. The two solutions that were recommended were the Elevated/ Transit hybrid, which was a taller skinnier elevated highway with additional transit, and the I5/ Surface / Transit hybrid. The latter alternative increases transit; adds a lane and makes other improvements to the parallel Interstate 5; and increases connectivity in the street grid north and south of downtown Seattle to enhance mobility.

#### **O-005-014**

The Section 4(f) Evaluation in the Final EIS analyzed alternatives for avoiding or minimizing harm to the Pioneer Square Historic District, and concluded that there are no prudent and feasible avoidance alternatives. The Section 4(f) Evaluation specifically considered the Surface/Transit/I-5 Hybrid alternative and concluded that it is not a feasible and prudent alternative for avoiding the use of historic resources because it would not meet the purpose and need of the project.

O-005-014

This alternative costs about \$700 million less than the bored tunnel alternative, requires no unproven technology,<sup>2</sup> equals or surpasses the tunnel option in terms of moving people and goods into and through Seattle, and results in fewer carbon emissions than the tunnel option. It avoids concentrating highway traffic into a mega-interchange next to the Pioneer Square Historic District. Instead, it distributes trips away from the Historic District, putting far less pressure on these historic streets. Specifically:

- Because there is no mega-interchange, there would be no excessive concentration of highway traffic generated at the edge of the historic district.
- Because there is no mega-interchange, there would be no need to alter historic district streets to make room for 50,000 – 70,000 additional cars, trucks, and buses.
- Because traffic will not be concentrated in this area, but rather distributed around it to I-5, transit, and other streets beyond the Historic District borders, there would not be on-going pressure for traffic to overwhelm these fragile historic streets.

For more information about this I-5/ Surface/Transit alternative, see the documents on the CD-ROM included with the hard copy of this letter. The most relevant documents are the Nelson-Nygaard Report and the documents explaining Scenario B presented by WSDOT during the 2008 planning process.

Even though the State, County and City transportation agencies agreed that this alternative was in the top two for further study in 2008, WSDOT has refused to analyze this alternative in its EIS. How could it avoid analyzing this alternative in detail? WSDOT could not argue that it was not a reasonable alternative because WSDOT had been involved in identifying it as one of the top two. Instead, WSDOT changed the ground rules. Without any public input, WSDOT subtly but dramatically re-defined the purpose and need for the project. Out went the purpose of moving people and goods in and through the city. In came the purpose of moving cars. With that sleight of hand, the alternative that relied heavily on increased transit became a non-starter.<sup>3</sup>

The public has constantly complained about this gamesmanship, but to no avail. Despite numerous letters to WSDOT protesting the new, contrived purpose and need statement in the 2010 SDEIS, WSDOT has indicated it will not return to the original formulation and will continue to exclude from the FEIS the more transit-oriented option it previously agreed was a feasible and prudent solution. WSDOT's manipulation of the NEPA process will not survive judicial scrutiny. It should not survive your scrutiny, either.

<sup>2</sup> The proposed tunnel would be the largest single-bore tunnel ever constructed. The technology for the bore was unveiled only in the last couple of years and is, as yet, unproven.

<sup>3</sup> The 2006 SDEIS defined the project's purpose and need as, in relevant part, to "maintain or improve mobility, accessibility, and traffic safety for people and goods along the existing Alaskan Way Viaduct Corridor." 2006 SDEIS at 122. The 2010 SDEIS changed this statement, without explanation, to "[p]rovide capacity for automobiles, freight, and transit to efficiently move people and goods to and through downtown Seattle." 2010 SDEIS at 6. As recently as the 2008 planning process, WSDOT had agreed to a set of guiding principles for the project which included the goal of "[p]rovid[ing] efficient movement of people and goods now and into the future." 2010 SDEIS at 50. Thus, the statement of purpose and need subtly shifted, for no stated reason, to emphasize capacity for automobiles.

O-005-014

We urge FHWA to analyze the I-5/Surface/Transit alternative known as Scenario B, which WSDOT developed during the 2008 planning process. (Scenario B performs as well as option C, but the street in Scenario B fits with the plans for Seattle's waterfront recently developed by the City of Seattle, dovetails better with Pioneer Square streets, and performs better for local access than Option C.) The Nelson Nygaard Report notes that traffic impacts on Pioneer Square would be reduced, in general, with either I5/Surface/Transit alternative compared to the tolled tunnel. See Nelson-Nygaard Report at 4-1.

### III. REQUEST FOR FULL PROTECTION UNDER SECTION 4(F)

O-005-015

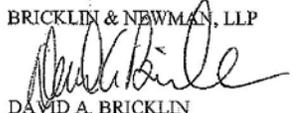
The requirements of Section 4(f) are "stringent," allowing a transportation project to use a protected area "only in the most exceptional cases." *Stop II-3 Ass'n v. Dole*, 740 F.2d 1442, 1447, 1452 (9th Cir. 1984). Yet WSDOT is proceeding full speed ahead, pursuing its preferred alternative without addressing the significant harms to the Pioneer Square Historic District streets. WSDOT has brought the proposed tunnel to the brink of a Record of Decision based on a fundamentally flawed review process.

WSDOT's preferred tunnel alternative would "use" the streets of the Pioneer Square Historic District as highway access routes. But WSDOT has not studied alternatives that would reduce or eliminate this impact, nor has it sufficiently proven it can use Pioneer Streets without seriously compromising the integrity of the Historic District. We request that you give Pioneer Square Historic District full protection under Section 4(f). We implore you to direct WSDOT, under Section 4(f), to both fully explore the I-5/Surface /Transit alternative that does not include a mega-interchange next to the Pioneer Square Historic District, and include in its tunnel alternative fully funded solutions to minimize harms to the Pioneer Square Historic District.

Thank you for your attention and for defending this beloved historic resource.

Sincerely,

BRICKLIN & NEWMAN, LLP

  
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Enclosure: CD-ROM with supporting documents

O-005-015

The Section 4(f) documentation has been thoroughly reviewed by FHWA staff at the Division and headquarters levels, and FHWA has confirmed that it meets all applicable requirements.

Ms. MaryAnn Naber, et al.  
June 14, 2011  
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cc: Allyson Brooks, Ph.D, State Historic Preservation Officer  
Anthea Hartig, Ph.D, Director, Western Office, National Trust for Historic Preservation  
Chris Moore, Field Director, Washington Trust for Historic Preservation  
Eugenia Woo, Director of Preservation Services, Historic Seattle  
Karen Gordon, City Historic Preservation Officer  
John Fowler, Executive Director, Advisory Council for Historic Preservation  
Lorne McConachie, Chair, Pioneer Square Preservation Board  
Leslie Smith, Director, Alliance for Pioneer Square  
Don Mathis, Division Administrator, Federal Highway Administration  
Peter Hahn, Director, Seattle Department of Transportation  
Members, Seattle City Council

**Via Email**

August 15, 2011

Angela Angove  
Alaskan Way Viaduct Replacement Project Office  
999 Third Avenue, Suite 2424  
Seattle, WA 98104 - 4019  
awv2011FEIScomments@wsdot.wa.gov

Dear Ms. Angove,

This letter provides comments on the final environmental impact statement ("FEIS") for the Alaskan Way Viaduct Replacement Project ("Viaduct.")

The People's Waterfront Coalition is a Seattle based organization concerned with both civic redevelopment of Seattle's downtown shoreline and a sustainable solution to viaduct replacement. We have participated in the viaduct replacement question since our organization formed in 2005.

Although the FEIS partially corrects one defect in earlier drafts, regarding the effects of tolling on Seattle streets, the FEIS fails to study alternatives properly and fails to adequately inform decision makers and the public.

**O-006-001**

**1. The statement of purpose and need remains too narrow, and WSDOT has failed to fairly analyze lower cost viable alternatives.**

The Statement of Purpose and Need is a critical part of any EIS as it circumscribes the range of alternatives to be considered. In this case, the project's statement was rewritten in 2009 from the goal-oriented "The project will maintain or improve mobility, accessibility, and traffic safety for people and goods along the existing Alaskan Way Viaduct Corridor" to the much narrower limitation of "vehicle capacity." Using the term capacity instead of mobility eliminates from consideration potentially viable and cost effective solutions that rely on transit, demand management, or adapting available capacity on other facilities. It excludes consideration of efficiency improvements and traffic management strategies that cost far less and present far less risk than megaproject construction.

Many Seattle based organizations commented on the 2010 Supplemental Draft EIS (SDEIS) and expressed strong concern about the change in the project's statement of purpose and need. This point, however, deserves additional emphasis as the FHWA prepares to choose between the alternatives developed in the FEIS. WSDOT set up the

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**O-006-001**

FHWA disagrees with your comment that the project's purpose and need statement is too narrow and has eliminated potentially viable and cost effective solutions that rely on transit, demand management, or adapting available capacity on other facilities. Changes made to the project's purpose and need statement and the reasons for these changes are discussed in Chapter 2, Question 6 of the Final EIS. Changes made to the project's purpose and need statement did not serve to narrow the scope of concepts that could be considered. Instead, the changes that were made allowed for a broader scope of solutions to be considered. The purpose and need statement presented in the 2006 Supplemental Draft EIS stated "the project will maintain or improve mobility, accessibility, and traffic safety for people and goods along the existing Alaskan Way Viaduct Corridor..." This purpose indicated that mobility must be maintained or improved. The project's current purpose and need statement is less restrictive by stating that it will provide a facility that "provides capacity for automobiles, freight, and transit to efficiently move people and goods to and through downtown Seattle." An important difference between the two purposes is that the earlier purpose statement required mobility to be maintained or improved, the updated purpose statement is focused on providing capacity to efficiently move people and goods to and through downtown Seattle, but it doesn't specify that existing capacity must be maintained.

Various surface and transit concepts have been considered throughout the life of this project, beginning with the Surface Alternative that was fully evaluated in the 2004 Draft EIS. The Surface Alternative was eliminated from evaluation in the 2006 Supplemental Draft EIS because it didn't meet the project's purpose and need statement. In the 2010 Supplemental Draft EIS, a new Surface and Transit Hybrid concept was considered and dropped as discussed in the Final EIS in Chapter 2, Question 6. Additional traffic analysis was completed after the 2010 Supplemental Draft EIS was published in response to comments

O-006-001

FHWA to commit a NEPA violation. The change in the statement of purpose and need has not been explained properly, as required by FWHA. An agency may not make such a change from a prior policy "sub silento." Rather the agency must show there are good reasons for the new policy. In this case, the change does not seem to be justified at all.

As a result, FEIS readers have been denied a full analysis of an I/5/Surface/Transit option. This is unfortunate because WSDOT, Seattle DOT, and King County DOT officials have, as recently as December 2008, declared this the leading lowest cost and greenest alternative. In this day of scarce resources, the lowest cost solution should be the front-runner. Given the triple threat of high and volatile fossil fuel costs, climate change, and an on-going recession, a solution that provides alternatives to driving should be at the top of the ranking. Without any reasonable explanation for the change in statement of purpose and need, it appears to have been reworded for primarily political reasons.

The key consequence is that there is no affordable alternative if the bored tunnel alternative proves unaffordable or is abandoned due to escalating cost or technical problems. The lead agencies should take all reasonable steps to change back the statement of purpose and need, and revisit analyses of lower cost, lower-risk, transit-rich alternatives.

O-006-002

**2. The project's financial plan is not secure, there is no funding for the mitigation called for in the FEIS, and the contingency funds are mostly spent. Can taxpayers really afford it? Will WSDOT deliver what they promised?**

The State Legislature has capped State funding for the Project at of \$2.4 billion. The rest of the funding package - \$700M - is no firmer now than it was when the SDEIS was released months ago. The Port of Seattle's \$300 million has still not been legally committed. The \$400M expected from future tolls is problematic due to the high diversion high tolls would cause, and the political volatility around tolling a single facility; the tolling strategy may be scaled back significantly or abandoned altogether. WSDOT has still not even asked the Legislature to authorize tolling the facility, and may not get a positive answer.

While WSDOT was forced to publicly release a part of its financing plan just last week, more questions were raised than answered regarding the project's viability.

With the above funds uncertain, is there enough money to build the full program as promised to Seattle citizens and decision-makers? The financing plan says maybe not; WSDOT may need to raise additional funds if three shaky sources are not secured, but the back up plans are vague to nonexistent.

What are the full financing and debt service costs of the project? Given the on-going depletion of gas tax revenues, and given shortfalls in all three of our states concurrent megaprojects, how will the state cover additional debt this will require? The financing plan does not show financing costs nor answer these questions.

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received on the 2010 Supplemental Draft EIS. A discussion of this analysis and the rationale for not evaluating a surface and transit hybrid in the Final EIS is provided in the Final EIS in Chapter 2, Question 7.

**O-006-002**

The Washington State Legislature passed into law RCW 47.01.402, which commits the state to providing funding up to \$2.8 billion to replace the SR 99 Alaskan Way Viaduct, with tolling to provide up to \$400 million of that commitment.

The state funds programmed by the State Legislature include gas tax revenue from the Motor Vehicle Fund through the Nickel and Transportation Partnership Act (TPA) taxing authorities, and federal funding. The funds are used across Washington State for highway-related projects and are bonded with General Obligations bonds backed by the good faith and credit of the state (RCW 47.10.864). Bonds issued under the authority of RCW 47.10.861-866 are a general obligation of the State of Washington and pledge the full faith and credit of the state to the payment of principal, interest and contain an unconditional promise to pay such principal and interest when the bonds become due. Bond proceeds for toll revenue may include General Obligation bonds, Toll Revenue bonds, or a combination of both, as determined by the Washington State Treasurer and the State Finance Committee. In addition, on February 9, 2010, the Port of Seattle Commission, by a 5 to 0 vote, moved to affirm the Port's support and financial commitment to the Bored Tunnel Alternative.

Finally, WSDOT has submitted a federally required finance plan to FHWA, entitled *Initial 2011 Financial Plan SR 99 Alaskan Way Viaduct Replacement Project*, which is currently under review. FHWA expects to complete its review and approve the finance plan following FHWA's authorization of this Record of Decision.

O-006-002

Are all the promises made to “sell” this project to Seattle secure, like funding the new waterfront replacement street, funding transit and bike facilities, and delivering excellent urban design for portals, streets, and other urban elements? Maybe not; WSDOT officials have said publicly that they intend to deal with any emerging cost problems by “managing scope.”

Necessary mitigation has been called for in the FEIS but not yet been identified for the preferred alternative; costs are still not known. Very little funding has been set aside in the project budget for mitigation; it may be grossly inadequate. Because WSDOT's funding plan rests on some shaky assumptions, the first project components likely to be cut are mitigation of the tunnel's environmental impacts. The FHWA should require WSDOT to demonstrate, and make binding commitments, that it will adequately fund the measures identified in the FEIS as necessary to mitigate the tolled-tunnel alternative's environmental impacts.

