UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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OFFICE OF
ECOSYSTEMS, TRIBAL AND
PUBLIC AFFAIRS

April 15, 2010

Mr. Randolph L. Everett, Seattle Major Projects Oversight Manager
Federal Highway Administration
711 S. Capitol Way, Suite 501
Olympia, Washington 98501

Ms. Jennifer Young, Environmental Manager
SR 520 Project Office
600 Stewart Street, Suite 520
Seattle, Washington 98101

Re: SR 520, I-5 to Medina Bridge Replacement and HOV Project Supplemental Draft Environmental Impact Statement Region 10 Project Number: 00-013-FHW

Dear Mr. Everett and Ms. Young:

F-003-001

The U.S. Environmental Protection Agency (EPA) has reviewed the SR 520, I-5 to Medina Bridge Replacement and HOV Project Supplemental Draft Environmental Impact Statement (SDEIS). We are submitting comments in accordance with our responsibilities under the National Environmental Policy act (NEPA) and Section 309 of the Clean Air Act.

As a result of the mediation process, the proposed project alternative has changed since the Draft EIS was issued and the previously analyzed alternatives are no longer being considered. We appreciate this because the design changes respond to our previous concerns at the Draft EIS stage regarding the Pacific Street Interchange Option. The project termini have also changed. As currently defined in the SDEIS the project spans 5.2 miles from Evergreen Point Road in Medina to I-5 in Seattle. The proposed action is to replace the existing 4 lane SR 520 Bridge, which includes the Evergreen Point Floating Bridge, its east and west bridge approaches, the Portage Bay Bridge, the Montlake interchange, and Lake Washington Boulevard access ramps, with a new 6 lane bridge (4 general purpose and 2 HOV lanes).

The one action alternative, a 6 lane bridge, has 3 design options: A, K, and L. The design options present 3 different configurations for the Montlake interchange and bridge spanning the Montlake Cut. Option A most resembles the current configuration with a second parallel bascule bridge over the Montlake Cut. Option K would have a lowered profile with a single-point urban interchange (SPUI) that tunnels under the Montlake Cut near the west shore of Union Bay. Option L would be aligned similar to Option K but the SPUI would be an elevated structure rising above the SR 520 mainline and crossing the Montlake Cut on a new bascule bridge. The 6-lane Alternative also includes: landscaped lids over the highway, a bike and pedestrian path,

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F-003-001

Since the SDEIS was published, FHWA and WSDOT have identified a Preferred Alternative that is similar to Option A, but with a number of design refinements. The refinements included in the Preferred Alternative are based on direction from the Legislative Workgroup and input from the community and agencies and are intended to reduce the effects presented in the SDEIS. See Chapter 2 of the Final EIS for a description of the planning process and the Preferred Alternative. By agreement with FHWA, WSDOT continues toward completion of the NEPA process by analyzing the Preferred Alternative in the Final EIS.

WSDOT manages traffic noise along highways in accordance with federal and state noise mitigation policies. In addition to noise mitigation measures, which generally include proven technologies such as noise walls and barriers in specific, qualified locations, the Preferred Alternative includes a number of noise reduction strategies along the corridor (see Sections 2.5 and 5.7 of the Final EIS) in response to public concern about noise. The Noise Discipline Report Addendum (Attachment 7 to the Final EIS) describes the results of the proposed noise reduction strategies, to the extent that they can be validly predicted, consistent with FHWA and WSDOT policy.

F-003-001 stormwater treatment and automated tolling. We anticipate it will also include some form of noise reduction, but the nature, extent, and location of these measures will likely remain unclear until final design.

F-003-002 Based on our review of the DSEIS, we have assigned a rating of EC-2 (Environmental Concerns, Insufficient Information), based on the following concerns: the need for additional analysis, disclosure, and mitigation of air quality impacts from project operation and construction; impacts associated with a potential phased construction scenario; the need to provide updated information regarding mitigation for disproportionately high and adverse project impacts on the Muckleshoot Indian Tribe and on low income bridge users; the need to reduce shading impacts and to develop suitable compensatory mitigation for unavoidable impacts to aquatic resources; and the absence of and need for mitigation for upland wildlife habitat impacts. An explanation of this rating is enclosed. Several requests for additional information are also included. Our detailed comments are provided in the enclosure that follows.

Thank you for the opportunity to review and comment on this important project. If you have questions or would like to discuss these comments, please contact Elaine Somers at (206) 553-2966 or me at (206) 553-1601.

Sincerely,

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

Enclosures

F-003-002

The SDEIS provided a comprehensive analysis of effects based on the project design and construction information available at that time. The Final EIS addresses the issues raised during the SDEIS comment period to the extent that they are applicable as part of NEPA environmental review.

