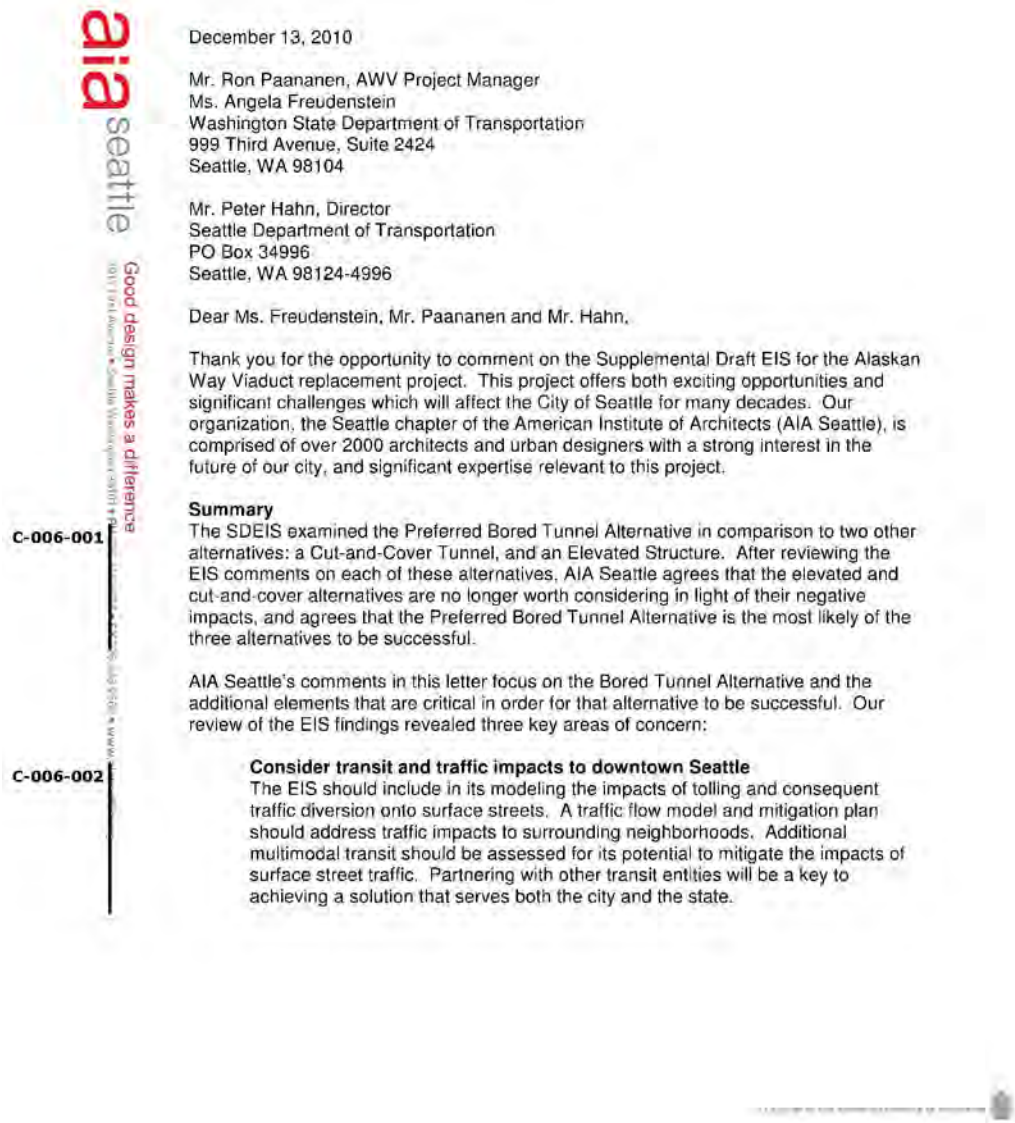

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Good design makes a difference

December 13, 2010

Mr. Ron Paananen, AWV Project Manager
Ms. Angela Freudenstein
Washington State Department of Transportation
999 Third Avenue, Suite 2424
Seattle, WA 98104

Mr. Peter Hahn, Director
Seattle Department of Transportation
PO Box 34996
Seattle, WA 98124-4996

Dear Ms. Freudenstein, Mr. Paananen and Mr. Hahn,

Thank you for the opportunity to comment on the Supplemental Draft EIS for the Alaskan Way Viaduct replacement project. This project offers both exciting opportunities and significant challenges which will affect the City of Seattle for many decades. Our organization, the Seattle chapter of the American Institute of Architects (AIA Seattle), is comprised of over 2000 architects and urban designers with a strong interest in the future of our city, and significant expertise relevant to this project.