The FEIS should have evaluated a backup plan that discloses in detail how the State plans to respond to the uncertainty described above -- including exactly which elements of the project scope will be sacrificed if necessary to avoid cost overruns, and how the Port and tolling revenues would be replaced if necessary. The public and decision-makers deserve to know the full truth, including risk scenarios, and what the financial implications may be.

O-006-003

**3. The tunnel project only performs adequately for trips bypassing downtown Seattle. It makes access and mobility WORSE for trips accessing the center of Seattle, our region's key economic center.**

The FEIS states that, with the tunnel, access to Seattle's CBD would be “less direct”, travel time between Ballard and Spokane St. would be 1-6 minutes longer than with the existing Viaduct, and freight travel times would be increased.

While providing Seattle's core urban center is one of the primary uses of the viaduct, the tunnel offers no exits – and thereby no access -- to downtown Seattle. It no longer provides effective access to Ballard, Magnolia, and Interbay because the connections to Elliott Ave are not replaced. This change would be especially difficult for commercial trucks that use the viaduct for delivery and services to downtown businesses, and for buses that use the viaduct to connect to downtown. The data show that the tunnel would not be a full replacement of the viaduct, as roughly only half of viaduct users will find the routing suitable to their needs.

If the tolling plan is implemented as described in the FEIS, this problem of low utility is increased. As the Nelson- Nygaard report commissioned by the Seattle Department of Transportation indicates, the 2010 SDEIS (as well as this FEIS) defined the project to exclude a critical new connection within the city street grid (the Elliott/Western connector) that will be built if a bored tunnel is selected. This omission results in an

### O-006-003

The data provided in this comment regarding travel times and SR 99 traffic volumes with a Tolled Bored Tunnel are not accurate and do not reflect the analysis presented in the Final EIS and Appendix C, the Transportation Discipline Report. Please see these documents for information about travel times, access, and traffic volumes. The Bored Tunnel Alternative does provide access to downtown Seattle and Ballard, Magnolia, and Interbay; however, as documented in the Final EIS, the Bored Tunnel changes the location and/or routes by which these areas will be accessed. Please see Exhibits 5-9 and 5-10 in the Final EIS, which show expected travel volumes. Note that traffic volume differences between the Tolled and Non-Tolled build alternatives are caused by tolling SR 99. Please see Question 15 in Chapter 5 of the Final EIS for a description of effects to freight.

The traffic analysis completed for the project reflects an evaluation of the Bored Tunnel Alternative, which does not include the Elliott/Western Connector. The results of this analysis are presented in the Final EIS in Chapter 5 and in Appendix C, Transportation Discipline Report in Chapters 5 and 7. As described in Chapter 2, Question 9, the Elliott/Western Connector is an independent project that will be examined through a separate environmental process. However, as required by NEPA, cumulative effects of reasonably foreseeable projects, including the Elliott/Western Connector, were considered as part of the cumulative effects analysis presented in Chapter 7 of the Final EIS. Detailed traffic analysis comparing the proposed action (Bored Tunnel) and the cumulative transportation effects of independent projects that comprise the Alaskan Way Viaduct and Seawall Replacement Program (which includes the Elliott/Western Connector) are provided in Chapter 8 of Appendix C, Transportation Discipline Report.

O-006-003

overestimate of the number of vehicles using the tunnel, and an underestimate of the tolling diversion.

The State did model a 2015 program alternative (including the connector) with Toll Scenario C, but the results are not reflected in the SDEIS. In this model, 38,000 daily trips were forecasted to use the tunnel, compared to 86,000 without a toll. The State's analysis suggests that with the planned Elliott/Western connector, tolling diversion from the tunnel could be as high as 55% of daily traffic.

The diversionary effects of a toll show that a tolled- tunnel alternative is neither cost effective nor able to meet the project's purpose and need. To raise \$400 million in tolls, each one-way peak hour trip cost up to \$4.00 or \$5.00 for the 2-mile stretch of SR-99. Because there are ample free parallel routes, only 38,000 or 1/3 of the current viaduct traffic are expected to use the tunnel; other users would divert to city streets.

This combination of the lack of exits downtown and the diversion from tolling places an unbearable burden on the city streets, especially around the southern interchange. Streets in this neighborhood, the Pioneer Square Historic District, cannot simply be widened to accommodate such a heavy flow to and from the single downtown interchange.

While these problems are acknowledged in the FEIS, and additional solutions and mitigation are called for, no solutions are identified and budgeted in the funding plan. Without some significant improvements to transit and local streets, travel in Seattle will be significantly degraded by this project. Mitigation for all the traffic problems caused to Seattle streets, and to Seattle transit users, must be identified and funded in the project budget.

On a deeper level, this condition calls into question the very utility of the project. Why spend this much for a facility that is expected to be unaffordable and undesirable for so many potential users? If mitigation is not funded, it could create WORSE access and mobility for 2/3 of current viaduct users. For \$3.1 billion, that is not much of a solution.

Before issuing the ROD, the FHWA must ensure that it is reasonable to spend federal-aid highway dollars on a project that causes such significant local problems, delivers so little utility, and only serves drivers who are seeking to bypass Seattle's CBD and financially able to pay the high cost of tolls.

O-006-004

**5. The FEIS improperly excludes the planned replacement of Alaskan Way, and the Elliott / Western connector, in its analysis.**

An environmental impact statement (EIS) is inadequate if it does not adequately consider the significant individual and cumulative environmental impacts resulting from a project. Stated another way, by artificially breaking off pieces of the project that is the

Proposed mitigation for transportation effects are discussed in Chapter 8 of the Final EIS and in the Project Commitments section of this Record of Decision.

**O-006-004**

The Bored Tunnel Alternative as defined in the Final EIS does not include the Elliott/Western Connector. The Elliott/Western Connector is an independent project that will be evaluated through its own environmental review process. The Final EIS does describe the Elliott/Western Connector in Chapter 2, Question 9 and cumulative effects of the Elliott/Western Connector and other projects are provided in Chapter 7 of the Final EIS. The detailed transportation cumulative effects analysis is provided in Chapter 8 of Appendix C, Transportation Discipline Report. The purpose of providing both the transportation analysis of the proposed action (the Bored Tunnel Alternative) and the proposed action with other projects identified as part of the broader Alaskan Way Viaduct and Seawall Replacement Program was to meet FHWA's requirements under NEPA for cumulative effects analysis.

Each of the build alternatives evaluated in the Final EIS has independent utility and would meet the purpose and need (see Final EIS Chapter 5, Question 37).

O-006-004

subject of the EIS, an EIS fails to give policy makers and the public a complete view of a project's significant environmental impacts.

The City DOT and WSDOT have long described the replacement of Alaskan Way, with its new connection to Elliott and Western Aves, as included in – and critical to the success of -- the tunnel project. The city and state DOTs are working together to ensure that the new Alaskan Way surface street provides the important connection to Ballard, Interbay and Magnolia, acknowledging the importance of this connection for commercial freight movement, and admitting that the tunnel itself would not provide this connection. However, this important concurrent project is not mentioned in the FEIS, nor included in the traffic modeling. This presents an inaccurate depiction of traffic diversion to city streets, especially under high-toll scenarios. This sort of segmentation is expressly outlawed by C.F.R. § 1508.25.

O-006-005

**6. The FEIS's traffic modeling and presentation of the resulting data is so badly limited that the FEIS is inadequate.**

The first flaw in the FEIS predictions of future demand emerges from a traffic model that uses unrealistic and outdated assumptions of future vehicle miles traveled in the model years studied. In our region, like many urban regions throughout the world, travel by car is declining. It has been declining for a decade. We now drive 14% less per capita, and 6% less overall – despite gains in population and economic growth – than we did in 2001. It is unrealistic for WSDOT to use models that assume significant growth in demand for travel by car. The facts don't support it. Furthermore, many indicators – economic, cultural, and demographic – suggest a continuing decline of VMT.

The second flaw in the FEIS' traffic model is that it paints a picture and models travel behavior as if "demand" for car travel exists independent of "supply." This is dubious at best, and deceitful at worst. Hundreds of cases of capacity reduction *in urban systems* show that this is simply not true. Reductions in capacity supply inspire a rearrangement of travel choices – for instance, change to bike or transit mode, change travel time, trip chain, carpool, rideshare, telecommute, shop on-line instead, or choose a local destination. According to analysis of real-world data, on average 25% of car trips do not reappear in an urban system in which capacity has been reduced -- with no adverse economic effect. Gridlock has never once materialized from a planned capacity reduction where notice was given and alternative solutions provided.

Not only is future demand is not absolute, but the City and State have policies that mandate investments and policy choices that *reduce* overall VMT.

The third flaw in the FEIS stems from its presentation of the data produced by its traffic model. Travel models are blunt instruments, with little ability to mimic the flexibility in human behavior about travel decisions. A look back comparing modeling predictions to reality show that results of models are often wildly inaccurate – especially in the case of highway removal -- and much analysis has been done examining why. However, this real

**O-006-005**

The transportation modeling completed for this project uses current models developed by the Puget Sound Regional Council and the City of Seattle Department of Transportation. The modeling techniques employed are consistent with current professional practice and have been reviewed and approved by FHWA staff at the division and headquarters levels. WSDOT has conducted additional review of the attachments to this comment letter and its analysis is included in the project file. This analysis confirms that the traffic forecasts in the Final EIS are sufficient for purposes of NEPA analysis.

O-006-005

debate in the profession of urban transportation planning is ignored, and the results of traffic models in the FEIS are presented as if they are fact. Small spot increases in congestion are reported as "gridlock!" -- without any indication of the statistical uncertainty that underlies the data.

For the FEIS to assume increased future demand for car travel, to assume high fuel prices will not affect travel and life choices, to model travel as if people would not make different choices if faced with congestion, to ignore policies that mandate reducing VMT, and to falsely portray modeling results as "fact" creates an inaccurate picture of the future. The net effect is exaggerated picture of need and utility, falsely certain predictions of chaos and gridlock if the facility is NOT built, and thereby an inaccurate picture of benefit. This is misleading for both the public and decision-makers, and seems to be the opposite of what NEPA and SEPA policy stands for.

As the UW researchers in a study entitled "Assessing Uncertainty About the Benefits of Transportation Infrastructure Projects Using Bayesian Melding: Application Seattle's Alaskan Way Viaduct," said of a previous WSDOT study that presented data from traffic models in the same way, "These point estimates ignore any uncertainty involved in the models used to generate them, and thus could mislead the public into having an unwarranted degree of confidence in the benefits of making these investments."

WSDOT should run models again with different scenarios - for instance, assuming decreased demand for travel in this corridor, flat travel in this corridor, and higher future fuel costs -- and present ranges of possible predictions. WSDOT should explain the uncertainty in their future predictions of facility use, and clarify the full range of margin of error for all detailed measures.

O-006-006

**6. Historic resources are not adequately protected from the risks during construction and harmful traffic impacts. Pioneer Square deserves full protection under Section 4f as a Historic District.**

WSDOT has not adequately addressed the local and federal regulations that protect historic resources, specifically the Pioneer Square Historic District. The relevant regulations are the Seattle Municipal Code, Section 106 of the 1966 National Historic Preservation Act, and Section 4(f) of the 1966 Department of Transportation Act. The Seattle Municipal Code defines why and how the Pioneer Square Preservation District should be protected. This special review district was established in large part to "avoid a proliferation of vehicular parking and vehicular-oriented uses . . . to encourage the use of transportation modes other than the private automobile . . . and to encourage pedestrian uses."

In a recent letter to the Federal Highway Administration's Preservation Officer, advocates explained the threat (paraphrased here): Pioneer Square is built upon old and decaying underground infrastructure and low-quality fill from when the District was reconstructed 100 years ago. Streets and sidewalks were raised one story, and are

**O-006-006**

FHWA, WSDOT, and SHPO have executed a Memorandum of Agreement (MOA) to resolve the adverse effects of the project on historic properties pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations. The MOA is included as Attachment C to Appendix I of the Final EIS. Requirements for specific historic properties in Pioneer Square are included in Stipulations I and II, and requirements for the Pioneer Square Historic District are included in Stipulation III. The Final Section 4(f) Evaluation for the project was published in the Final EIS, with discussion of the Pioneer Square Historic District appearing in Sections 4 and 5 of the evaluation. Appendix J of the Final EIS includes supplemental materials for the Final Section 4(f) Evaluation.

O-006-006

structurally supported by an unusual and fragile system of retaining walls and underground "areaways," the now-underground former sidewalks. Can streets physically withstand the high volumes of traffic and heavy loads expected? This concern must be better analyzed, and the answer known before WSDOT is given approval to overload the streets.

If the tunnel is built, WSDOT predicts widespread congestion on streets, delays for buses and trucks, and back-ups onto SR-99. For well over a year, WSDOT has been aware that the volume of traffic in Pioneer Square would not be acceptable on Pioneer Square streets, but has offered no solutions.

Historic Preservation leaders are concerned that WSDOT doesn't comprehend what it means to protect the full Historic District. WSDOT's project views the neighborhood as a set of buildings, not as a comprehensive whole.

Section 4(f) stipulates that Parks and Historic Sites -- such as the Pioneer Square Historic District -- cannot be used for highway purposes unless these conditions apply:

- The action includes all possible planning to minimize harm to the property resulting from use.
- There is no feasible and prudent alternative to the use of land.

WSDOT is in violation of both points. First, WSDOT refuses to identify, negotiate and fund solutions to the problems they know exist before attempting to start the project. Falsely asserting that the Historic District is only its buildings, and not its streets, character, views, pedestrian and bicycle friendliness, is not accurate and allows WSDOT to avoid responsibility for egregious impacts. \

Second, the artificially narrowed statement of purpose and need excludes solutions that reduce car travel and disperse trips onto other routes and modes. Instead it allows WSDOT to falsely argue that the source of much of the problems -- the single interchange which concentrates all downtown bound traffic through the Historic District streets -- is the "only" solution.

Should this project proceed, the Pioneer Square Historic District streets are at risk of becoming high capacity access routes for SR 99. This could destroy the calm pedestrian character of this neighborhood, put the delicate underground areaways at risk of failure, and degrade the very historic resource that is protected.

WSDOT and FHWA must do a thorough section 4(f) analysis of how to fully protect the Pioneer Square Historic District.

O-006-007

#### **7. The tunnel alternative degrades and threatens transit.**

In an inter-agency review of the tunnel project, the Federal Transit Authority (FTA) sent WSDOT a letter critical of the project. "In the broadest sense FTA remains disappointed

#### **O-006-007**

The project will not have significant impacts to transit, and the Final EIS discusses mitigation as required by CEQ and FHWA regulations. The project includes several features that will benefit transit operations in the downtown Seattle area. These are described in Chapter 3, Question 4 of the Final EIS and in Appendix C, Transportation Discipline Report and in the Project Commitments section of this Record of Decision. In brief, both the south and north portals include transit bypass lanes that will allow buses to pass general traffic in entering the downtown street grid. Overall transit access through downtown Seattle will be improved by the project as it will support service through more of the street grid than is presently possible; however, transit travel times will vary because access points will change. This is described in the Final EIS in Chapter 5, Question 14.