Air Quality: The Final EIS provides quantitative analyses of construction effects on air quality and of mobile source air toxics (MSAT) emissions from project operation. The responses to comments F-003-004 through F-003-006 provide further explanation of how construction effects on air quality have been considered. The response to Comment F-003-003 provides further explanation of the additional analysis of the effects of operation on air quality. Regarding EPA's suggestion of additional mitigation, construction effects on air quality are addressed by best management practices and by new federal regulations regarding ultra-low-sulfur diesel fuel. Air quality during operation would be within established standards, and MSATs would be addressed through vehicle technology improvements in accordance with EPA policy; thus additional mitigation for air quality has not been provided. See also the Air Quality Discipline Report Addendum (Attachment 7 to the Final EIS).

Phased Implementation Scenario: The SDEIS discussed the possibility of constructing the project in separate phases over time, with the vulnerable structures (the Evergreen Point floating bridge, west approach bridge, and Portage Bay bridge) built first. Based on updating funding information, this Final EIS discusses the potential for the floating bridge and landings to be built as the first phase of the SR 520, I-5 to Medina project. This differs from the SDEIS Phased Implementation scenario, which included the west approach and the Portage Bay bridge in the first construction phase. See Section 2.8 of this Final EIS and the response to Comment F-003-007 for further explanation.

U.S. Environmental Protection Agency
Detailed Comments on the
SR 520, I-5 to Medina Bridge Replacement and HOV Project
Supplemental Draft EIS

F-003-003

Air Quality, Mobile Source Air Toxics

Operational impacts: Because FHWA guidance uses an average daily traffic volume (AADT) of 140,000 or more as a threshold for quantitative evaluation of mobile source air toxics (MSATs), and because the SR 520 project AADT is estimated to reach 133,750, the SDEIS evaluates air quality with respect to MSATs only qualitatively (p. 5-114). Whether or not the threshold is exceeded, we think a project of this magnitude warrants quantitative analysis of emissions, near roadway effects, disclosure of associated health impacts, and identification of sensitive receptors. Examples of sensitive receptor locations in the project area would include the University of Washington Medical Center, the various project area parks and outdoor recreation areas, daycare facilities, senior centers, and several schools.

This issue is of concern because air toxics emissions, particularly diesel exhaust, are known or suspected to cause cancer or other serious health effects, such as respiratory, neurological, reproductive, and developmental effects. Pursuant to Washington State Senate Bill 6099 (May 2007), a Health Impact Assessment (HIA) was done for the SR 520 project (*SR 520 Health Impact Assessment -- A bridge to a healthier community*, September 2008) with the goals of calculating the project's impact on air quality, carbon emissions, and other public health issues, and making recommendations to enhance the positive impacts and to remove or minimize any negative impacts on health. We commend the project proponents for incorporating positive design features to enhance health, such as vegetated lids and bike/pedestrian trails, which were recommended in the HIA. We also think that the SEIS should incorporate the information on air quality, existing and potential health effects, and sensitive receptors from the HIA.

Recommendations:

- In the Final Supplemental EIS, provide quantitative analysis of MSATs. Include information regarding near roadway effects, health related impacts, and identify sensitive receptors. Much of this information can be obtained from the SR 520 Health Impact Assessment.
- Include the complete SR 520 HIA as an Appendix to the SEIS.

F-003-004

Construction impacts: We are concerned about the potential underestimation of construction air quality impacts that were designated "temporary" in the SDEIS. The duration of the construction period is approximately 7 ½ years (p. 6-128). This is significant as it represents nearly one-fifth of the age of the current bridge, and it could be substantially longer under a phased construction scenario. The significance of 7 ½ years is underscored when one considers the threshold used in the conformity rule. Under the transportation conformity rule, "Temporary increases are defined as those that occur only during the construction phase and last five years or less at any individual site" 40 CFR 93.123(c)(5). The conformity rule does not consider construction periods more than five years as temporary.

Environmental Justice Effects: WSDOT will continue to coordinate with the Muckleshoot Tribe regarding effects on fisheries resources in accordance with EPA and FHWA Environmental Justice policies, and through government-to-government relations. Based on substantial new improvements to transit serving SR 520 and extensive outreach to community-based social service agencies conducted by WSDOT, WSDOT concludes that the effects of the toll on low-income and limited-English-proficiency populations have been greatly minimized. The responses to comments F-003-008 and F-003-009 provide further explanation.

Ecosystems Effects: WSDOT has designed the Preferred Alternative to minimize fill and shading effects to wetlands as much as is practicable. Additional planning for mitigation of effects on aquatic resources has occurred in coordination with resource protection agencies since the SDEIS was published. Mitigation for effects on upland wildlife habitat will be developed in coordination with the City of Seattle during the shoreline permit process. The responses to comments F-003-010 through F-003-013 provide further explanation.