C-006-001

Summary
The SDEIS examined the Preferred Bored Tunnel Alternative in comparison to two other alternatives: a Cut-and-Cover Tunnel, and an Elevated Structure. After reviewing the EIS comments on each of these alternatives, AIA Seattle agrees that the elevated and cut-and-cover alternatives are no longer worth considering in light of their negative impacts, and agrees that the Preferred Bored Tunnel Alternative is the most likely of the three alternatives to be successful.

AIA Seattle's comments in this letter focus on the Bored Tunnel Alternative and the additional elements that are critical in order for that alternative to be successful. Our review of the EIS findings revealed three key areas of concern:

C-006-002

Consider transit and traffic impacts to downtown Seattle
The EIS should include in its modeling the impacts of tolling and consequent traffic diversion onto surface streets. A traffic flow model and mitigation plan should address traffic impacts to surrounding neighborhoods. Additional multimodal transit should be assessed for its potential to mitigate the impacts of surface street traffic. Partnering with other transit entities will be a key to achieving a solution that serves both the city and the state.

C-006-001

FHWA, WSDOT, and the City of Seattle appreciate receiving your comments on the Bored Tunnel Alternative.

C-006-002

The Final EIS considers the effects of tolling in Chapter 5, Permanent Effects. Additional information on the effects of tolling the alternatives can be found in Chapter 7 of Appendix C, Transportation Discipline Report, in the Final EIS.

Added King County Metro transit service is being considered as part of construction mitigation, but the funding for this added service has yet to be secured. Also, improvements to the speed and reliability of transit service may be supported by the project and could continue following construction completion. The project would not be supporting ongoing transit expansion following construction completion. However, transit service enhancements are expected in downtown Seattle; for example, Sound Transit LRT and commuter rail expansion under Sound Transit 2 and the King County Metro RapidRide bus program.

C-006-003

C-006-004

C-006-005

C-006-006

Describe physical and character risks to historic neighborhoods
The EIS should provide mitigation or alternative strategies to address the project's significant risk to historic buildings, and its potentially profound impact on the pedestrian character of historic districts.

Quantify and consider greenhouse gas emissions
The EIS should analyze how the project would help reduce carbon emissions in accordance with city, county, state and federal policies.

A more complete analysis of each of these concerns follows.

Traffic Impacts within Downtown Seattle

AIA Seattle's position on the viaduct replacement states:

> *The (viaduct replacement) should link surrounding and immediately adjacent urban districts through a system of connections. Mobility integration should address the individual needs of pedestrians, automobiles, transit, freight, service, bicycle, ferry, water taxi, trail network, accessibility, emergency, parking and the collective overlaps and opportunities where these modes come together. A sustainable solution must contribute to a comprehensive transportation plan, which incorporates multiple modes of transportation and anticipates changing technologies and patterns of mobility.*

To achieve the goals of enhanced mobility, improved traffic, and protection of urban assets, the Bored Tunnel Alternative must be analyzed for its overall impact on mobility and connectivity.

+ Identify total mobility needs and how to meet them

A primary use of the viaduct is to provide access to downtown Seattle with approximately 42% of the trips coming and going to downtown neighborhoods. With its focus on bypass trips through downtown, the preferred Bored Tunnel Alternative does not solve the full challenge of the viaduct replacement. With the impacts of tolling included, the preferred Bored Tunnel Alternative only serves approximately one third of the mobility needs currently served by the viaduct. It is incomplete without solutions that enhance local mobility and access. The EIS should identify local mobility and access to downtown as a goal, and evaluate alternatives based on their ability to provide this essential function.

+ Include the impacts of tolling in the model

The analysis in the entire document (except for Ch 9), including travel times, traffic volumes, greenhouse gas emissions, and storm water runoff, assumes that there will be no tolling on the project. However, tolling revenue is an essential part of the basic funding plan, and use of tolling will dramatically affect the impacts. According to the SDEIS, the impact of tolling will be to divert to surface streets an additional 40,000-45,000 vehicles which will be added to the 29,000 additional vehicles sent to surface

2

C-006-003

The strategies to address risk to buildings and historic districts are described in Chapter 6 of Appendix I, Historic, Cultural and Archaeological Discipline Report of the Final EIS. Buildings and structures (both historic and non-historic) along the alignment have been inspected and evaluated by structural engineers. The construction process includes extensive monitoring of each building and structure before, during and after tunneling. This will enable any settlement impacts to be detected immediately so that they can be prevented or minimized. If damage does occur to historic buildings, it will be repaired according to the Secretary of the Interior's Standards for Rehabilitation of Historic Properties.