**O-006-007** | that the Project's impacts on public transportation are, from our perspective, adverse, even with mitigation."

The City of Seattle, like all urban areas in the US, is confronting the triple threat of climate change, volatile energy costs, and an on-going recession. As described in People's Waterfront Coalition's SDEIS letter, there are myriad plans and policies at the City, County, State, and Federal level setting course for a less car dependent future toward the mandate of lower greenhouse gas emissions and reduced economic dependence on fossil fuels.

This project does not comply with this intended shift, and actively impedes it. This project does not add any new transit service. The Statement of Purpose and Need does not allow consideration of any solutions that include a shift to transit modes. Worse, the project degrades transit by removing important access points for buses into the city, and by causing -- but not resolving -- problems by concentrating so many downtown bound cars, trucks, buses into one interchange.

This situation of worsened transit access and viability must not stand. The FEIS must both a) consider a solution that relies more heavily on transit, demand management strategies, efficiency improvements, and bike facility investments and b) identify solutions to improve, not degrade, transit service within the proposed tunnel project.

**O-006-008** | **8. The tunnel project should fully identify and mitigate impacts from soil settlement, water management, and from any ground stabilization measures.**

Soil settlement along the bored tunnel route could cause damage to private buildings and publicly owned utilities, streets, and other infrastructure. The uncontrollable risk of digging below the water table can pose additional challenges to the protection of public and private property. The FEIS should identify possible impacts, including secondary impacts, and commit to full mitigation within the project budget.

Soil improvements and stabilizing measures may be needed along the bored tunnel alignment to protect existing structures and public utilities from settlement. WSDOT should include full evaluation of possible impacts from soil settlement. WSDOT should also analyze the impacts of possible ground water mounding that may result from soil improvements, and the permanent changes to ground water flow so that solutions (monitoring, pumping, deepening foundations, etc) can be identified. WSDOT must commit to fund the necessary protection strategies and mitigation to protect Seattle utilities and properties, both public and private.

**O-006-009** | **9. The project ignores a key opportunity, and our city's and state's mandates, to reduce greenhouse gasses.**

**O-006-008**

Impacts and mitigation measures for all of these subjects (and more) are provided in the Final EIS and attached discipline reports (see Final EIS Chapter 6, Question 29 and Appendix P, Earth Discipline Report). Project commitments are described in this Record of Decision.

**O-006-009**

The Final EIS provides a complete evaluation of air quality and greenhouse gases in Chapter 5, Questions 28 and 29, and Chapter 7, Question 4, and in Appendices M, Air Quality Discipline Report, and R, Energy Discipline Report. Appropriate mitigation measures are described in Chapter 8 and in the Project Commitments section of this Record of Decision.

O-006-009

The FEIS's Air Report makes the point that the study area is located within a maintenance area for carbon monoxide (CO) and an attainment area for all of the other criteria pollutants.

"Because the Bored Tunnel Alternative would not cause or exacerbate an exceedance of the NAAQS or increase regional emissions, it would meet the project-level conformity requirements (40 CFR 93.123)."

"Because regional MSAT emissions are not expected to increase and no exceedances of the NAAQS are expected, no significant adverse effects on air quality are expected to result from the three build alternatives. Therefore, no mitigation measures for operational effects would be required."

As discussed above, the State and the City of Seattle both have policies and commitments to work to **reduce** greenhouse gases to attempt to curb or reverse global warming.

The tunnel will contain an elaborate exhaust system to collect vehicle emissions in the Tunnel and release them into the air from two point source stacks. There is no plan to do anything to manage or treat these toxic gases at the stacks.

The State must commit, as a mitigation measure, to use reasonably available control technology at the stacks to reduce greenhouse gases to help achieve our shared commitment to curb greenhouse gases.

Further, the viaduct replacement project presents a significant opportunity to help the City and State achieve policy objectives for reducing emissions, reducing VMT, and achieving carbon-neutrality. This project positions itself in opposition to these policies in several significant ways: Insisting on vehicle capacity replacement as a narrow definition of purpose; refusing to study alternatives that rely on transit, efficiencies, demand management, or other modes; asserting that a dubious prediction for expected demand for car travel disqualifies any other approach but a highway; and failing to do a real comparison of how overall VMT affects greenhouse gas generation.

In addition, the FEIS fails to adequately address the full range of possible impacts of climate change, and identify how the project may need to adapt to changing conditions. Sea level rise, increases in storm surges and storm energy, and stormwater flow changes are expected. Any long term infrastructure must adequately consider future conditions along Seattle's western edge quite different from the present. The UW Climate Impacts Group and City of Seattle's data on possible impacts to Seattle should be used to model potential impacts. The FEIS must identify adaptation measures, and consider these as potential contributors to the total cost.

O-006-010

**Summary**

WSDOT has created a fatally flawed NEPA process by narrowing the statement of purpose and need for unjustified reasons, failing to analyze all reasonable alternatives, withholding financing information on the project until the last minute, failing to perform a full Section 4(f) analysis for the Pioneer Square Historic District, and falling short of the objectivity and good-faith required by NEPA. Before finalizing the FEIS, WSDOT and state officials made a de-facto final decision when they declared the bored tunnel alternative is a done deal. WSDOT assumed an adversarial stance toward anyone who questioned their de-facto final decision, suing a citizen group to stop a valid referendum and punishing a cooperating agency (Seattle DOT) for submitting comments regarding further study of a lower cost alternative and necessary mitigation for harmful impacts. These actions are not those of an agency performing an objective and good-faith review of the project; they seem like the actions of an agency sacrificing an objective process in favor of ensuring their predetermined outcome is realized.

Now that the FEIS is published, and some elements of the financing plan have been recently shared, this is now the only opportunity for decision-makers and the Seattle public to weigh the merits of a tolled tunnel and to negotiate solutions to unresolved problems with the project. Is usage by only 1/3 of present viaduct users enough to justify the project? How will the \$700 million funding gap be covered? What will be cut if it is not? Problematic impacts to Seattle streets and facilities have been identified; will any additional solutions be included in the project budget? Will any mitigation be funded? Are historic resources and private property adequately protected? If so, what is the total cost of the project, and how will additional money be raised?

Instead of a constructive discussion, WSDOT has misled the public into believing it is too late to ask questions, too late to solve problems, and there are no other alternatives. The FHWA must take action now to avoid ratifying WSDOT's missteps, and should address the problems raised in this and other FEIS letters before issuing a Record of Decision.

Sincerely,

Cary Moon  
Director, People's Waterfront Coalition

**O-006-010**

FHWA is satisfied all procedures required by NEPA have been followed, including disclosing relevant information for the public and decision makers and completing a detailed Section 4(f) Evaluation. The public has been afforded ample opportunity to comment on the project and review the substantial amounts of information that have been made available.

From: Brenton Clark [mailto:brenton.w.clark@gmail.com]  
Sent: Tuesday, July 19, 2011 9:23 PM  
To: WSDOT AWV 2011 FEIS Comments  
Subject: EIS Comment

**I-001-001**

I find it completely inappropriate that the EIS for the Alaskan Way Viaduct replacement did not include a plausible transit-oriented alternative, such as the so-called "ST5" plan. It has the appearance of using options that were specifically selected to make the deep bore tunnel look attractive, rather than being a true scientific inquiry into the environmental impacts of possible alternatives. The process for selecting a plan appears to have been subverted from the start, and no tunnel proponent has satisfactorily denied this allegation.

—  
Brenton Clark  
MPA 2011  
Evans School of Public Affairs  
4747 16th Ave NE #38  
Seattle, WA 98105  
[brenton.w.clark@gmail.com](mailto:brenton.w.clark@gmail.com)

### **I-001-001**

The alternatives development and screening process is described in Chapter 2, Questions 2 through 7, of the Final EIS. Specifically, the additional traffic analysis completed for the surface and transit hybrid concept is discussed in Question 7 of Chapter 2. Supporting information on alternatives screening is contained in Appendix W of the Final EIS.

2011 August 9  
6018 Sycamore NW  
Seattle 98107

Mr. Daniel M. Mathis, P.E., Division Administrator  
U.S. Department of Transportation  
Federal Highway Administration Suite 501, Evergreen Plaza  
711 South Capitol Way  
Olympia WA 98501-1284

Re: SR 99, Alaska Way Viaduct  
Deep Bore Tunnel Alternative  
Record of Decision  
Comments for Review and Inclusion

Dear Sir,

The following pages contain comments that I believe indicate that the Deep Bore Tunnel Alternative to replace the elevated Alaskan Way Viaduct should not be approved.

If it would make it easier to review the included URL's, I can submit this as an email message. I can be reached at [pnaopensource@gmail.com](mailto:pnaopensource@gmail.com)

Sincerely,



Harvey Friedman

RECEIVED  
AUG 10 2011  
WASHINGTON DIVISION

I-002-001

Comment for Inclusion in the Record of Decision (ROD) AWV

The editorial (probably written by Joni Balter) in the 2011 July 20<sup>th</sup> edition of Seattle Times and that in the 29 July edition are fine examples of how ex-mayor Nickles, the Seattle City Council, and their backers are reducing Seattle from a "world-class" city to a "3rd-class" city.

These scare-mongers are conflating the agreed upon precariousness of the seawall in a earthquake with the safety of the elevated AWV itself.

By lying about the safety of the AWV, not only do they want to take away the terrific views from traveling on the viaduct and make traffic into and out of downtown worse, but also they want to raise taxes on the rest of us living outside of downtown Seattle to pay for their pet project, without allowing us to vote on it. It is not a representative democracy if the City Council acts for downtown first and provides only crumbs for other neighborhoods.

McGinn was correct in wanting the city to replace the seawall ASAP. Of course, he is wrong in thinking that reducing automobile traffic is the best way to reduce fossil fuel use as we can see from the use of electric cars and hybrid cars that result in less gasoline tax for the state coffers.

It appears that the judge does not understand the law or perhaps thinks that Initiatives are only permitted when the electeds can determine the outcome.

The position of Governor Gregoire in 2007, "A \$2.8 billion rebuild of the elevated structure remains the only sensible option now on the table, the governor said in discounting the "surface option" that some civic leaders are touting, now that a tunnel plan has been rejected by Gregoire, key legislators and the state Department of Transportation."

led to this

*"But there is more to Drago's Viaduct script than her maneuvering. In fact, it was she who masterminded the key milestone that allowed Viaduct Planning 2.0 to even happen in the first place. Remember that quirky two-part vote in March 2007, where voters of Seattle said No (to an elevated by 57 percent) and Hell No (to a tunnel, by 70 percent)? Splitting it into two was a Drago idea and it made all the difference. Had it been a single vote, tunnel vs. elevated, she now says, we [tunnel supporters] would have been dead on arrival.*

*"The Governor mandated that Seattle vote over the options (something City leaders didn't want to do), but failed to imagine just how clever ballot drafters could be. Drago knew that voters were opposed to the more expensive tunnel (polls showed that), but she also knew they were opposed (though not as heavily) to the elevated option. A split vote would send them both down. She presented the idea to [Deputy Mayor Tim] Ceis*

Comments for Inclusion in ROD DBT/AWV

Page 1 of 12

## I-002-001

Chapter 3 of the Final EIS describes how the alternatives for replacing the Alaskan Way Viaduct were developed. Your preference for the Elevated Structure Alternative is noted.

**I-002-001**

*and it took him about two seconds before he said perfect, remembers Drago. And perfect it was for the script she was writing. We lived to see another day, she says proudly."*

which gave the illusion of letting the people vote in a way that mattered.

It particularly fooled those politically naïve folks (as many as 30 percent) wanting a retrofit who voted "no" to both options or didn't vote at all.

Less than a third of Seattle voters and even less of elevated AWV SR99 users want the AWV to be replaced by any tunnel (let alone the unsafe, multiply-varianced (why did the FHWA allow?), super expensive deep-bored tunnel that does not meet the specifications that were presented to, and passed by, the state legislature).

So, vote no on Referendum 1.

Though not my preferred choice, the Environmental Impact Statement has a plan for a replacement elevated AWV. This is a cost-saving compromise solution which can be improved to take less time to complete. Let us vote "yes or no" on the compromise.

**I-002-002**

Comment for Inclusion in the Record of Decision (ROD) AWV

This article generated more opposition to a tunnel and support for elevated AWV.

[http://www.seattlepi.com/opinion/150363\\_firstpersondecl.html](http://www.seattlepi.com/opinion/150363_firstpersondecl.html)

**I-002-003**

Comment for Inclusion in the Record of Decision (ROD) AWV

Here is report of Governor Gregoire favoring elevated AWV section of SR99.

<http://www.komonews.com/news/local/5941281.html>

*"A \$2.8 billion rebuild of the elevated structure remains the only sensible option now on the table, the governor said in discounting the "surface option" that some civic leaders are touting, now that a tunnel plan has been rejected by Gregoire, key legislators and the state Department of Transportation."*

We will assume that governor did not accept bribes to change her position so the question is, "Why did she?"

Despite the crowing in <http://ec2-72-44-60-181.compute-1.amazonaws.com/2009/12/27/seattle-city-hall/18780/Best-of-2009-How-Jan-Drago-dragooned-a-Viaduct-solution/>

*"But there is more to Drago's Viaduct script than her maneuvering. In fact, it*

Comments for Inclusion in ROD DBT/AWV

Page 2 of 12

**I-002-002**

Many statements and opinions have been expressed supporting and opposing alternatives and other aspects of this project. This is normal for a project of this magnitude and local and regional importance.

**I-002-003**

Many public officials have made statements supporting and opposing alternatives and other aspects of this project. This is normal for a project of this magnitude and local and regional importance. Chapter 2, Questions 1 through 7 of the Final EIS discuss the project history and what happened during the alternatives development process.