F-003-003

The Air Quality Discipline Report Addendum in Attachment 7 to the Final EIS provides a quantitative analysis of MSAT emissions. MSAT emissions for the SR 520, I-5 to Medina project were estimated based on vehicle volume, vehicle speed, and roadway length. The analysis shows that differences in MSAT emissions between the Preferred Alternative and the No Build Alternative would be negligible and that all MSAT emissions are predicted to decrease significantly from existing conditions. Under EPA policy, MSATs, including diesel particulate emissions, will be addressed through vehicle technology improvements, and emission levels are expected to decline noticeably in the upcoming years despite increased travel. See the Potential Effects section of the Addendum.

F-003-005 The Portland Air Toxics Assessment identified construction activities as a significant source of air toxics in the urban area. In the case of the SR 520 project, construction of new roadways, lids, retaining walls, sound walls, bridge foundations, temporary work and detour bridges, bridge pontoons, bridge removal, and operations in staging areas all individually or cumulatively can be significant sources of regulated pollutants and air toxics. The magnitude of these construction emissions needs to be disclosed and the air quality impacts to sensitive receptors in the area, such as, the University of Washington Medical Center, need to be evaluated.

F-003-006 To determine the magnitude of emissions, the NEPA document should indicate how the construction emissions in tons/day of CO, VOC, and NOx compare to the operations emissions estimated in the SDEIS Exhibit 12, page 20, Air Quality Discipline Report. Construction emissions can be estimated as they are frequently done for General Conformity analyses. Some examples of measures of construction activity that can be converted into emissions are: cubic yards of concrete, hours per year of non-road equipment, miles per year for construction employee commuting, and miles per year for delivery and concrete trucks. The construction of the I-90 floating bridge and approaches provide a source of construction activity data that could be used for this estimate. Construction impacts may be of sufficient magnitude that diesel retrofits and other air quality construction mitigation measures should be required in construction contracts. U.S. DOT CMAQ money can be used to help fund diesel retrofits and there are many examples of construction retrofit contract language across the Country.

Recommendations:

- Quantitatively estimate construction-related emissions of regulated air pollutants and air toxics.
- Require retrofitting of construction equipment in construction contracts.
- See the Clean Construction USA website at http://www.epa.gov/otaq/diesel/construction/ for many examples of construction mitigation measures, case studies, and examples of institutional arrangements for implementing this mitigation.
- Commit to a full suite of air quality construction mitigation measures, including those identified in the SR 520 HIA, to avoid and minimize construction-related emissions to the extent possible.

F-003-007 **Phased Implementation Scenario**

We commend the project proponents for including in the DSEIS an analysis of impacts for the Phased Implementation Scenario. We appreciate the information that it provides, yet we are concerned that perhaps the analysis does not go quite far enough. The Phased Scenario should acknowledge that, at some point, "temporary" impacts should be considered long term or permanent impacts depending on the nature and duration of effects. As stated above, conformity rules under the Clean Air Act identify impacts as temporary only if they last 5 years or less. The question of whether or not this finding should also apply to impacts regarding noise, water quality, habitat, species, and so on should be examined.

The characteristics and health effects of criteria pollutants, including particulate matter, are described in Attachment 1 to the Air Quality Discipline Report, and the Air Quality Discipline Report Addendum includes additional discussion regarding health effects associated with MSATs. WSDOT's analysis was conducted using EPA and Washington State Department of Ecology air quality guidance, which has been formulated to protect human health and the environment. The SR 520 Health Impact Assessment (HIA), which is included as Attachment 14 to the Final EIS, provides further discussion and is also available at http://www.wsdot.wa.gov/Projects/SR520Bridge/Library/technical.htm. In general, the HIA recommended potential measures that could be incorporated to improve the region's overall quality of health, rather than attributing specific health outcomes to the project itself. However, protecting human health is one of the reasons behind many of the studies conducted in the preparation of an EIS.

F-003-004

Since publication of the SDEIS, detailed construction schedules for the Preferred Alternative were developed. Construction of the Preferred Alternative is anticipated to exceed 5 years, warranting a quantitative emissions analysis to examine construction effects for conformity purposes (40 CFR Part 93). The Air Quality Discipline Report Addendum (Attachment 7 to the Final EIS) provides a quantitative analysis of effects on air quality from construction. The analysis describes effects in each area of construction by year (see the Potential Effects section of the Addendum).