Chapter 8 of the Final EIS contains the mitigation measures proposed to address potential effects to historic buildings and districts (specifically Pioneer Square).

C-006-004

Estimates for the potential direct emissions of greenhouse gases under the build alternatives are provided in the Final EIS and Appendix R, Energy Disipline Report. All of the build alternatives would result in a decrease in greenhouse gas emissions, compared to the Viaduct Closed (No Build Alternative).

The study area evaluated includes areas likely to be affected by changes in greenhouse gas emissions as a result of the project. The greenhouse gas effects were estimated for roadways within the city center area, as well as in the region. The city center area is bordered by Prospect Street on the north, 15th Avenue on the east, S. Holgate Street on the south, and Elliott Bay on the west. The region includes all the traffic movements in King, Pierce, Snohomish, and Kitsap Counties.

C-006-006 streets in the bored tunnel alternative, resulting in a total of 69,000-74,000 additional vehicles on surface streets.

C-006-007 After analyzing the traffic impacts on surface streets that would result from tolling, the SDEIS concludes that "These effects would not be acceptable as part of a long term tolling solution." (Ch 9, pg 214) No alternative is suggested other than to state that "other scenarios" would be needed. After analyzing tolling impacts on transit riders (Ch 9, pg 215) this SDEIS concludes again that "These effects would not be acceptable as part of a long term tolling solution." No alternative is suggested other than to state that "other scenarios" would be needed.

Modeling should include tolling to clarify its impacts. Without it, the SDEIS creates an inaccurate depiction of traffic impacts.

+ Analyze downtown traffic flow and develop a mitigation plan

When the diversion effects of tolling are included in the model, the negative impacts to downtown's transportation system and its urban design character are significant or intolerable.

The EIS should include a traffic flow model that considers traffic diverted from the tunnel by tolling. The EIS should also include a mitigation plan to show elements in the project needed to prevent, resolve, or mitigate the negative impacts to the functioning of Seattle's local transportation system and to protect and enhance the urban design character of the waterfront.

C-006-008 The EIS must answer these questions: Specifically which city streets will carry the trips in and out of downtown from the tunnel interchanges? How many of these trips will use the new Alaskan Way surface street on the waterfront? How would this affect the waterfront parks and public spaces being planned now?

C-006-009 **+ Quantify needed transit service**

When the bored tunnel as preferred alternative was announced in January 2009, the package included $190 million worth of transit investments. Additional transit service was then, and is now, deemed necessary to provide access to and from downtown Seattle, since the bored tunnel does not provide sufficient access by itself.

The EIS should include and analyze additional transit service for its utility and effect on traffic on surface streets and in the tunnel.

C-006-010 **Risks to Historic Districts**

AIA Seattle supports the protection of historic resources as part of an overall strategy to create and sustain a livable city. To achieve the goal of protecting historic assets, the Bored Tunnel Alternative must fully assess its impact on nearby neighborhoods and include strategies to minimize destruction of historic buildings and neighborhood character.

3

C-006-005

Comment noted. The Bored Tunnel Alternative was identified as the preferred alternative because it best meets the project's purposes (goals) and needs as were stated in Chapter 1 of the 2010 Supplemental Draft EIS. Though the Bored Tunnel Alternative would alter travel patterns to and from downtown, access and mobility to this area would be maintained.

With the Bored Tunnel Alternative, access to downtown would be provided via ramps located at Alaskan Way and Dearborn Street in the Stadium area. Traffic using the Stadium area ramps would disperse over several city arterials, including the improved Alaskan Way, First, Second, and Fourth Avenues to access downtown. Updated analysis has been included in the Final EIS. Appendix C, Transportation Discipline Report, of the Final EIS the detailed transportation analysis, including facility operational analysis, for this project.

C-006-006

Chapter 9 in the 2010 Supplemental Draft EIS discussed the possibility of tolling and effects if tolls were applied to the Bored Tunnel Alternative. In addition, a detailed tolling analysis has been conducted for all alternatives and is presented in this Final EIS. Please refer to Appendix C, Transportation Discipline Report, for additional detailed analysis of tolling impacts to transportation elements.