I-002-003

was she who masterminded the key milestone that allowed Viaduct Planning 2.0 to even happen in the first place. Remember that quirky two-part vote in March 2007, where voters of Seattle said No (to an elevated by 57 percent) and Hell No (to a tunnel, by 70 percent)? Splitting it into two was a Drago idea and it made all the difference. Had it been a single vote, tunnel vs. elevated, she now says, [tunnel supporters] would have been dead on arrival. The Governor mandated that Seattle vote over the options (something City leaders didn't want to do), but failed to imagine just how clever ballot drafters could be. Drago knew that voters were opposed to the more expensive tunnel (polls showed that), but she also knew they were opposed (though not as heavily) to the elevated option. A split vote would send them both down. She presented the idea to Deputy Mayor Tim Cels and it took him about two seconds before he said perfect, remembers Drago. And perfect it was for the script she was writing. We lived to see another day, she says proudly."

which gave the illusion of letting the people vote in a way that mattered; particularly fooling those politically naïve folks (as many as 30 percent) wanting a retrofit who voted "no" to both options or didn't vote at all,

here is how SDOT and clever consultants came up with scary cartoon video to change governor's mind after wasteful vote of March 2007. This is courtesy of Elizabeth Campbell's using the Public Disclosure Act to eventually get the pdf file in 2009.

go to <http://www.scatnow.com/Documents>  
and grab  
04262007-Clark-Rigsby-attach1SpecforVideo.pdf

I-002-004

Comment for Inclusion in the Record of Decision (ROD) AWW

Here is an exchange on the S Holgate to S King SDEIS in which the replier ignores the pertinent query because there was nothing in the script that covered it.

WSDOT and its consultants appear to mis-interpret the federal rules for Draft Environmental Impact Statement responses. In the FONSI, entry I-010-001 comments

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Having read the environmental impact statement on the southern part of the AWW, I must comment about an inaccuracy that I noticed. While it is true that the visual impact or views while driving south on it won't be substantially different, going north is a whole other story. Under the EIS, side-by-side traffic means that southbound traveling trucks and buses would obstruct the views of those traveling northbound.

Currently traveling north gives magnificent views (serendipitously provided by the original AWW designers) that are so spectacular that they merit "United Nations Heritage Drive" designation.

Starting at Holgate, we see the Coast Guard pier and the Pier 46 cargo containers and cranes to the west and soon the baseball field and football stadium to the east. As we get higher, we see the Olympic Mountains and Puget Sound with its tankers, ferries and pleasure craft to the west and to the east the varied architecture of the city. But the view doesn't stop here at S. King St. even though the project does; to the west is even more of the Sound, mountains, and water traffic, and to the east more city, up close and personal. When passing the Ferry Terminal, we get a glimpse to the north of how ugly the city could become

Comments for Inclusion in ROD DBT/AWW

Page 3 of 12

I-002-004

The S. Holgate Street to S. King Street Viaduct Replacement Project is an independent project which is now under construction, following NEPA review which concluded in February 2009. In the Alaskan Way Viaduct Replacement Project Final EIS, permanent impacts to views are discussed in Chapter 5, Question 17.

**I-002-004**

When development is allowed right to the water. True, after Pine Street, the views aren't so special, but the EIS was about the South End of the AWV, not the entire thing.

Clearly, the view is many times better when traveling on the viaduct, compared to surface, tunnel, or side-by-side, particularly heading north. Though not as extensive as the views discussed in the April 6, 2008 edition of the "Seattle Times Pacific Northwest Sunday Magazine" for rich condo buyers and businesses, the views that riding on the viaduct provides are DYNAMIC, offering a splendid slice of Seattle. Furthermore, this is public, not just for car/SUV users but open to anyone who can afford bus fare. Unlike land acquisition problems with monorail, this right-of-way is already in use; improving the elevated viaduct wouldn't require buying up lots of land. Visitors immediately recognize our quality-of-life from traveling north on the viaduct. Even if transportation no longer depended on fossil fuels, (for examples, either a return to animal use, or some type of ground-effects hovercraft), the northbound view would still be spectacular and should not be given up to benefit greedy downtown interests.

Now that I've presented a case to maintain the views, let me discuss ways to do so.

- 1) depending on a positive outcome of the Miyamoto report, retrofit the existing viaduct all the way from the BatterySt. tunnel to S. Holgate St.
- 2) modifying Scenario D slightly, have the elevated structures at different heights with the northbound lanes higher than the southbound lanes and extend this the entire length of the existing viaduct. It would appear that this would satisfy all the federal highway safety standards and satisfy the majority of viaduct users including Seattle-dwellers, all 500000+ not just those living downtown.

I still think that demanding that the "South End" solution be applicable to any of tunnel, surface, or elevated side-by-side for the central waterfront and then claiming that the only solution that meets that criterion is what is described in the EIS, is removing the elevated double-deck viaduct by "stealth engineering".

-----  
that I made on the EA for the H2K section of the SR99 AWV, the response

-----  
In Chapter 3 of the EA (p. 59), under the question "How would the project affect views?", the text states that "views from the new SR 99 roadway would not be substantially different from the existing viaduct. Motorists traveling northbound would still experience panoramic views of the downtown skyline." It goes on to state that for southbound SR 99 travelers, "the views of the stadiums and SODO area would improve somewhat with the new roadway configuration, because these views would no longer be blocked by the upper roadway".

-----  
to my comments implies that the only views worth seeing are those of the built environment. Any big city has a downtown skyline. The setting of Seattle on Puget Sound with the Olympic Mountains is what makes it so desirable. Did WSDOT use an AIA architect with no appreciation for the Sound and mountains to write the response to my comments?

**I-002-005**

Another attempt to explain is to consider the prohibition on building on migrating waterfowl resting wetlands. These areas are not necessarily in constant use year-round but are definitely to be maintained. Now the WSDOT reply to my complaint that the Draft Environmental Impact Statement didn't address my concern that

**I-002-005**

Throughout the project, there has been ample and appropriate public discourse and disclosure. Chapter 2, Questions 11 through 15 and Appendix A, Public Involvement, of the Final EIS describe tribal and agency coordination and public involvement that the project team conducted throughout the NEPA process. The Finding of No Significant Impact (FONSI) referred to in this comment is for the S. Holgate to S. King Street Viaduct Removal Project, which is independent of the project addressed in this Record of Decision.

I-002-005

valuable views would be stolen from northbound users of the H2K section of the AWW. It is as if the WSDOT responders only considered the worms in the wetland and not the waterfowl that appear periodically. People are not waterfowl and can adapt when necessary but it seems to me that the users of the AWW, not just the landowners near it, should have a vote on whether to rebuild a safer, quieter AWW. Let me give another example of why I think that there is a significant environmental impact. Suppose someone decided that the Space Needle must come down for an extension of the EMP and they argued that there was no significant environmental impact because people could still get around that area. I would claim that the views of those who wanted to get up to the restaurant or the observation deck would be stolen because they couldn't do that anymore. Would the WSDOT responders still claim no significant environmental impact? Concerning H2K, those adapters affected are the everyday commuters into downtown Seattle, the everyday commuters through downtown Seattle (who might not have a problem (unless claustrophobic) if they are traveling southbound), the everyday commuters out of downtown Seattle, the tradespeople (plumbers, electricians, roofers, HVAC folk, communications setup and repair workers, etc.) who use the AWW several times a day to go in, out, through Seattle, those living in the Puget Sound region who bring visiting guests from Sea-Tac airport north on the AWW so that those visitors can appreciate the diversity of Seattle. All should have a vote on whether to have to permanently adapt or not.

The vote should be based on complete information, not just upon what the powers-that-be think will convince the voting public to vote for or against what the p-t-b want as, for example the March 2007 vote limited to Seattle residents only in which only 2 of the 6 outcomes had meaning. None of the WSDOT engineers had the courage to correct the information released to the media about the rebuild. There were 2 ways to do the rebuild, quickly with a total shutdown for 3 years, or, with ongoing construction, demolition, and limited usage that could take 10 years. What the media reported was that the rebuild would involve total closure for 10 years - a gross canard.

Democracy only works when the electorate is informed. Slanting information to deceive the voters is unethical. But, it is obvious why it was done. If folks knew that they could have a safer, quieter, elevated AWW for even the same amount of money that a deep-bored tunnel would cost, the vote would probably be 3-1 in favor of rebuild. Downtown developers using Jan Drago, Tayloe Washburn, and Tim Ceis as front voices, wanted to get rid of the elevated SR99 AWW so that they could make more profits. Their attitude was that if the smooth talking front people couldn't convince the public, then too bad for the public. This scheme was not new but had been going on for years. Even before the Nisqually earthquake of 2001, the parameters for the waterfront design charrette were that AWW wouldn't be there. Despite that, two entrants did include AWW; they definitely didn't receive honorable mention. As early as 2004, I suggested using quieter pavement as what one hears when going from King to Snohomish county on I-5, and even acoustic tiles on the bottom of the upper deck. Because this might reduce noise so that only those with very sensitive hearing would complain, it wasn't even tried especially because the intent was to knock down the AWW anyway.

To come back to the FONSI, I think that replacing elevated SR99 AWW with a surface side-by-side highway has a significant environmental impact and that it would take an informed (all options, costs, timelines, honestly presented) vote of the entire region to allow you to claim no significant environmental impact. Even if this vote shows that the majority don't care, it would still be a

**I-002-005**

significant impact to me, but I would cease writing to you about it.

**I-002-006**

Comment for Inclusion in the Record of Decision (ROD) AWV

Some more reasons for not buying a deep-bored tunnel to replace AWV

A "done deal", spending public money for a less functional deep-bored tunnel to replace the elevated Alaskan Way Viaduct section of State Route 99, based on alleged fraud and deception should be re-examined and, if necessary, "undone".

There are several parts to the fraud and deception allegation.

1. That the majority supports the deep-bored tunnel is false. The majority in Puget Sound prefer an elevated SR99.

[http://seattlepi.nwsource.com/saturdayspin/181511\\_bqweb10.html](http://seattlepi.nwsource.com/saturdayspin/181511_bqweb10.html)

The viaduct project website has exact breakdown of AWV usage. They measured with cameras at all entrances and exits and compared license plates. They also found that more than half of vehicles using AWV were licensed outside of Seattle city-limits.

<http://www.wsdot.wa.gov/Projects/Viaduct/library-meetingmaterials.htm>

Presentation was at August 28, 2008 meeting. Look at "Origin and Destination Information" presentation and at "Meeting Notes" for that meeting. "Public Comments" was also interesting.

The majority of AWV users, the true "stakeholders", want, preferably, a retrofit, and if not, then a rebuild that retains the Seneca and Columbia ramps.

<http://www.westseattleherald.com/articles/2007/08/21/interact/opinion/opinion.txt>

2. The Seattle Stakeholder Advisory Committee did not represent the stakeholders of SR99 but mainly greedy Seattle interests.

Following the disastrous (for tunnel advocates and mayor) vote, the "consulting group", Moore Iacafano Goltsman, Inc. (MIG) produced the "AWV stakeholder interview report" presented at the 13 December 2007 meeting in Seattle Town Hall. This report was glibly presented but EXTREMELY BIASED.

Point 1) They accepted the mayor's spin on the results of the March 2007 vote without comment.

Point 2) Their survey/poll of 69 "stakeholders" allowed all five original plans that WSDOT studied (chart on page 20 of the report), not the restricted vote that the mayor forced on Seattle voters.

Point 3) They did not get a fair representation of voters. Most of the 69 stakeholders polled were already on record that any elevated solution would be a "deal breaker" by 5 to 1.

**I-002-006**

Throughout the course of this project, extensive analysis has been completed on multiple alternatives. The alternatives development process is described in Chapter 2, Questions 1 through 7, of the Final EIS and in the Project History Report provided as Appendix S of the 2010 Supplemental Draft EIS (available on the project website and also included on CD with the Final EIS).

I-002-006

Why was not also considered the P.I.'s Saturday Spin question where results are at

"[http://seattlepi.nwsource.com/saturdayspin/181511\\_bqweb10.html](http://seattlepi.nwsource.com/saturdayspin/181511_bqweb10.html)"?

This was open to anyone who read about it in the P.I. over several days, not restricted to a select few. Over 120 were passionate enough to vote; by a 30 to 1 margin, we saw either "fix it" (meaning retrofit) or "don't tear down the viaduct without rebuilding a better one". This is an exact opposite deal breaker than for the downtown interests but for twice as many people.

Point 4) If this was truly an unbiased study, they would have mentioned what most wanted before the mayor's vote -- a state-wide vote ranking all five choices. After all, we are discussing SR99, a solution to regional transportation in and through Seattle.

Despite this clear bias, the "Stakeholder Advisory Committee" was then picked as a proportionally-voting subset of those interviewed for the MIG report.

3. That the EXISTING AWW would be unsafe in a big earthquake does not mean that no elevated AWW could be built that would be safe. (see 5.)

4. That the AWW must be totally demolished before it can be rebuilt is false. WSDOT engineers have studied at least two different ways of having ongoing construction and demolition while the AWW is still being used.

<http://www.wsdot.wa.gov/NR/rdonlyres/8A69CCB4-348F-487C-8E42-8032FE97452A/0/SDEISAppendixBAlternativesandConstructionMethods.pdf>

<http://www.wsdot.gov/Projects/Viaduct/library-environmental.htm>

5. The WSDOT directed TV and youtube video showing the existing AWW collapsing appears not to be tied to a computer simulation with adjustable parameters but rather was just a SCARY cartoon propaganda movie illustrating how unsafe the combined AWW/seawall is.

It appears to be based on a vulnerability analysis (The 2007 Seismic Vulnerability Analysis Report is available on the WSDOT website at [www.wsdot.gov/Projects/Viaduct/Library.htm](http://www.wsdot.gov/Projects/Viaduct/Library.htm) and appears to imply that the AWW would not necessarily fail without the decrepit seawall failing first.) that apparently didn't use data from the 6.8 magnitude 2001 Nisqually earthquake directly.

What wasn't reported was that the design for a rebuilt SR99 elevated AWW would survive the magnitude 7.0 earthquake presumed in that video and even more intense temblors.

It appears fair to conclude that this video was political especially in light of

[04262007-Clark-Rigsbyattach1SpecforVideo.pdf](http://www.wsdot.gov/Projects/Viaduct/Library/04262007-Clark-Rigsbyattach1SpecforVideo.pdf)

a copy of which is on <http://www.scatnow.com/Documents/>

Rather the simulation video served to scare the governor, her advisors, and other key policy makers into feeling that any AWW elevated solution for SR99 would be too dangerous to consider.

Comments for Inclusion in ROD DBT/AWW

Page 7 of 12

**I-002-006**

This "done deal" must be undone.

**I-002-007**

Comment for Inclusion in the Record of Decision (ROD) AWV

Here is response to an early September 2010 Neal Pierce attack on AWV. Note most recent comment.

[http://community.seattletimes.nwsources.com/reader\\_feedback/public/display.php?source\\_name=mbase&source\\_id=2012804409](http://community.seattletimes.nwsources.com/reader_feedback/public/display.php?source_name=mbase&source_id=2012804409)

**I-002-008**

Comment for Inclusion in the Record of Decision (ROD) AWV

explanation from transportation engineer

----- Forwarded message -----

Date: Wed, 23 Feb 2011 16:39:26 -0800

From: Christopher Brown <cvbrown.pe@gmail.com>

Subject: Re: THE # OF CARS using the tunnel?