Exhibit 3 in the Air Quality Discipline Report Addendum (Attachment 7 to the Final EIS) shows construction stages and durations of the Preferred Alternative by geographic area. Construction is expected to last longer than 5 years in the Portage Bay and west approach areas. Quantitative estimates for air quality emissions are not required for areas where construction would last less than 5 years. However, in response to public

F-003-007

Long term social, economic, and environmental impacts should be acknowledged and appropriately mitigated. For example, local businesses served by Delmar Drive East, 24th Avenue East, and the Lake Washington Boulevard ramps (p. 6-130) would be affected by reduced access and road closures for an indefinite period of time under the Phased Scenario. At some point, these businesses may no longer be viable due to these impacts, yet there is no mitigation proposed for them. At some point, it may be appropriate to consider them as displacements or closures due to the effects of prolonged project construction. This may also become a factor with respect to Tribal fish resources and fishing access, and other affected natural and community resources.

While the precise timing and amounts of funding for a "mega-project" such as SR 520 may be uncertain, we are concerned that the duration of the phased scenario is indefinite. According to the SDEIS, Phases 1 and 2, the bridge/highway structures, would be built first. If the phased construction period lasts too long, it is possible that, based on the life expectancy of the new bridge, escalating project costs together with a changing cost/benefit ratio could lead to a point of diminishing returns for completing construction of the "Phase 3" components of the project – namely the landscaped lids, bike/pedestrian trail connections, and other community livability features. This potential threshold or point of diminishing returns should be analyzed and disclosed in order to identify at what point it might no longer be cost effective to complete the Phase 3 project components because it would soon be time to replace the bridge again. Inability to complete the project would also have the outcome of emitting higher levels of greenhouse gases (GHGs) because the GHG emissions of the phased scenario exceed those of the No Build alternative due to striping to only 4 lanes for the Portage Bay and west approach bridges (p. 5-153).

Recommendations:

- Acknowledge and propose mitigation for potential long term/permanent social, economic, and/or environmental effects due to phased implementation.
- In the Final SEIS, expand the analysis and disclosure of impacts for a Phased Implementation Scenario to include a potential temporal point of diminishing returns or changing cost/benefit ratios over time for completing full project build out.

F-003-008

Environmental Justice

The SDEIS is clear that the Muckleshoot Indian Tribe would suffer disproportionately high and adverse impacts to natural resources (fish resources, fish habitat, and fishing access) and potentially to cultural resources (Foster Island Traditional Cultural Property) due to the proposed project. The SDEIS also states that there will be continued efforts to work with the Tribe to mitigate these impacts. The Final SEIS should disclose whether or not these issues are satisfactorily resolved according to the Tribe.

Recommendation: Work cooperatively and in consultation with the Muckleshoot Tribe to adequately mitigate impacts to tribal resources and report on the progress in the Final SEIS.

F-003-009

We support the proposed mitigation to offset the burden of tolls for low income bridge users. In particular, the ability to use Electronic Benefit Transfer (EBT) cards appears helpful.

comments received on the SDEIS, the Final EIS also includes estimates for areas where construction would last fewer than 5 years (I-5, Montlake interchange, bascule bridge, floating bridge, and Eastside transition areas).

F-003-005

The Air Quality Discipline Report Addendum (Attachment 7 to the Final EIS) quantifies the annual emissions of criteria pollutants in tons per year from construction for several segments of the project by area including the Montlake area (Exhibit 6). Emissions to air in the vicinity of the University of Washington Medical Center would be associated with construction of the Montlake interchange, the second bascule bridge over the Montlake cut, and improvements to Montlake Boulevard. Similarly, the construction schedule identified in the Construction Techniques and Activities Discipline Report Addendum (Exhibit 3) provides a rough schedule of the construction sequence by area. It shows that construction in the Montlake area will take approximately 4 years. Based on the data from these two reports, the exhibits show that air emissions from construction in the vicinity of the University of Washington Medical Center will be generated for a period of approximately 4 years with peak emissions occurring in 2014. See Exhibit 6 in the Air Quality Discipline Report Addendum (Attachment 7 of the Final EIS) for information on the annual amount of estimated pollutants during construction.

F-003-006

The quantitative analysis of effects on air quality from construction accounts for diesel exhaust from construction equipment and hauling, fugitive dust from demolition and site grading, emissions associated with workers' commutes, and other construction-related air quality concerns. During construction, best management practices would be used to minimize construction emissions. WSDOT will comply with the procedures outlined in the Memorandum of Agreement between WSDOT

F-003-009 Even this, however, would require a percentage of the available resources of low income residents that is needed for food and other essentials, for use as tolls. Additional mitigation should be considered, such as, issuance of free transponders and reduced fare transit passes.

Recommendation: Consider additional mitigation for low income bridge users that would offset or decrease the added expense of tolls, such as, free transponders and/or reduced fare transit passes.