C-006-007

The analyses regarding how tolls might be implemented as part of the proposed action were preliminary for the 2010 Supplemental Draft EIS but have been updated for the Final EIS. They will be further refined during final design through a joint planning effort (described below) should the state legislature authorize tolls on the SR 99 Bored Tunnel. The analysis in the Final EIS represents a conservative estimate of the impacts of tolling the SR 99 Bored Tunnel. We anticipate that any effects

C-006-011

+ Identify street revisions in Pioneer Square Historic District and describe their impacts

Currently, the viaduct offers seven on and off ramps to provide access to downtown Seattle neighborhoods, spread from the stadium area to Belltown. (Ch 4 pg 74) The Bored Tunnel Alternative reduces the number of downtown ramps to four, and concentrates them all in the southern interchange adjacent to the Pioneer Square Historic District. This configuration concentrates all the traffic going between SR-99 and downtown Seattle on only a few streets, most of them in the Historic District. Because the existing street grid in this area is not well connected, there are not many viable routes; and some of the streets are narrow, fragile, and pedestrian oriented and not well suited for significant increases in traffic load.

The EIS should describe in detail the traffic volumes that are expected on specific streets around the southern interchange, identify street revisions necessary to accommodate the increased load, and describe their impacts. The EIS should answer these questions: How many vehicles will use Alaskan Way, First Ave, Second Ave, Fourth Ave? How will the planned street revisions affect the pedestrian character of the streets? Will the planned revisions remove street parking? Will the planned revisions remove any of the street trees in the Historic District? Will these changes affect the access to and viability of retail? How will the proposed changes to these streets affect the viability of travel by bicycle?

The EIS should also describe alternatives or mitigation strategies being considered, such as additional transit, routing traffic away from the Historic District, or demand management.

C-006-012

+ Analyze the physical risks to historic resources

Boring a tunnel next to Seattle's historic neighborhood, with its historic buildings, fragile and brittle infrastructure, high water table, and unstable soils, is challenging. The SDEIS describes the risks of digging and boring in this location (Ch 5 pg 126), possible damage to 12 historic structures (Ch 2 pg 31), and possible collapse or dramatic damage to two buildings (Ch 5 pg 142) during construction, and mentions measures to protect structures.

Additionally, given that water table is quite close to the surface, there is risk that the solidification of soils, due to tunnel walls, retained cuts at the portals, and the injection of jet grout under buildings, might alter natural water flows, create a water barrier, and cause water to back up in the Pioneer Square Historic District. (Ch 5 pg 127)

The EIS should provide a detailed analysis of these issues. Questions the EIS should answer include: What process will be used to determine the need for jet grout or other protective measures? Which specific buildings will need to be protected? What impacts will the protective measures have on the buildings, underground structures, sidewalks, and streets? What is the risk of submerging subsurface structures and which structures are vulnerable?

due to applying tolls to the SR 99 Bored Tunnel will be notably less than those described in the Final EIS analysis.

Prior to a final decision about how the SR 99 Bored Tunnel would be tolled, the Washington State Department of Transportation will be working with the Seattle Department of Transportation and other agencies to refine and optimize how to toll the SR 99 tunnel while minimizing diversion of traffic to city streets and minimizing potential effects to transit, bicycle, and pedestrian travel. WSDOT, with cooperation from the City of Seattle, the Port of Seattle, and King County, will establish a Tolling Advisory Committee to provide strategies for minimizing diversion impacts.

As part of the Bored Tunnel project and related projects, WSDOT and partner agencies have or will implement several strategies that should reduce the effects of potential diversion. For example, both the south and north portal configurations include bus priority lanes to provide reliable travel times for SR 99 transit service into and out of downtown. The streets that transition between SR 99 and the downtown street grid are designed in a manner that meets the City's Complete Street goals and include treatments for pedestrians, bicycles, freight, and adjacent land uses. Traffic conditions on city streets are compared in Chapter 5 of the Final EIS and in Appendix C, Transportation Discipline Report.

In advance of construction, WSDOT funded Intelligent Transportation System (ITS) investments that provide improved signal operations and travel time information on SR 99 and city streets such as 15th Avenue NW that were likely to see increased volumes due to SR 99 construction activities. These investments will have lasting value. Supplemental transit services and transportation demand management were also implemented with assistance from the City of Seattle and King County, and these strategies can form the blueprint for future strategies.