To answer your points, consider the following.

First, highway capacity is a bit of an odd thing to understand since it is a function of both speed and Level of Service (LOS). Typically, a good design will yield an LOS at 'D', about 50 mph, and anything worse than that is to be avoided.

At LOS D, a freeway (e.g. the tunnel since it is supposed to be free flowing) will have a capacity of about 1,750 passenger cars per hour per lane. Its speed will be at about 50 mph under uninterrupted flow regimes. This is subject to things like grades, the truck (heavy vehicles) volumes in the traffic stream, and the hope there are no perturbations in the stream to cause it to become unstable.

Note the volume is in "hours" - e.g. the design hour or the p.m. peak hour if you wish.

Of course, as a good rule of thumb the p.m. peak hour is about 10% of the total daily demand!

Next, the SDEIS at Exhibit 2-9 tells us that the viaduct, in 2015, has a volume (ADT) of 117,000 near Columbia Street. The DBT, at that location, will have an ADT (average daily traffic) of 86,000.

That means its p.m. peak hour will be in the order of, say, 8,600 if we use the 10% rule. But the ratio of NB to SB traffic flow is something like 60/40, a typical ratio in most urban areas. Thus, the peak direction will be  $8,600 \times .60 = 5,160$  vehicles per hour (vph). Divide this by 2 (the number of lanes in the tunnel) and you get a single lane flow of 2,580 vph. Gulp! What's up here?

That 2,580 vph is way over capacity. It should raise a red flag. In fact, under

Comments for Inclusion in ROD DBT/AWV

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**I-002-007**

Many statements and opinions have been expressed supporting and opposing alternatives and other aspects of this project. This is normal for a project of this magnitude and local and regional importance.

**I-002-008**

Chapter 5, Questions 2 through 15 of the Final EIS present the permanent transportation effects of the project. Additional details about the transportation analysis can be found in Appendix C, the Transportation Discipline Report.

I-002-008

Very ideal conditions the maximum flow rate of any freeway lane is 2,000 vph. The above number exceeds that ideal rate, as you can see.

Consequently, that translates into congestion (technically called forced flow), an LOS of F, and that leads to a lot of rear end accidents and all the stuff you see on I-5 in the peak hour on the SB ship canal bridge - namely, crawling traffic.

Next, looking at what the viaduct has in store per the SDEIS - 117,000 ADT - versus the DBT at 86,600 ADT, the difference is 30,400 ADT.

That 30,400 is going to be dumped onto city streets that will have no more capacity added to the network than exists today. How do you sing Trouble in River City? Will anyone say, "Houston, we have a problem?" O'Brien is the only one who has seen this coming and had the courage to say anything about it.

EXGO - a \$4.2 billion project to make waterfront and through traffic worse.

And the yahoos at WSDOT along with Nickels and the remaining idiots on the council think this is a good project? Puleeeeeeze.

To parse Churchill, never in Seattle's history have so many been charged so much for the sole benefit of so few.

And, I haven't even talked about operations costs, accident costs or even bond costs.

Recall, yesterday the Washington State Health Authority on behalf of the Swedish Medical Center put out 6.25%, 30-year, AAA bonds maturing in 2041. (Probably a good buy if you have some spare cash.)

For the Port of Seattle with its \$300 million "donation" that comes to a tad under 2 billion for its 30-year likely bond issue.

Last, I can appreciate your wanting to revamp the waterfront. But, I must ask, why? Revamp into what? You cannot see the Olympics through all those waterfront buildings until you get to an opening and those are few and far between. The revamping they are talking about is for and on behalf of only a very few local property owners such as Ivar's, Miner's Wharf, Argosy Cruises, Clipper Navigation, et al. Why don't they opt for an LID if it so important to them? After all, they are the sole beneficiaries of this so called water front promenade. It is not you nor me.

Remember, the rest of us peasants footing the bill can always see the Olympics at Myrtle Edwards Park, Carkeek Park, Shilshole, Alki, Lincoln Park, Steinbruck Park, etc. And, except for the latter, they don't have parking at \$4.00 per hour! Riddle me this. Why should the average citizen pay for a view on the waterfront at \$4.00/hour when it is free everywhere else and fairly close by? I hope this makes some sense to you and why I consider this project to be ill conceived and ill advised. It has nothing to offer but woe, death, debt and lots of that as you can see.

Chris

9688 Rainier Avenue S.  
Seattle, WA 98118-5981

December 3, 2010

I-002-009

Rob McKenna, Esq.  
Office of the Attorney General  
State of Washington  
P. O. Box 40100  
Olympia, WA 98504-0100

Re: SR 99 PSH 1 Alaskan Way – Seattle  
Deep Bore Tunnel Alternative  
Inadequate Shoulder Widths for Accommodating HC Persons  
Failure to Meet Published ADA Standards

Dear Mr. McKenna:

As my elected official in matters of the law I am enclosing for your review, comments and files a copy of my recent e-mail to Seattle City Councilwomen Ms. Sally Bagshaw's aide, Mr. Philip Roewe, in which I have set out answers to several items sent to her by e-mail (attached) from WSDOT. The WSDOT author is unknown, as you will note.

For your advice, Ms. Bagshaw is the chairwoman of the council's Alaska Way Viaduct Committee. I have previously described to her why the so-called Deep-Bore Tunnel is such an appallingly unsafe option. The attached document provides further comments.

You are familiar with many of my concerns from earlier correspondence. Not the least of these is the decision by WSDOT (PB) to seek and obtain permission from FHWA to use less than standard shoulder widths. My letter to WSDOT for their *Corridor Hearing*, dated April 22<sup>nd</sup>, 2010, is a case in point. (Incidentally, as of this date, they have still not provided any answers to that letter nor have they published, for the official public record, the required *Adoption of Corridor Hearing Summary* per the *Design Manual*.) In any event, current designs show tunnel shoulders of merely 2 feet and 6 feet on each side of the travel lanes. Both are clearly inadequate. This concern is plainly born out by considering two recent WSDOT projects: the new Tacoma Narrows Bridge with its 10-foot shoulders and the \$500 million retrofit of the Hood Canal Bridge where its previous shoulders were determined to be hazardous because they failed to meet the standards.

When I say that a 2-foot shoulder is inadequate you must recognize that a common, typical Metro Dial-Ride mini-bus (DART) has a handicapped (HC) access wheelchair (WC) ramp on its right side. It needs 6 feet of clear space to deploy the ramp. (See attached photograph.) Further, at its end, an additional 3 feet is required to allow the WC user to get-off the ramp and turn left or right. (See attached *Minimum Guidelines & Requirements for Accessible Design*, Subpart D – Technical, page 3, Figure 4.14)

Comments for Inclusion in ROD DBT/AWV

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## I-002-009

Travel lanes inside the bored tunnel would be approximately 11 feet wide, with a 2-foot-wide shoulder on one side and an 8-foot-wide shoulder on the other side. Information on the design of the Bored Tunnel can be found in Chapter 3 of the Final EIS and Appendix B, Alternatives Description and Construction Methods Discipline Report.

The design will meet NFPA 502 standards for road tunnels, and as such is a reasonable policy that is consistently applied to meet the nondiscrimination requirements of the Americans with Disabilities Act (ADA). Also, Dan Mathis, the FHWA Division Administrator for Washington State, addressed Mr. Brown's concern in a letter to Mr. Brown dated February 23, 2011. In this letter, Mr. Mathis explained that a review of standards and guidelines on accessibility and the design approach taken for this project found relevant requirements have been met.

I-002-009

Rob McKenna, Esq.  
December 3, 2010  
Page 2

I believe you may find similar dimensional requirements in 36 CFR Ch. XI (7-1-96 edition) for example.

As you can see, in summary, the WC ramp plus the end clearance must be at least (6 feet + 3 feet) 9 feet to accommodate such a wheelchair user. This obviously does not work with a 6-foot shoulder and, noticeably, is an utter impossibility with a 2-foot shoulder.

I have an acquaintance who uses an electric WC for his daily mobility needs. His Dodge van has a four-foot ramp from its right side. With 2-feet of clearance at the ramp end he needs not less than 6-feet of space. Considering the NB tunnel roadway and its 2-foot shoulder on the right side he is obviously unable to exit his vehicle in the event of an emergency. The question we argued was what do you do in the event of, say, an earthquake that ruptures a section of the tunnel near the south portal that is located some 150 feet below sea level? The idea of waiting for help in a rapidly flooding tunnel did not alleviate his worries. Indeed, there is an AASHTO requirement that tow-trucks be located at each end of the tunnel if adequate shoulders are not available. But, with the vertical separation of SB over NB lanes, you can see that no less than 2 tow-trucks would be mandated at each end. Unfortunately, this is not discussed anywhere in the SDEIS. Likely, it was not even thought of by WSDOT staff. Incidentally, this did not answer his reservations, either. For short, you can see why this deep-bore tunnel does not curry his favor given the various *above ground* options. Now you can understand why he and all similar HC persons are placed at an unacceptable risk with the deep-bore tunnel option.

We recognize that the ADA may have opportunities for WSDOT to argue such elements as "reasonable accommodation" or even "undue hardship" but, given the fact that there are above ground (or above the sea-surface) options, it is inconceivable that serious consideration can be given for the deep-bore tunnel. Can you explain why my colleague must be given second-class citizenship in this respect? Is his life really meaningless?

I would appreciate a reply on this matter. Unfortunately, with the WSDOT's history of totally ignoring the issues raised in my *Corridor Hearing* letter April 22<sup>nd</sup>, I will not be surprised if this, too, falls on deaf ears.

Thank you for your attention in this matter.

Yours truly,

D. V. Brown, P.E.

Encl.

I-002-010 Comment for Inclusion in the Record of Decision (ROD) AWW

Some more recent pertinent opinions and comments

Comments for Inclusion in ROD DBT/AWV

Page 11 of 12

## I-002-010

Many statements and opinions have been expressed supporting and opposing alternatives and other aspects of this project. This is normal for a project of this magnitude and local and regional importance.

I-002-010

<http://www.westseattleherald.com/2011/08/02/opinion/op-ed-reject-referendum-1-reject-tolled-tunnel>

<http://queenanneneews.com/main.asp?SectionID=9&SubsectionID=308&ArticleID=31801>

From: Guy Gallipeau [mailto:guygal787@comcast.net]  
Sent: Wednesday, July 27, 2011 6:51 PM  
To: WSDOT AWW 2011 FEIS Comments  
Subject: FEIS Washington State Constitution

I-003-001

The rights of We The People are being violated in accordance with our Washington State Constitution, Article I Declaration Of Rights Sections 1, 2, 4, 5, and 19. Article II Section 1 Legislature Powers Where Vested.

Article I Section 1 Political Power states all political power is inherent in the people, and governments derive their just powers from the consent of the governed, and are established to protect and maintain individual rights. ARTICLE II, Section 1 explains those rights in detail.

Initiative I-101 does not prevent the state from building highways, however it protects the peoples right to vote by petition as stated in Article I Section 4. The deep bore tunnel is considered as a multibillion dollar bypass road to nowhere and is not in the best interest of our city and will cause GRID LOCK that this city will take years to recover from. There is a feasible and prudent alternative already in place which better serves the mobility and future transportation needs. Stop this rhetoric and adhere to the Washington State Constitution and let the voters exercise their God given rights.

Guy Gallipeau  
Seattle City Activist (47 years)  
5617-45th Ave. S.W.  
Seattle, WA 98136

### I-003-001

FHWA is confident all appropriate processes and procedures have been followed in evaluating alternatives to replace the existing Alaskan Way Viaduct and in selecting the Bored Tunnel Alternative.

From: Stacy Mohr [mailto:stacylh@hotmail.com]  
Sent: Tuesday, July 26, 2011 4:26 PM  
To: Alaskan Way Viaduct  
Subject: tunnel acces & traffic question

**I-004-001**

What will be done to alleviate traffic on surface streets when 45% of cars that currently use SR 99 in the downtown area will no longer be able to access SR99 from the existing location. Mercer street is already a mess in the evenings (that's an understatement). What is the plan for the increased traffic on Mercer street and other surface streets, considering an estimated 25,000 additional cars using Mercer street in the evening to access 99? What will be done to ensure that traffic flow doesn't become worse downtown?

Thank you,  
Stacy

### **I-004-001**

Traffic effects of the Bored Tunnel and other alternatives during operation are fully described in Chapter 5, Questions 2 through 15, of the Final EIS and in Appendix C, Transportation Discipline Report, Chapters 5 and 7. The City of Seattle is already working on improvements to Mercer Street separate from the Alaskan Way Viaduct Replacement Project. The City is currently constructing the Mercer Corridor Project's East Phase I and construction of the West Phase II is expected to begin in the fall of 2012. These projects will convert Mercer Street into a 2-way street and improve connections.

WSDOT, King County, and the City have developed and are implementing transportation improvements to minimize traffic effects during construction to keep people and goods moving. These mitigation measures are discussed in the Project Commitments section of the ROD.

J. Roger Nowell  
116 Fairview Ave No.  
Apf 1115  
Seattle, WA 98109

July 28, 2011

The Honorable R. C. "Ray" LaHood  
Secretary of Transportation  
Federal Highway Administration  
1200 New Jersey Avenue S.E.  
Washington, D.C. 20590

Re: FEIS Alaska Way Tunnel  
Seattle, Washington

Dear Secretary LaHood:

**I-005-001** | There are two aspects of the proposed Alaska Way tunnel which profoundly trouble me. The first is its exorbitant cost. And it does not matter whether the funds are City, State or Federal. It is taxpayer money and I pay to all three entities.

**I-005-002** | The second is its seeming purposelessness. It will carry non-freeway traffic north and south of the downtown core, but without any access to, or egress from, the downtown itself. I frankly cannot comprehend why we would build something with such minimal function.

Please do whatever you and your agency can to abort this wasteful and useless project.

Very truly yours,

J. Roger Nowell

cc: Ms. Angela Angove  
Washington State Department of Transportation

### **I-005-001**

Costs for the Bored Tunnel and funding for the project are described in the Summary, Question 12, and Chapter 2, Questions 5 and 7 of the Final EIS.

### **I-005-002**

The Bored Tunnel will provide substantially improved traffic conditions compared to the Viaduct Closed (No Build Alternative). Traffic effects of the project are described in Chapter 5, Questions 2 through 15, of the Final EIS and in Appendix C, Transportation Discipline Report, Chapters 5 and 7.