Aquatic Resources

F-003-010 Wetlands: The SDEIS does a good job of quantitatively (in acres) evaluating the shading impacts to wetlands and wetland buffers from both project construction and operation phases and the various project design options. It is important to minimize these impacts to the extent practicable. Incorporating the "constant-slope" bridge profile (such as is feasible in design Options A or L), as opposed to a lower bridge profile, would help in this respect as well as to facilitate stormwater flow to treatment facilities without the need for and costs of pumping. We support design options that would serve both needs and maintain context sensitivity to the extent practicable, yet it is important to convey that visual preference should not be considered as justification for increasing wetland impacts.

Recommendation: Design bridge height to be at a level that reduces shading to the extent practicable.

F-003-011 Mitigation: We appreciate that a technical work group has been convened to discuss suitable compensatory mitigation for unavoidable impacts to aquatic resources. We plan to participate in this work group.

Recommendation: Include and involve EPA, the Corps, USFWS, NOAA Fisheries, WDFW, Ecology, the Muckleshoot Tribe and all other interested and affected resource agencies and organizations to develop mitigation plans to protect and restore ecological functions in this important watershed.

F-003-012 Pile driving and fish impacts: The SDEIS (p. 6-85) indicates that bubble curtains appear to be effective mitigation to reduce the severe noise impacts to fish and other aquatic biota from pile driving. On page 6-71 the SDEIS lists other methods considered as potential but less effective mitigation.

Recommendation: The search for effective noise mitigation for pile driving is ongoing. We urge that bubble curtains be used together with any and all other means of mitigation deemed effective, in consultation with the Services and in accord with their recommendations, to lessen the noise impacts from the installation of the thousands of bridge piles needed for work bridges and project bridge supports.

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and the Puget Sound Clean Air Agency for controlling fugitive dust. Federal regulations require the use of ultra-low-sulfur diesel fuel in on-road trucks, and regulations that took effect in 2010 require the use of ultra-low-sulfur diesel fuel for construction equipment. Older equipment does not require retrofitting to use the newer fuel. See the Mitigation section of the Air Quality Discipline Report Addendum (Attachment 7 to the Final EIS) for further discussion.

The Health Impact Assessment (HIA) provided a more general discussion of construction air quality effects and measures to reduce potential effect than is provided in the Air Quality Discipline Report and Addendum. The Discipline Report and Addendum list best management practices to minimize construction-related emissions.

WSDOT encourages its contractors to reduce idling time of equipment and vehicles, and encourages managing construction staging areas to avoid exposing residents or neighborhoods to fugitive dust, consistent with the HIA recommendations. The contractor(s) working on the project will be encouraged to provide a shuttle service for construction workers, as recommended in the HIA. Where possible and practicable, WSDOT can negotiate incentives that could result in shorter construction durations and reduced environmental effects, consistent with the HIA recommendations.

Consistent with the HIA, WSDOT has worked to shorten the overall construction period. Where practicable, construction would be scheduled to avoid periods of heavy traffic, as recommended in the HIA. WSDOT will also minimize construction lane closures and provide temporary lane configurations, as recommended in the HIA. During weekday peak travel, WSDOT would maintain two through lanes on SR 520 in each direction. In addition, the on- and off-ramps at Montlake Boulevard would remain open or temporary ramp connections would be constructed. Most lane and ramp closures required during construction would occur at night

F-003-013 **Wildlife Habitat Impacts**

The SDEIS (p. 6-124, Table 6.16-1) indicates there will be no mitigation for impacts to wildlife habitat/upland vegetation losses. The SDEIS does not indicate what will happen to sites such as these that are disturbed by project construction but not used as project paved area. Wildlife habitat quality is less than optimal in the project area, but is much needed and used by resident species due to its scarcity. Some form of mitigation and restoration, such as, planting of native plant species, should be included in project commitments.

Recommendation: Provide suitable mitigation for impacts to upland wildlife habitat.

F-003-014 **Tolls**

For analysis purposes in the SDEIS, the No Build Alternative was not modeled with tolls (p. 5-117). This is unfortunate because tolling will soon be implemented on SR 520 in its current state as a 4 lane facility. State law now directs that tolls will be placed on all SR 520 through-lanes between I-5 and I-405 to generate revenue for investment in the SR 520 corridor (RCW 47.56.820). As a result, the comparison of alternatives in the SDEIS with respect to traffic analyses, air pollutant emissions, travel time, and overall system performance do not accurately reflect how the No Build Alternative would perform.

Recommendation: For the Final SEIS, analyze the No Build Alternative with tolls.