C-006-013

Reduction of Greenhouse Gas Emissions

AIA Seattle's position statement notes:

> *The environmental stewardship of our region, including the City of Seattle's Climate Action Plan, call for measures that sustain the environment by protecting natural habitats, reducing driving, and making cities more livable.*

To contribute to our state's overall carbon emissions reduction targets and lessen the impacts of global warming, the Bored Tunnel Alternative must identify project impacts on greenhouse gas emissions from vehicular traffic, and develop strategies to bring the project into compliance with carbon reduction targets.

+ Discuss compliance with government GHG reduction targets

The City, County, State and Federal governments have policies urging transportation agencies to pursue decreased Vehicle Miles Traveled over time, and increase the viability of other modes, as part of a larger effort to reduce green house gas emissions from vehicles. The Governor and State Legislature addressed the need to reduce greenhouse gases from transportation in Executive Order 09-05 and in Section 47, Chapter 1, Section 440 of the Revised Code of Washington, which set statewide vehicle miles traveled reduction targets as part of the plan to reduce statewide greenhouse gas emissions. The targets are:

- Decrease the annual per capita vehicle miles traveled by eighteen percent by 2020;
- Decrease the annual per capita vehicle miles traveled by thirty percent by 2035; and
- Decrease the annual per capita vehicle miles traveled by fifty percent by 2050.

The EIS should analyze how this project would help reduce vehicle miles traveled in compliance with the state's VMT reduction targets.

C-006-014

+ Allow for a wider range of low-carbon solutions by focusing on mobility

In the 2006 SDEIS the purpose was "The project will maintain or improve mobility, accessibility, and traffic safety for people and goods along the existing Alaskan Way Viaduct Corridor." This statement of purpose and need allowed for a variety of sustainable solutions, including transit, demand management, or use of available capacity on existing facilities, to be considered as part of a comprehensive solution.

The statement of purpose and need in the 2010 SDEIS addresses only car capacity, rather than the original goals of mobility, accessibility and safety. Yet to meet our ambitious carbon reduction goals, experts and policy makers agree that we must commit to more alternative transportation, and pro-actively plan for reduced Vehicle Miles Traveled.

5

C-006-008

It is expected that, overall, traffic will use several different streets near both the north and south portals to travel to/from the proposed Bored Tunnel. Traffic is expected to distribute based on available capacity and driver consideration of travel time of these various roadways.
Please see the Final EIS, Appendix C Transportation Discipline Report for information regarding traffic volumes on Alaskan Way. The impacts of the Alaskan Way waterfront project are evaluated as part of the cumulative effects of the project and included in the Final EIS. The final design of Alaskan Way will be determined as part of the City of Seattle's Central Waterfront Project.

C-006-009

Added King County Metro transit service is being considered as part of construction mitigation but the funding for this service increase has not yet been secured. Also, improvements to the speed and reliability of transit service will be supported by the project and will continue following construction completion. The project would not be supporting ongoing transit expansion following construction completion. However, transit service enhancements are expected in downtown Seattle; for example, Sound Transit LRT and commuter rail expansion under Sound Transit 2 and the King County Metro RapidRide bus program.

The Final EIS considers King County and Sound Transit planned transit projects in the cumulative effects analysis in Chapter 7. However, the Final EIS does not analyze these transit projects in the manner suggested in this comment because analyzing the effects of other projects is beyond the scope of this Final EIS.

C-006-010

Appendix I, Historic, Cultural and Archaeological Discipline Report, of the Final EIS addresses strategies to minimize impacts to historic areas and demolition of and damage to historic buildings. Mitigation for potential

C-006-014

The EIS should revise the statement of purpose and need (Ch 1 pg 4) to use the long-established definition for this project, 'mobility for people and freight', and not redefine the goal as vehicle capacity.

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C-006-015

Conclusion

The SDEIS reveals that the Bored Tunnel Alternative, while preferable to the other two alternatives examined in the SDEIS, solves only a portion of the challenge. For the project to be successful and enhance mobility and livability in our city, the SDEIS must include additional analysis and recommend additional solutions as part of the project.

The EIS should address the need for effective access into downtown Seattle neighborhoods, and study how to best provide this access for people and freight. The EIS should analyze additional transit service, demand management programs, street improvements that route local trips to other arterials, and I-5 improvements to shed light on how best to improve access to Seattle neighborhoods.

As decision makers weigh the alternatives, it is imperative that the answer not only serve bypass trips, but also enhance access into downtown Seattle neighborhoods, and ensure the opportunity of the new waterfront is protected and not inundated with excess traffic.