Donald F Padelford  
POB 2846  
Seattle, WA 98111  
tel 206-262-1155  
fax 707-202-1155  
dfp07@dfpNET.NET

July 19, 2011

Angela Angrove  
Alaskan Way Viaduct Project Office  
999 Third Avenue, Suite 2424  
Seattle, WA 98104

Re Alaskan Way Viaduct Replacement Project  
Final EIS

I-006-001

I have briefly reviewed the EIS. My comment concerns the proposed decommissioning of the existing Battery Street Tunnel and demolition of its attendant fly-over from Western Avenue to Alaska Way. While I have previously expressed the opinion that this combined facility should be kept in tact as a two lane structure (currently six lanes on the fly-over and four lanes in the tunnel itself), I understand from the EIS that demolition of the fly-over is pretty much a "done deal" under the plan. So I will constrain my remarks to the tunnel itself.

I believe that this should be kept "on ice" for further use as funds become available. For instance such a tunnel could be valuable as a bike/bus (or other transit mode) link between SR99 and Western Avenue in some ways reminiscent of the Snoqualmie Pass bike (formerly railroad) tunnel. In the past this region has unfortunately lost various rights of way, such as that associated with the Interurban, that cannot now be recovered. However, more recently, and fortunately, we have acquired Burlington Northern Railway ROW which is being put to good recreational use. And while the Battery Street Tunnel (and its fly-over) may not look like much now, the example of the Highline in Manhattan shows that, with creativity, a formerly drab, obsolete, industrial facility can be metamorphosized into a delightful community asset.

Sincerely,



Cc: Steven Holl Architects

ViaductFinalEIS20110719

## I-006-001

Reuse of the Battery Street Tunnel was briefly considered during alternative development, but the facility needs substantial reconstruction to make it safe for public use, and the costs involved are prohibitive.

Angela Freudenstein  
Washington State Department of Transportation  
999 Third Avenue, Suite 2424  
Seattle, WA 98104

August 14, 2011

Dear Ms. Freudenstein:

This letter provides my comments on the final environmental impact statement ("FEIS") for the Alaskan Way Viaduct Replacement Project ("AWV"). I also incorporate my December 2010 comments on the draft by this reference.

I am a resident and property owner in downtown Seattle and a semi-retired lawyer with thirty eight years of experience as a practicing attorney and as a manager in the public and nonprofit sectors. I have long followed the AWV Project and have made a number of comments to both State and local officials.

Although the FEIS partially corrects a major defect in the Draft – the refusal to fully acknowledge the fact that the proposed action is a tolled deep-bored tunnel ("DBT") - I continue to believe that the FEIS fails to adequately inform decision makers and the public.

I-007-001

**1. The Purpose and Need Statement Remains Too Narrow and Real Options Are Given Short Shrift.**

The Statement of Purpose and Need is a critical part of any EIS as it circumscribed the range of alternatives that were considered. In this case, the Project's Purpose and Need Statement was rewritten from the even handed "The project will maintain or improve mobility, accessibility, and traffic safety for people and goods along the existing Alaskan Way Viaduct Corridor" to feature the much narrower concept of "vehicle capacity." Using the term capacity instead of mobility eliminated from consideration potentially viable and cost effective solutions that include transit, demand management, or available capacity on other facilities. As

**I-007-001**

We disagree with your comment that the project's purpose and need statement is too narrow and has eliminated potentially viable and cost-effective solutions that rely on transit, demand management, or adapting available capacity on other facilities. Changes made to the project's purpose and need statement and the reasons for these changes are discussed in Chapter 2, Question 6 of the Final EIS. Changes made to the project's purpose and need statement did not serve to narrow the scope of concepts that could be considered. Instead, the changes that were made allowed for a broader scope of solutions to be considered. The purpose and need statement presented in the 2006 Supplemental Draft EIS stated, "the project will maintain or improve mobility, accessibility, and traffic safety for people and goods along the existing Alaskan Way Viaduct Corridor..." This purpose indicated that mobility must be maintained or improved. The project's current purpose and need statement is less restrictive by stating that it will provide a facility that "provides capacity for automobiles, freight, and transit to efficiently move people and goods to and through downtown Seattle." An important difference between the two purposes is that the earlier purpose statement required mobility to be maintained or improved, the updated purpose statement is focused on providing capacity to efficiently move people and goods to and through downtown Seattle, but it doesn't specify that existing capacity must be maintained.

Various surface and transit concepts have been considered throughout the life of this project, beginning with the Surface Alternative that was fully evaluated in the 2004 Draft EIS. The Surface Alternative was eliminated from evaluation in the 2006 Supplemental Draft EIS because it didn't meet the project's purpose and need statement. In the 2010 Supplemental Draft EIS, a new Surface and Transit Hybrid concept was considered and dropped as discussed in the Final EIS in Chapter 2, Question 6. Additional traffic analysis was completed after the 2010 Supplemental Draft EIS was published in response to comments

**I-007-001** a result, FEIS users have been denied a full analysis of a surface/transit option. This unfortunate because, in the real world, the current debate is between advocates of the DBT and those who believe that the Viaduct can be removed and freight and personal mobility maintained with a suite of incremental road and transit improvements. The FEIS is not as helpful in this debate as it could have been.

**I-007-002** **2. Why Not a Planned Viaduct Closure?**

In evaluating the "Viaduct Closed" Alternative, only "Unplanned" closures are studied. Evidently a planned closure is unthinkable. Why? I understand that transportation officials have developed plans to respond to an emergency Viaduct closure. Why not think through transportation life without the Viaduct and develop incremental strategies to phase the facility out while allowing time for incremental improvements to be implemented and the public to adjust?

**I-007-003** **3. The Project's Financial Plan is Still Not Firm and the Contingency Mostly Spent**

The State Legislature has capped State funding for the Project at of \$2.4 billion. The rest of the funding package - \$700M – is no firmer now than it was when the SDEIS was released months ago. The Port of Seattle's \$300 million has still not been legally committed, and according to a recent press report, the Port Commission won't even look at a "Financing Plan" before the end of 2011. Moreover, the \$400M required to be raised by future tolls is on thin ice. WSDOT has still not even asked the Legislature to authorize tolling the facility.

Meanwhile, the practicality of tolling the Tunnel is beginning to be questioned in light of the large unmitigated impact of diverted traffic to the City's street and transit systems. The FEIS coyly states that, with the DBT, Seattle's CBD access would be "less direct", travel time between Ballard and Spokane St. would be 1-6 minutes longer than with the existing Viaduct, and freight travel times would be increased. But this is claimed to have a "negligible effect" on the overall economy. And now we learn from the State's recently released Financial Plan that transit into and through downtown Seattle will be slowed as well. Quite a pay-off for a \$2B investment, don't you think?

received on the 2010 Supplemental Draft EIS. A discussion of this analysis and the rationale for not evaluating a surface and transit hybrid in the Final EIS is provided in the Final EIS in Chapter 2, Question 7.

**I-007-002**

The long-term effects of closing the viaduct and not replacing it, which would effectively be a planned closure, are described in Chapter 5, Question 1 of the Final EIS.

**I-007-003**

The Washington State Legislature passed into law RCW 47.01.402, which commits the state to providing funding up to \$2.8 billion to replace the SR 99 Alaskan Way Viaduct, with tolling to provide up to \$400 million of that commitment.

WSDOT has informed FHWA that:

"The state funds programmed by the State Legislature include gas tax revenue from the Motor Vehicle Fund through the Nickel and Transportation Partnership Act (TPA) taxing authorities, and federal funding. The funds are used across Washington State for highway related projects and are bonded with General Obligations bonds backed by the good faith and credit of the state (RCW 47.10.864). Bonds issued under the authority of RCW 47.10.861-866 are a general obligation of the State of Washington and pledge the full faith and credit of the state to the payment of principal, interest and contain an unconditional promise to pay such principal and interest when the bonds become due. Bond proceeds for toll revenue may include General Obligation bonds, Toll Revenue bonds or a combination of both as determined by the Washington State Treasurer and the State Finance Committee. In addition, on February 9, 2010, the Port of Seattle Commission, by a 5 to 0 vote, moved to affirm the Port's support and financial commitment to the Bored Tunnel Alternative."

I-007-003

Then there is the matter of cost overruns. Neither the State nor the City of Seattle has been willing to accept responsibility for paying these potential costs and each claim to think that this responsibility is on the other. But experts hired by the City saw a 40% probability that cost overruns will occur. And that was before the State acted to commit more than 75% of its \$415M contingency before the Tunnel portion of the Project has even begun. When Protect Seattle Now tried to get a court to rule on the legality of the cost overruns portion of the Tunnel enabling statute, the State trotted out technical defenses to block any judicial resolution. It would seem that “what they don’t know won’t hurt them” is the official State doctrine on this matter.

And then there is Mr. Elman’s latest initiative which would scupper the State’s preferred differential tolling scheme and force the Legislative to vote to imposed specific tolls rather than punt to the Transportation Commission.

In addition, the State has said publicly that it intends to deal with any emerging cost problems by “managing scope.”

The FEIS should have evaluated a backup plan that discloses in detail how the State plans to respond to the uncertainty described above including exactly which elements of the Project scope will be sacrificed if necessary to avoid cost overruns and how the Port and tolling revenues would be replaced if necessary.

I-007-004

#### 4. The Project’s Economic Benefits Should be Better Justified

Project boosters have made much of the alleged economic benefits of the Project and specifically its Deep Bored Tunnel preferred alternative. Hence, the Economics Discipline Report (“EDR”) that is part of the FEIS takes on special importance to the public and decision makers.

Direct Job Creation: The EDR states that the average number of temporary jobs created by the Deep Bored Tunnel portion of the project would total 480. But how many of these jobs will actually be “local” as opposed to filled by technical specialists in the tunneling industry who move about as tunneling work presents

Finally, WSDOT has submitted a federally required finance plan to FHWA, entitled *Initial 2011 Financial Plan SR 99 Alaskan Way Viaduct Replacement Project*, which is currently under review. FHWA expects to complete its review and approve the finance plan following FHWA's authorization of this Record of Decision.

#### I-007-004

Chapter 5, Question 20 and Chapter 6, Question 18 as well as Appendix L, Economics Discipline Report, describe the permanent and construction effects of the Bored Tunnel. The analysis provided follows FHWA and WSDOT guidance and provides appropriate information for the public and decision makers.

I-007-004

itself? The EDR doesn't say. When I raised this question in comment on the Draft, the response was that WSDOT could not control who ends up getting hired. But I didn't ask for control but rather a good faith analysis. The FDIS should have provided this analysis. .

Direct Job Elimination: Deep Bored Tunnel construction will actually eliminate or displace some existing local jobs due to property acquisition at the two Tunnel portals. According to the FEIS, the total job loss would be 152. At least some of this job loss will probably be temporary but that is also true of the jobs created. So it would seem fair to net out the loss and set the temporary direct job creation number at 328. And of course, all of the lost jobs, unlike the new ones, would affect local workers. The FEIS should have acknowledge this

Indirect Economic Impact: The Bored Tunnel portion of the Project is estimated to cost \$1,960M. But, according to the EDR, DBT expenditures include \$130M in federal "new money". Only this money would provide secondary economic "stimulus" as the State and local funds would be spent in the state even without the DBT project. But how much of total Project expenditures will actually occur locally? The successful bidder is national and international in make-up so it is probable that a substantial amount of Project direct and secondary spending will actually take place outside of Washington and outside of the United States. For example, the Tunnel Boring Machine, rumored to cost \$80M, will be fabricated in Japan. What about the portion of Project expenditures that necessarily goes to contractor overhead and profit? Won't a lot of this money be spent where the successful firms are based? The FEIS does not deal with this. It is possible that the "money out" could be greater than the (new) money in. If so, the stimulus value of the project could be zero or negative. Moreover, DBT construction will disrupt area businesses. Shouldn't these losses be netted out when calculating the temporary stimulus value of the project? The FEIS should have provided additional information to clarify these matters.

Loss of City Revenue and Higher O&M Costs: The EDR points out that the DBT project will eliminate a number of parking spaces, mostly in the areas of the north and south portals as well as under the existing Viaduct. This permanent parking revenue loss has been estimated to cost the City about between \$500M and \$2.1M in annual revenue. During the construction period, 630-850 on street parking spaces will be lost. Annual revenue loss to City: \$1.5 - \$1.8M.

I-007-004

The FEIS does not discuss how the City is expected to make up this ongoing revenue loss. In addition, business displacement caused by Project construction would cause an unspecified loss in tax revenue to the City and other governments.

The FEIS reports that annual operations and maintenance costs of a Deep Bored Tunnel enhanced SR99 are expected to exceed current expenditure by an estimated \$3.5 M annually. The Report does not state this, but presumably most, if not all of these costs will fall on the State. It is also not stated what the O&M costs of tolling the Tunnel will be. The projected O&M increase raises clear sustainability issues that the EDR neither discusses nor explains. The FEIS should have discussed these issues.

I-007-005

#### 5. A Chance to Reduce Greenhouse Gases?

The FEIS's Air Report makes the point that the study area is located within a maintenance area for carbon monoxide (CO) and an attainment area for all of the other criteria pollutants.

"Because the Bored Tunnel Alternative would not cause or exacerbate an exceedance of the NAAQS or increase regional emissions, it would meet the project-level conformity requirements (40 CFR 93.123)."

"Because regional MSAT emissions are not expected to increase and no exceedances of the NAAQS are expected, no significant adverse effects on air quality are expected to result from the three build alternatives. Therefore, no mitigation measures for operational effects would be required."

This sounds good, but don't both the State and the City of Seattle have policies and commitments to work to **reduce** greenhouse gases to attempt to curb or reverse global warming? How serious are these commitments really?

The DBT will contain an elaborate exhaust system to collect vehicle emissions in the Tunnel and release them into the air from two point source stacks. To the best of my knowledge there is no plan to do anything to manage or treat these toxic gases at the stacks.

#### I-007-005

Greenhouse gas effects and climate are evaluated in Appendix R, Energy Discipline Report, and not in Appendix M, Air Discipline Report. Both report fully evaluate relevant effects of the Bored Tunnel Alternative. Mitigation measures related to energy usage and air quality are described in Chapter 8 of the Final EIS and included in this Record of Decision.

I-007-005

Shouldn't the State commit, as a mitigation measure, to use reasonably available control technology at the stacks to reduce greenhouse gases? And if the State chooses not to do this, shouldn't the City of Seattle use its substantive authority under existing environmental law to require this? Or is the alleged commitment to curb greenhouse gases just more hot air?