F-003-015 While the subject of tolls is covered in more detail in a separate Environmental Assessment (*SR 520 Variable Tolling Project*, April 2009), the SDEIS should clarify:

- Whether or not bicycle and pedestrian bridge users would be exempt from paying tolls similar to transit and 3-person HOV users (p. 2-5), and
- How vehicles with 1 or 2 vs. 3 occupants would be accurately determined using transponders for charging tolls.

Recommendation: Include the above information in the Final SEIS and highlight it as new information.

F-003-016 **Design Option Features**

Based on the analysis of impacts in the SDEIS, Design Option A appears the least damaging to the environment overall. However, it would help to clarify whether the impacts of Design Option A could be further reduced by potentially eliminating the auxiliary lane from the Portage Bay Bridge and construct a narrower roadway. In regard to the function of Option A, it would also be helpful to provide a rationale for removing the Montlake transit flyer stop, which is a convenient and efficient transit point, and the potential for including it in the project design. Both features affect roadway width and have associated impacts and benefits, but the SDEIS does not evaluate these as design options.

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and on weekends for limited periods of time. Roadway closure hours and dates would be timed to avoid special events and would be coordinated with closures on other freeways. Chapter 3 of the Final EIS provides further information about construction staging, duration, and activities.

As discussed in the Final Transportation Discipline Report (Attachment 7 to the Final EIS), WSDOT is developing a trip reduction plan focused on keeping people moving through congested areas during construction. This is expected to include a set of temporary transit demand management (TDM) and transit enhancements that will provide additional travel options to people who travel through the study area. Because WSDOT would maintain two through lanes on SR 520 in each direction during the peak periods throughout project construction, WSDOT has not identified an effect that would require additional bus service on SR 520. As construction staging and phasing plans are finalized with the contractor, additional service on the corridor during construction could be considered if WSDOT determines that new effects would occur.

F-003-007

The SDEIS discussed the possibility of constructing the project in separate phases over time, with the vulnerable structures (the Evergreen Point floating bridge, west approach bridge, and Portage Bay bridge) built first. This “Phased Implementation scenario” was analyzed for each environmental resource. Due to the funding shortfall, FHWA and WSDOT still believe it is prudent to evaluate the possibility of phased construction of the corridor should full project funding not be available by 2012. Currently committed funding is sufficient to construct the Evergreen Point floating bridge and landings; a Request for Proposals has been issued for this portion of the project, with proposals due in June 2011. Accordingly, this Final EIS discusses the potential for the floating bridge and landings to be built as the first phase of the SR 520, I-5 to Medina project. This differs from the SDEIS Phased Implementation

F-003-016 *Recommendation:* In the Final SEIS, include the above information regarding these two design features.

Construction – general

F-003-017 Fate of excavation material: The SDEIS indicates (p. 6-124) that Option A would require excavation of 340,000 cubic yards of material, and would use 86,000 cubic yards of fill. Excavation amounts would be even higher for Design Options L and K. There is no information in the SDEIS regarding the use or disposal location of the excess excavated material.

Recommendation: In the Final SEIS, provide an explanation about what will be done with the excavated material from project construction.

F-003-018 Ensuring seamless performance: The SDEIS indicates there would be monitoring to ensure the use of best management practices (BMPs), such as, for erosion control. To document means for compliance, it would be helpful to include in the Final SEIS an explanation of how a project of this magnitude ensures that the mitigation commitments, permit conditions, and all applicable BMPs are implemented as intended/stated in the NEPA documents and permits.

Recommendation: In the Final SEIS, include information regarding mechanisms during project construction and operation/maintenance that ensure seamless performance. As the project progresses, we also recommend visiting the EPA Region 3 Green Highways website at http://www.greenhighways.org/ for ideas and methods that benefit transportation, the ecosystem, urban areas, public health, and surrounding communities.

scenario, which included the west approach and the Portage Bay bridge in the first construction phase. See Section 2.8 of this Final EIS for further information.

As stated in Section 2.8, it is important to note that, while the new floating bridge might be the only portion of the project in place for a period of time, WSDOT's intent is to build the complete project described in this Final EIS. Mitigation measures would be undertaken concurrently with the portion of the project causing the impact. Enhancements (such as lids) would continue to be integral to the project, and would be built at the same time as the corresponding portion of the corridor.

See the responses to comments F-003-004 through F-003-006 regarding analysis of effects on air quality from construction.

F-003-008

WSDOT has worked with the Muckleshoot Indian Tribe Fisheries Division through the Natural Resources Technical Work Group for the SR 520, I-5 to Medina project, and coordinates with other interested tribes regarding the project. WSDOT continues to coordinate with the Muckleshoot Tribe under the terms of the 1989 Centennial Accord between the Federally Recognized Tribes in Washington State and the State of Washington, the New Millennium Agreement, the WSDOT Executive Order on Tribal Consultation, the Centennial Accord Plan of the Washington Department of Transportation, and the Section 106 and NEPA processes.