Thank you for this opportunity to comment on the SDEIS and its findings. If you would like further information on AIA Seattle's position on the viaduct replacement project, you may visit http://aiaseattle.org/node/1976 or contact Stephanie Pure, AIA Seattle External Relations Director, spure@aiaseattle.org.

With thanks,

Mark Reddington, Co-Chair
AIA Seattle Waterfront Task Force

Lisa Richmond, Executive Director
AIA Seattle

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impacts is addressed in Chapter 8 of the Final EIS and in the Section 106 Memorandum of Agreement. An extensive monitoring program will be undertaken before, during and after tunneling to detect and prevent building settlement.

C-006-011

With the Bored Tunnel Alternative, access to downtown would be provided via ramps located at Alaskan Way and Dearborn Street in the Stadium area. Traffic using the Stadium area ramps would disperse over several city arterials, including the improved Alaskan Way, First, Second, and Fourth Avenues to access downtown. The Bored Tunnel Alternative analysis shows the alternative in general would maintain or slightly improve the intersection traffic operation as compared to the 2015 Existing Viaduct. Chapter 5, Permanent Effects, of the Final EIS discusses transportation operation effects for all the proposed alternatives. Details are included in Appendix C, Transportation Discipline Report, of the Final EIS.

Because operational effects of the built alternative would be substantially better than the Viaduct Closed (No Build Alternative), long-term transportation mitigation measures beyond what are outlined in the alternative definitions (including the Program improvements) are not anticipated. However, a number of mitigation measures in place during construction could have benefits over the longer term. Refer to Chapter 8, Mitigation, in the Final EIS for details.

C-006-012

Buildings and structures (both historic and non-historic) along the alignment have been inspected and evaluated by structural engineers. The potentially affected buildings and the monitoring plan are discussed in Chapter 6 of Appendix I, Historic, Cultural and Archaeological Discipline Report, of the Final EIS. The construction process includes monitoring of selected buildings and structures before, during and after

tunneling. This will enable any settlement impacts to be detected immediately so that they can be prevented or minimized. If damage does occur to historic buildings, it will be repaired according to the Secretary of the Interior's Standards for Rehabilitation of Historic Properties.

Measures that can be employed to mitigate the risk of groundwater mounding behind tunnel walls or ground improved areas are outlined in the Earth Discipline Report, Appendix P, and summarized in Chapter 5 of the Final EIS. The level of detail provided in the Earth Discipline Report is appropriate for environmental review purposes. The risk of groundwater mounding and associated design-related mitigation will be further evaluated during final design of the project.

The Western Building's existing poor structural condition means that it cannot withstand settlement as well as other nearby historic buildings. After studying various options for retrofitting or demolishing the building, and receiving public input, WSDOT determined that a protection plan for the Western Building could be implemented with the Bored Tunnel Alternative. The settlement impacts would be mitigated by:

1. Strengthening the foundation with micro piles and grade beams, or constructing a reinforced concrete wall system, or using a combination of both approaches.
2. Installing epoxy grout and wrap on cracked concrete columns and beams.
3. Constructing a temporary exterior steel frame and interior shoring and bracing.
4. Injecting compensation grout to manage building settlement to less than 0.5 inches.

The steel framing and the interior shoring and bracing would be removed when the risk of settlement diminishes, leaving the exterior appearance of the building approximately the same as it is currently. The work would

be reviewed by the Pioneer Square Preservation Board and would be done in compliance with the Secretary of the Interior's Standards for Rehabilitation of Historic Buildings (36 CFR 67.6). This work would require tenants to be relocated. The building would be unavailable for 12 to 20 months while it is being reinforced.

The Polson Building is not at risk of collapse or demolition, even though it shares an adjoining wall with the Western Building. The surrounding soil would be stabilized with compaction grouting and, if needed, the basement would be reinforced on the interior.

C-006-013

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.

C-006-014

Changes made to the project's purpose and need statement in 2010 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.

C-006-015

The lead agencies do not agree that additional analysis is needed to make a decision about what alternative should replace the failing viaduct. The lead agencies have evaluated a wide range of alternatives and concept since the Draft EIS was published in early 2004. The preferred alternative (the Bored Tunnel) meets the established puproses and needs for the project, which includes:

- Provide capacity of automobiles, freght, 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.

A full discussion of how the preferred alternative meets the project's established purpose and need is provided in the Final EIS. Proposal for additional transit service, street improvements, etc. are discussed in Chapter 7 of the Final EIS where complimentary projects in the local area are discussed. Details about the effects of these complmentary projects is provided in Appendix C, Transportation Discipline Report.