Sincerely,

Bryan Glynn  
1415 Second Avenue, #2205  
Seattle, WA 98101-2072  
206.683.2933  
[Bglynn1018@aol.com](mailto:Bglynn1018@aol.com)

CC Mayor Mike McGinn  
Members, Seattle City Council

From: Elspeth Hilton [mailto:elspeth.hilton@gmail.com]  
Sent: Monday, August 15, 2011 2:39 PM  
To: WSDOT AWW 2011 FEIS Comments  
Subject: Replace the Viaduct with smart city planning, not a tunnel

**I-008-001**

After the FEIS was published showing that a deep bore tunnel will make little improvement to what traffic would be like if the viaduct simply fell down and was not replaced, it is clear that an expensive, risky, highway project is both financially irresponsible but also a bad investment. I encourage WSDOT to instead support a smarter plan for transportation and land use in Seattle by improving the downtown grid via traffic planning, investing in transit, and adding a lane to I-5 where possible and appropriate. Seattle is a progressive city full of citizens that fully embraces transit, walking and biking as their form of transportation. Others would embrace those modes if they were safer, more frequent and available in more routes (such as Ballard to West Seattle). Rather than building a tunnel that bypasses the city, meeting the needs of a few, please make a plan for the future that meets the needs of many and continues to move Seattle towards a bike, bus and walking friendly city that also has smart traffic planning for those who need to drive. Though highways have their time and place, downtown Seattle is not it. Please reconsider the plan for replacing the Alaska Way Viaduct with a deep bore tunnel - the FEIS makes clear it is not worth the money, and will not be an effective response to the traffic and transportation needs of the city.

Best,  
Elspeth Hilton  
1120 NW 59th Street  
Seattle, WA 98107

**I-008-001**

In the Final EIS, Chapter 5, Question 1 describes what would happen if the viaduct isn't replaced. Extensive analysis has been completed throughout the course of this project as described in Chapter 2, Alternatives Development, of the Final EIS.

Monday, August 15, 2011

Angela Angove  
Alaskan Way Viaduct Project Office  
999 Third Ave. Suite 2424  
Seattle, WA 98104

Dear Ms. Angove:

I-009-001

This letter is submitted as part of the public response exercise related to the Alaskan Way Viaduct and Seawall Replacement Project's Central Waterfront Final Environmental Impact Statement issued July, 2011.

I believe to even begin to comment on this matter is a futile effort if past comments and other efforts at intervening or participating in this project by many others and myself are to be any guide, because since December 31, 2008 the final decision about what alternative to build was made, and since then this whole environmental review under NEPA and SEPA has been a sham. Sham processes result in sham public participation and outreach processes, and that is what this has been for several years, to even date.

It is well understood administratively, statutorily, and judicially that environmental reviews are to inform project decisions, not to ratify them. However the latter is exactly what this environmental review process has been - the ratification of a final decision by the City of Seattle, King County, and the State of Washington to proceed to build a deep bore tunnel to replace the SR 99 Alaskan Way Viaduct.

Based on the public record there never was any intent on the State or the City's part to bring forward any other alternative but "a tunnel", and then "the tunnel", the present deep bored tunnel. As early as April 21, 2007 the State Legislature directed the Governor to make a final design decision on the Viaduct replacement by December 31, 2008 (ESHB 1094 Section 305 (16)(b)). ESSB 5768 ratified that decision on April 24, 2009, declaring that the State was to "replace the Alaskan Way Viaduct with a deep bore tunnel under First Avenue from the vicinity of the sports stadiums in Seattle to Aurora Avenue north of the Battery Street tunnel."

From these points forward thousands of pages of documents establish that the final decision was made to proceed with the deep bored tunnel project. Those pages are submitted via the following link, I am submitting for the FEIS record the public disclosure documents I have received from WSDOT related to its administration and management of both the AWVSRP and specifically the Central Waterfront Project/Deep Bored Tunnel:

<http://www.seatnow.com/FEIS%20Response/>

These documents confirm in whole or in part that the decision to proceed with the tunnel is exclusive of the environmental review process, that the environmental review process in no

### I-009-001

NEPA requires the identification of a Preferred Alternative as part of the EIS process (see 23 CFR 711.125). This may occur as early as the Draft EIS; however, to provide full opportunity for public input, WSDOT typically does not identify a Preferred Alternative until the Final EIS. For this project, a preferred alternative was identified in the 2010 Supplemental Draft EIS. Throughout the project's environmental process, FHWA and WSDOT have evaluated a reasonable range of alternatives. See Chapter 2 of the Final EIS for more information on alternatives development. FHWA requires the designation of a preferred alternative in the Final EIS to provide full disclosure of the choice most likely to be implemented. However, the final decision on which alternative will be implemented as a federal action that is taken by FHWA is documented in this Record of Decision. FHWA is not obligated to select the preferred alternative or any build alternative, regardless of the expressed opinions of state officials. Notwithstanding what Washington State leadership may favor or announce, the NEPA process requires a reasonable range of alternatives. FHWA has independently evaluated the NEPA documents for this project and has concluded that a reasonable range of alternatives have been identified.

WSDOT's decision to initiate design-build contracting for the project before the Record of Decision is consistent with FHWA regulations. Under 23 CFR § 636.109(3), the contracting agency (in this case WSDOT) may issue a request for proposals (RFP) prior to the conclusion of the NEPA process, as long as the RFP informs proposers of the general status of the NEPA process and that no commitment will be made as to any alternative under evaluation in the NEPA process, including the No Build Alternative. WSDOT's RFP met those requirements. See Chapter 2 of the Final EIS for more information.

**I-009-001** way informed the final decision to proceed with the deep bored tunnel, but just the opposite occurred, the deep bored tunnel project has been underway since on or before January 1, 2009.

**I-009-002** In addition, I am questioning the legality of the tunnel project proceeding and the ultimate destruction of the Viaduct based on the matter of the Alaskan Way Viaduct's status as a State protected essential public facility. The Alaskan Way Viaduct, its location, capacity, and all of its structural and transportation elements, the six points of ingress/egress, and its appurtenances north and south of it, the mainline of the SR99/city of Seattle corridor, all those things which establish the Viaduct's identity/use/legal standing, has statutorily protected status as an essential public facility, as a highway of statewide significance, and as a historical transportation structure eligible for national, State, and local recognition as such; none of which has been extinguished in any forum, legal or otherwise, nor through any legislative, executive, or administrative acts. Therefore this idea that with this FEIS or any of the prior or ongoing actions the State and City are taking that the Viaduct can be so easily eliminated is false. In order for there to be any realignment all of these statuses must be extinguished; and none of this was addressed by the FEIS or any other proceeding related to the AWVSRP and its documentary record.

**I-009-003** Furthermore, the FEIS did not address the ongoing conflicts between the assorted Notices of Intent that have and have not governed this project, the conflict between just what laws the FEIS was created under. At certain junctures WSDOT claims that it is proceeding under SAFETEA-LU, while not complying with the requirements of that federal act.

Finally the idea that the deep bored tunnel is not proceeding is belied by the fact that WSDOT under its PIN 809936E has expended funds for construction, not just for preliminary engineering, or right-of-way acquisitions. The FEIS does not address those expenditures or several decisions where Moving Forward Projects were terminated upon the January, 2009 decision to proceed with the tunnel.

In the end, I object to this project proceeding due to the false pretenses that both the FEIS was created and under which the deep bored tunnel project is proceeding.

Elizabeth A. Campbell  
3213 W. Wheeler St. No. 271  
Seattle, WA 98199

Elizabeth A.  
Campbell

Digitally signed by Elizabeth A. Campbell  
DN: cn=Elizabeth A. Campbell, o=ou,  
email=campbell@ethiuse.com, c=us,  
c=US  
Date: 2011.08.15 16:41:45 -0700

Cc:

Raymond H. "Ray" LaHood, Secretary of Transportation  
Brodi Fontenot, Acting Deputy Asst. Secretary for Administration  
Department of Transportation  
Federal Highway Administration  
1200 New Jersey Ave. SE  
Washington, DC 20590

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### I-009-002

SR 99, not the Viaduct as a separate structure, is part of the state highway system and as such is a highway of statewide significance and an essential public facility. The fact that SR 99 is a highway of statewide significance and an essential public facility does not preclude WSDOT from making safety improvements or replacing the structures that make up that highway route.

The Viaduct was considered as a structure eligible for inclusion on the National Historic Register. Eligibility for the National Register does not prevent the replacement of an aging transportation structure. The impacts of removing the Viaduct structure and mitigation for the removal are addressed in a memorandum of agreement signed by the state historic preservation officer. Neither Section 106 of the National Historic Preservation Act nor NEPA require that the structure's historic status be extinguished, only that it be considered in accordance with those two statutes.

### I-009-003

WSDOT prepared a project history report that described the changes that have been made to the project over the years, much of which have resulted from the input of citizens, businesses, and other public agencies. The Project History Report was included as Appendix S in the 2010 Supplemental Draft EIS, which is also provided on CD with the Final EIS. The scope of the environmental review has changed in order to address these changes. WSDOT prepared a project history report that documents the development of the project and its environmental review over the last 10 years. Because environmental review began on this project in 2001 prior to the enactment of SAFETEA-LU, WSDOT and FHWA were not required to repeat work that had been previously done and was allowed to continue the ongoing environmental review rather than starting the process over again under Section 6002 of SAFETEA-LU (23 U.S.C. 139). However, other provisions of SAFETEA-LU may still

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<sup>i</sup> On the part of the City of Seattle the effort to eliminate any Viaduct replacement alternative but a tunnel (first it was a cut-and-cover tunnel, now it is the deep bored tunnel) started long before the December 31, 2008 joint decision with the State and King County. The City of Seattle took numerous legislative and City sponsored actions to ensure that another elevated structure to replace the Alaskan Way Viaduct could never be built, including but not limited to the following:

- a. 2000 Ordinance 120045 Relating to the Department of Parks and Recreation; authorizing the Superintendent to proceed with consideration of planning options for the development of a new aquarium facility and waterfront park in the area covered by the Central Waterfront Master Plan
- b. 2003 "Central Waterfront Plan Background Report Precedent Study"
- c. 2003 "Blue Ring, Seattle's Open Space Strategy for the Center City" that will "serve as the critical guide to the numerous plans currently underway downtown, and the many more sure to come in the next 100 years. Among others, the Alaska Way Viaduct replacement".
- d. 2004 Waterfront Charrette
- e. 2004 Resolution 30664 Adopting Principles for Development of a Central Waterfront Plan.
- f. 2004 Resolution 30717 Relating to the Central Waterfront Master Plan; amending the Central Waterfront Master Plan - Portal to the Pacific to reconfigure the site plan
- g. 2005 "Administering Financing & Implementing Seattle's Waterfront Vision" report written concurrently with the Draft Central Waterfront Concept Plan; report relating to a strategic effort for decision makers as they begin codifying the process and administrative structure for managing and implementing Seattle's Central Waterfront plan; including how to ensure that "with removal, of the Alaska Way Viaduct, properties along the city's western edge will become highly desirable".
- h. 2005 Resolution 30724 Adopting Guiding Principles for decisions related to the Alaskan Way Viaduct and Seawall Project.
- e. 2006 Ordinance 122247 Relating to the central waterfront, declaring that an aerial highway along the central waterfront is discouraged by adopted City of Seattle ("City") policies, stating that construction of an aerial highway structure is inconsistent with current use and height regulations, and stating the City's intent to amend existing regulations and policies to further clarify that an aerial highway structure in the central waterfront area is inconsistent with the City's Comprehensive Plan.
- f. 2006 Final Environmental Impact Statement for the Central Waterfront Master Parks Plan

apply to this project.

WSDOT has undertaken other projects in the Alaskan Way Viaduct Replacement Program after all required environmental review was complete. WSDOT has entered into a design-build contract for the Central Waterfront section of the project as allowed by federal rule, 23 CFR section 636.109. WSDOT's contract and the work allowed under that contract prior to the Record of Decision meet the requirements of this rule and of the NEPA rules, 40 CFR part 1500.

- 
- g. 2006 US Army Corps of Engineers (USACE) Environmental Assessment pursuant to expired NOI
  - e. 2006 USACE Scoping Report. Elliott Bay Seawall, WA General Investigation (Alaskan Way Seawall Feasibility Study Environmental Impact Statement) pursuant to expired NOI
  - f. 2007 Ordinance 122406 Relating to the development of a Mobility Plan to replace the central waterfront portion of the Alaskan Way Viaduct
  - g. 2009 Seattle Pedestrian Plan
  - h. 2009 Ordinance 123142 Establishing Central Waterfront Partnerships Committee – redevelopment and master use planning related to AWVSRP.
  - i. 2009 Ordinance 123212 Amending Ordinance 123142 to alter the composition of the Central Waterfront Partnerships Committee.
  - j. 2009 \$225 Million appropriated for seawall replacement and SDOT issues Request for Qualifications for design of seawall; no SEPA, NEPA, or other environmental review precedes.



August 15, 2011

Honorable Christine Gregoire  
State of Washington  
Capitol Building  
Olympia, WA

Dear Governor:

In re: Deep bore tunnel project in Seattle

I am a 30 year resident of Seattle who has studied the SR 99 tunnel project closely. My lifetime profession is public policy and program analysis, which I now practice independently and as a Research Associate at Mineta Transportation Institute. You and I have met just once in your office in 2005 for a meeting facilitated by Booth Gardner on the risks of Sound Transit's light rail project that includes tunneling, now underway with years left to go.

First, thank you for your service in a difficult fiscal period for our State.

This present letter serves two purposes.

First, it is a comment on the Final EIS for the SR 99 Tunnel that I request be entered into the SR 99 Tunnel Record of Decision with a response from authorities. This letter is cc Transportation Secretary Hammond and her FEIS team, so that will happen without further action on your part.

Second, as I used to do in an earlier job working for the Mayor of Washington, DC, I want to suggest an option if things go wrong with the SR 99 project.

The two purposes are closely related.

**I-010-001**

The SR 99 surface-transit alternative developed in the Partnership Process of 2007 and described in Appendix W in the SR 99 Tunnel FEIS, shown on the map on page 459, and inserted at the end of this letter, is likely not the best possible design to maximize north-south capacity and minimize travel time through downtown Seattle. These two measurements are why this alternative was screened out from further consideration in the Final EIS. The design reflects that it was, after all, a horse built by a committee.

I base my negative judgment of the surface alternative dismissed in the FEIS on my inspection of the map attached to the bottom of this letter which shows, for example, a waterfront sidewalk width of 104 feet and a speed limit of 30 mph, just to name two

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**I-010-001**

The lead agencies appreciate your perspective on the design of the I-5, Surface, and Transit Hybrid scenario. Modest design modifications (sidewalk width and speed limit), as suggested, would not adequately address the capacity deficiencies of this scenario. The transportation analysis for the I-5, Surface, and Transit Hybrid is discussed in the Final EIS Chapter 2, Question 7, and Final EIS Appendix W, *2011 Surface and Transit Scenario Year Analysis Results*.

Honorable Christine Gregoire, August 15, 2011, page 2

I-010-001

characteristics that I believe could be modified to create a higher-throughput design. There are others.