Regarding impacts to fish and fish habitat, the project was divided into eight zones, based on expected fish species or life-stage use, overall biological functions, and the types of project construction activities that would occur in each zone as part of the Natural Resources Technical Working Group coordination process. Based on this evaluation, specific in-water work windows and best management practices were developed

for each zone to minimize the potential effects to fish species and the life-stages expected to occur. These same zones and fish use characteristics were also used to assess the potential effects of the project and develop appropriate mitigation measures. The conditions in large areas of Union Bay (Zone 4) and Portage Bay (Zone 2) are currently not considered good habitat for salmonids due to the dense aquatic vegetation in the shallow shoreline areas. Therefore, construction activities in these areas are expected to have fewer and less severe effects on salmonids than activities in areas with less vegetation. Additional discussion of project effects from construction activities, including in-water noise and nighttime lighting, were included in the Ecosystems Discipline Report Addendum (Attachment 7 to the Final EIS). Appropriate mitigation measures, which have been determined through coordination with project partners including affected tribes, are identified in the Conceptual Aquatic Mitigation Plan and the Conceptual Wetland Mitigation Plan (Attachment 9 to the Final EIS).

The discussion of environmental justice effects on page 5-50 of the SDEIS acknowledged the reduced access to tribal fishing areas resulting from the larger bridge. An updated discussion of the effects of project operation on usual and accustomed fishing areas is provided in section 5.3 of the Final EIS and in the Environmental Justice Discipline Report Addendum (Attachment 7 to the Final EIS). WSDOT and FHWA will continue to coordinate closely with the Muckleshoot Indian Tribe to quantify the extent to which the wider bridges will affect access to the tribe's usual and accustomed areas and to develop mitigation for adverse effects on treaty fishing activities.

The State Historic Preservation Officer, WSDOT and the Muckleshoot Indian Tribe recognize that Foster Island is a culturally sensitive area. WSDOT has conducted extensive background research to fully understand its significance. As a result, WSDOT is treating Foster Island as a Traditional Cultural Property (TCP) as defined by the National

Register of Historic Places (NRHP). WSDOT will continue to consult with interested tribes about Foster Island according to the Section 106 process and will take the precautions necessary to preserve its significance. The cultural resources analysis found that the Preferred Alternative would diminish the integrity of the Foster Island TCP. The Section 106 process resulted in a Programmatic Agreement and a Foster Island Treatment Plan, which lays the foundation for appropriate mitigation measures with the Muckleshoot Indian Tribe for the TCP. Please see the Final Cultural Resources Assessment and Discipline Report (Attachment 7 to the Final EIS) for further discussion.

The responses to comments in the Muckleshoot Indian Tribe's comment letter on the SDEIS (Item T-001) provide additional detail regarding how WSDOT is addressing the Tribe's concerns.

F-003-009

Since publication of the SDEIS, new information is available that provides a basis for changing the conclusion that tolling would have a disproportionately high and adverse effect on low-income populations. First, there have been substantial improvements to alternatives to paying the toll, including new investments in transit services across SR 520 and rideshare and vanpool options. As a result of these improvements, fewer low-income populations will be adversely affected by the toll than previously assumed, because there are now more affordable alternatives to paying the toll. According to guidance that WSDOT received from FWHA, this minimizes the impact of the toll on low-income populations. Second, FHWA has provided WSDOT with guidance that overall project benefits, including those that apply broadly to all users, should be considered in determining whether there is a disproportionately high and adverse effect on low-income or minority populations. All SR 520 users, including low-income users, will benefit from a safer bridge that is less vulnerable to catastrophic failure. In addition, all SR 520 users, including low-income users, will benefit from a faster, more reliable trip across SR

520. Coupled with the new affordable alternatives to paying the toll that minimize the impact on low-income populations, targeted outreach to environmental justice populations, and mitigation measures undertaken for the SR 520 Variable Tolling Project (discussed in the 2009 Environmental Justice Discipline Report), analysts believe that the overall project benefits offset the adverse effects of the toll on low-income populations. Therefore, no mitigation is now proposed.

F-003-010

The Preferred Alternative includes a constant-slope profile in the West Approach area. The revised heights in the Preferred Alternative were based on a number of factors, including elevating the bridge over Foster Island to reduce land disturbance, maintaining a constant profile for stormwater conveyance, and minimizing the intensity of effects on wetlands and open water from shading. The result is a bridge structure higher than with Option A over much of Foster Island (see the Ecosystems Discipline Report Addendum in Attachment 7 to the Final EIS). WSDOT has designed the bridge to minimize fill and shading effects on wetlands to the greatest extent practicable.