I-010-002

**If the traffic engineers at WSDOT and FHWA would certify in the SR 99 Bored Tunnel Record of Decision that the best possible surface design for Viaduct replacement is fully documented in the environmental record as the design shown in FEIS Appendix W, that would be an important addition for the Record of Decision, especially if at some point the bored tunnel construction goes badly.**

Here's why: We residents of Northwest Seattle – who are having our established travel patterns with the Viaduct transformed to worse by the future SR 99 design – need to know now and in the future that WSDOT did all it could do to create an optimal surface alternative to the Viaduct that maintained the Viaduct's functions for Western/Elliott access, and that "Scenario L: I-5, Surface and Transit Hybrid" in Appendix W, page 459 was the result. Too bad it didn't work out. So be it.

My overall assessment of the bored tunnel project based on study of the Final EIS is twofold: (1) the risks to downtown Seattle and the regional economy resulting from a construction-related incident with the proposed SR 99 Tunnel are considerable, and (2) the forecast traffic performance upon opening of the new tunnel is not outstanding as a payoff benefit for the tunnel commensurate with the risks in building it.

On the question of risks, they are described in summary fashion in the Final EIS, and were undoubtedly explained to you in late 2008 and early 2009 as you were making your decision that WSDOT should build a tunnel under downtown Seattle. My summary view is that underground Seattle is not a suitable place to attempt driving the world's largest tunnel boring machine.

The soil and water table conditions are quite different than with the big M30 tunnel in Madrid that you toured on June 17: the Madrid tunnel is above the water table and SR 99 tunnel is below it, for example. The area of the cutting face of the Seattle TBM is going to be 33 percent bigger than the one used in Spain. The bigger the machine is, the higher the probability of sink holes and other subsidence on the surface.

As you ponder the SR 99 tunnel risk issue prior to the issuance of the Record of Decision by FHWA, I ask that you consider **four documents that I am asking here to be specifically referenced in the Record of Decision: two articles from a recent tunnel conference about how the SR 99 tunnel builders will deal with subsidence, the Thom Neff report commissioned by the Mayor of Seattle, and a summary of the psychological research describing the willingness of groups of men to accept more risk than they would accept individually.** These references are all cited here as Internet locations:

Settlement Considerations for Designing the Alaskan Way Tunnel:  
[http://books.google.com/books?id=Lpb6\\_nnYPqwC&lpg=PA762&ots=Y55HOT54Fg&dq=%22Deformation%20Mitigation%20Submittal%22&pg=PA751#v=onepage&q=%22Deformation%20Mitigation%20Submittal%22&f=true](http://books.google.com/books?id=Lpb6_nnYPqwC&lpg=PA762&ots=Y55HOT54Fg&dq=%22Deformation%20Mitigation%20Submittal%22&pg=PA751#v=onepage&q=%22Deformation%20Mitigation%20Submittal%22&f=true)

## I-010-002

Your request to include risk analysis in the Record of Decision is acknowledged. However, the Record of Decision is a decision document. Its purpose is to state the project decision, describe the alternatives considered in the environmental review process and to commit to mitigation measures, as required. The environmental analysis, including consideration of project risks, is presented in the Draft EIS, two Supplemental Draft EISs and Final EIS produced for this project and their corresponding supporting documents (discipline reports).

Honorable Christine Gregoire, August 15, 2011, page 3

I-010-002

Geotechnical Baseline for the SR 99 Bored Design-Build Alaskan Way Tunnel, Seattle Washington:  
[http://books.google.com/books?id=Lpbe\\_nnYPqwc&pg=PA478&dq=deep%20bore%20tunnel%20Seattle&pg=PA472#v=onepage&q=deep%20bore%20tunnel%20Seattle&f=false](http://books.google.com/books?id=Lpbe_nnYPqwc&pg=PA478&dq=deep%20bore%20tunnel%20Seattle&pg=PA472#v=onepage&q=deep%20bore%20tunnel%20Seattle&f=false)

Tunnel expert Thom Neff report: <http://images.bimedia.net/documents/Risks.pdf>

Groupthink, Abilene and Risky Shift:  
<http://mikeclayton.wordpress.com/2010/08/19/groupthink-abilene-and-risky-shift/>

I-010-003

As reinforcement for my comment about the best surface alternative not having been studied in the FEIS, the Alaskan Way surface treatment that is already designed to be in place for the bored tunnel option could be improved to handle more traffic if the bored tunnel didn't exist. Note the photo simulations from the FEIS inserted on this page of my



letter. They show extraordinarily wide sidewalks with space that could accommodate another vehicle lane and more vehicle volume. Also, I-5 through downtown Seattle could



be improved to handle more traffic with electronically narrowed, smart highway lanes and a variable speed that goes slower to safely maximize volume throughput in peak periods. The electronic signs on I-5 both north and south of the I-405 turnouts for bypassing Seattle on the east side of Lake

Washington could direct through traffic to the optimal route through the urban region, whether Seattle CBD or Bellevue CBD.

I-010-004

Bottom line: If the deep tunnel option goes bad at any future point, including during construction, you have the option of ordering the WSDOT to work collaboratively with Seattle DOT to take a second look at improving the traffic performance of the Alaskan Way Boulevard in the absence of the Viaduct but still maintaining an improved Battery

### I-010-003

Many possible surface street concepts have been examined throughout the life of this project. One concept, called the Surface Alternative, was fully evaluated in the 2004 Draft EIS as described in the Final EIS in Chapter 2, Question 2. This alternative was dropped for reasons identified in the Final EIS in Chapter 2, Question 3. Other surface street concepts were developed and considered through an extensive public process in 2008 called the Partnership Process. The surface and transit hybrid concept developed through this process represented the collective and collaborative ideas of area citizens and leaders. Traffic analysis was then completed for this concept as described in Chapter 2, Questions 6 and 7 of the Final EIS.

### I-010-004

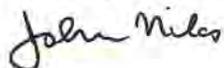
Thank you for your comments.

Honorable Christine Gregoire, August 15, 2011, page 4

I-010-004

Street Tunnel and compatibility with an open, pedestrian-friendly waterfront design. At the same time, the future use of I-5 and I-405 for through traffic could be optimized if and when SR 99 no longer includes a stretch that moves like our historic Viaduct from the 1950s.

With respect and best wishes,



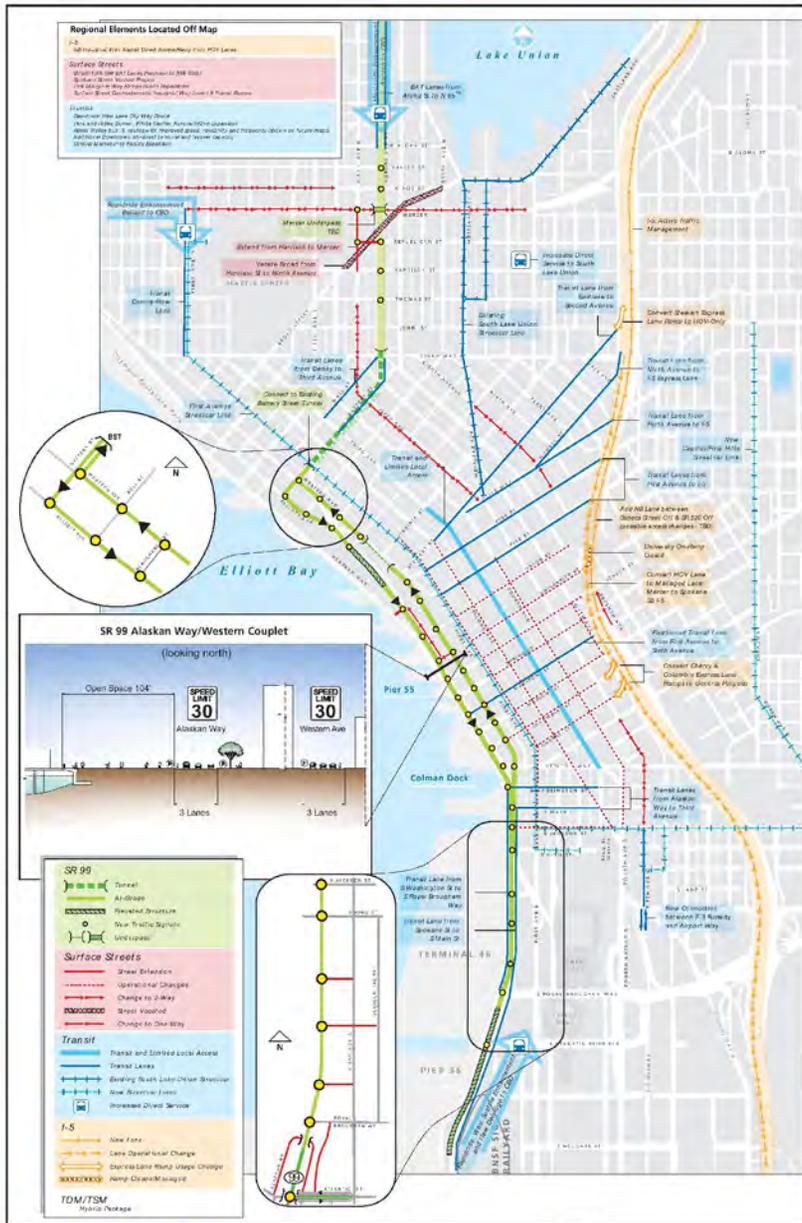
John Niles

Cc:

Paula Hammond, P.E., State Secretary of Transportation  
Dan Mathis, RHWA Region X Administrator  
Angela Angove, Alaskan Way Viaduct Project Office

Attachment:

Map of SR 99 surface transit option from Appendix W of FEIS



From page 459 of Appendix W of the Final EIS for the Deep Bore Tunnel, Seattle Exhibit 1 Scenario L: I-5, Surface and Transit Hybrid

From: Toby Thaler [mailto:toby@ouploup.net]  
Sent: Monday, August 15, 2011 8:38 PM  
To: WSDOT AWW 2011 FEIS Comments  
Subject: AWW 2011 Final EIS Comment

Angela Angove  
Alaskan Way Viaduct Project Office  
999 Third Ave., Suite 2424  
Seattle, WA 98104

Deep Bore Tunnel ventilation

I-011-001

Concentration of *unfiltered* vehicle exhaust at the North and South Portals and stacks at the North and South Tunnel Operations Buildings exposes densely populated areas in Seattle to concentrated Mobile Source Air Toxics (MSATs) in addition to increased particulates and CO.

In the FEIS, WSDOT, and FHWA assert that due to engine controls adopted by the EPA and phasing out of older vehicles, the concentration of the pollutants at the portals and tunnel operations building stacks is acceptable, because they expect that the engine controls will mean that MSATs, particulates and CO emissions will be lower in the future than they are today, even if the number of cars using the tunnel increases.

The following statements in Appendix M – Air Discipline Report, pp. 23-24, raise my concerns as a community member about the concentration of MSAT's:

"...currently available technical tools do not allow a prediction of the project-specific health effects that would result from the potential emission changes associated with a project"

"The tools to predict dispersion of MSATs into the environment are limited"

"Exposure assessments are difficult because it is difficult to accurately calculate annual concentrations of MSATs near roadways and to determine the portion of a year that people are actually exposed to those concentrations at a specific location."

Also, in Appendix M on p. 24, it says, ""Based on FHWA's recommended tiered approach the project belongs in Tier 3 (i.e., projects with a high potential for MSAT effects). This category is appropriate because the tunnel alternatives have the potential to add capacity to urban roadways, and the affected roadways are located near populated areas."

Tunnel exhaust filtering has been or is being installed in numerous tunnels in other countries – Norway, Denmark, Australia and Japan, in order to protect human health. I believe that the Deep Bore Tunnel, if built, must incorporate filtering of the vehicular exhaust in order to protect the health of those who live or work downtown, especially near the tunnel portals.

**I-011-001**

Your concern about air quality at the tunnel portals is acknowledged. As noted in the Final EIS Appendix R, Energy Discipline Report, the exhaust from the ventilation stacks and tunnel portals were modeled in the Final EIS, and, based on this modeling, no exceedance of the National Ambient Air Quality Standards (NAAQS) would occur. Mobile Source Air Toxic (MSAT) emissions were also analyzed in the Final EIS, using FHWA guidelines. FHWA has developed this approach because currently available technical tools do not allow a prediction of the project-specific health effects (such as health risks) that would result from the potential MSAT emission changes associated with a project.

Deep Bore Tunnel Greenhouse Gas Emissions

**I-011-002**

In the FEIS Appendix R – Energy Discipline Report, it says on p. 4 that 2030 Viaduct Closed conditions would result in the highest operational energy and greenhouse gas emissions. However, in the calculations for energy and greenhouse gas emissions (“Attachment A” to Appendix R), the 2030 Viaduct Closed conditions is shown to create the fewest daily emissions in the Center City. Which is correct?

Also, to assert that the greenhouse gas emissions for the Deep Bore Tunnel only increase in the City Center City but don’t increase the regional total is sticking one’s head in the sand. Seattle needs to play a leading role in reducing overall greenhouse gas emissions and so does this highway project.

Malfesance

**I-011-003**

Calculations for energy and greenhouse gas emissions and for air quality modeling were not made available to the public as part of the 30-day FEIS review process except by request. The reason was due to “file length or size”. However upon receiving the information, I discovered that these files could easily have been linked to WSDOT’s FEIS web page, since they were not of excessive length or size. This appears to be an attempt by WSDOT to delay the public’s review of the information, the public’s ability already curtailed by the maximum 30 days allowed to review in excess of 7200 pages of documentation.

Toby Thaler  
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cell 697-4043

**I-011-002**

Page 4 of the Energy Discipline Report, Final EIS Appendix R, summarizes the results of Exhibit 1-2 on page 5. Exhibit 1-2 reports that the total regional operational energy and greenhouse gas emissions are higher for the 2030 Viaduct Closed (No Build Alternative).

With the Viaduct Closed in 2030, traffic volumes (measured in vehicle miles traveled) in the city center would decrease, but traffic volumes in the region would increase; see Exhibit 5-1 in the Energy Discipline Report. Exhibits 5-2, 5-3 and 7-3 in the Energy Discipline Report and the calculations in Appendix A of the Energy Discipline Report show that the operational energy and greenhouse gas emissions are lower in the city center and higher in the region under the 2030 Viaduct Closed (No Build Alternative). Please note, the city center is included in the regional analysis, therefore, overall, the highest calculated operational energy and greenhouse gas emissions were for the 2030 Viaduct Closed (No Build Alternative). As described in section 2.3 of the Energy Discipline Report, the city center area is bordered by Aloha Street on the north, 15th Avenue on the east, S. Holgate Street on the south, and Elliott Bay on the west, as shown on Exhibit 2-3. The region includes all the traffic movements in King, Pierce, Snohomish, and Kitsap Counties; the regional study area is shown on Exhibit 2-4 of the Energy Discipline Report.

**I-011-003**

The information referred to in this comment consists of voluminous numeric output from analytical models and was provided upon request in time for examination during the Final EIS comment period.