F-003-011

A comprehensive Natural Resources Technical Working Group composed of regulatory agencies, including EPA, was convened from June through October 2010 to detail project effects and discuss appropriate mitigation opportunities. An overview of the group's work can be found in the Agency Coordination and Public Involvement Discipline Report Addendum (Attachment 7 to the Final EIS).

F-003-012

Bubble curtains were shown to be effective in reducing in water noise during a test pile-driving project in 2009 (see the SR 520 Bridge Replacement and HOV Project, Pile Installation Test Program

Underwater Noise Technical Report, March 2010, available at http://www.wsdot.wa.gov/NR/rdonlyres/E12A70C2-7A11-4F83-A37B-6C1D4F22694B/0/SR520PileHydroacousticRpt.pdf. The monitoring results from this test have been shared with the USFWS and NMFS and are available in this report. WSDOT has worked with the Services to develop effective mitigation measures for the in-water pile driving necessary to construct the project, and this coordination will continue through the permitting stages of the project.

F-003-013

Mitigation for effects on upland wildlife habitat will be developed in coordination with the City of Seattle regulations during the shoreline permit process when appropriate commitments will be assigned. In addition, upland buffers protecting mitigation wetlands will provide upland wildlife habitat. Please see the Conceptual Wetland Mitigation Plan in Attachment 9 to the Final EIS.

F-003-014

As explained on page 1-37 of the SDEIS, the SR 520 Variable Tolling Project will implement tolling on SR 520 in 2011 for the primary purpose of managing traffic congestion. This toll would remain in place until the construction of the SR 520, I-5 to Medina project and would then be replaced with new tolls adopted by the Transportation Commission to provide project funding in accordance with the financing plan. Although the state Legislature has authorized allocation of revenues from the Variable Tolling Project to fund the SR 520 Pontoon Construction Project and the SR 520, Medina to SR 202: Eastside Transit and HOV Project, the toll would be removed when the bonds for those projects are repaid, which is expected to be before 2030. Therefore, if the SR 520, I-5 to Medina project were not built, there would be no toll in effect in 2030, which is the year used to compare the No Build Alternative and the Build alternatives. This is why the baseline No Build Alternative assumption is that the SR 520 corridor would not be tolled.

The 4-Lane Alternative evaluated in the 2006 Draft EIS was assumed to be tolled, and was determined not to meet the project purpose and need. As discussed in Chapter 2 of the Final EIS, tolled and “transit-optimized” 4-lane alternative options also would not satisfy the project purpose and need, and therefore have not been advanced for the project. In response to public comments, WSDOT conducted a sensitivity analysis of a tolled 4-Lane Alternative. This alternative was found to provide minimal improvements to mobility compared to No Build. The addition of the HOV lanes improves person-mobility to a much greater degree than any 4-lane option, particularly for users of transit and carpools. Chapter 5 of the Final EIS and the Transportation Discipline Report (Attachment 7) provide additional information.

F-003-015

Bicyclists and pedestrians are assumed to be exempt from tolls. Section 1.11 of the Final EIS also includes information regarding electronic tolling. For additional information see WSDOT’s website at www.wsdot.wa.gov/tolling/.

F-003-016

The Preferred Alternative includes a managed shoulder rather than an auxiliary lane on the Portage Bay Bridge, thus reducing roadway width and associated effects compared to Option A. The addenda to the discipline reports (Attachment 7 to the Final EIS) present assessments of the differences in effects between the Preferred Alternative and Option A. These differences have been summarized in Chapters 5 and 6 of the Final EIS.

The Montlake Freeway Transit Station would be removed to minimize the width of the freeway through the Montlake area. Removing the station would reduce the width by up to 40 feet compared to keeping the station. Also, modifications in the Preferred Alternative include changes

to the Montlake Boulevard interchange and lid to better accommodate transit. Bus stops on the lid would accommodate both eastbound and westbound buses, replacing the current Montlake Freeway Transit Station stops for buses traveling between the University District and the Eastside. University Link light rail is expected to be operational in 2016 and will accommodate some of the trips that now use the stops. Chapter 8 of the Final Transportation Discipline Report (Attachment 7 to the Final EIS) provides further discussion of expected transit operations with the Preferred Alternative, including expected transit travel times and how future transit would incorporate service currently provided at the stops. See Attachment 8 to the SDEIS, Range of Alternatives and Options Evaluated, for further discussion of how and why removal of the stops was considered.

Additionally, since the SDEIS was published, WSDOT and the City of Seattle led a joint design refinements and transit connection workgroup as directed by Engrossed Substitute Senate Bill (ESSB) 6392 that included King County Metro and Sound Transit. ESSB 6392 required the workgroup to evaluate the transit connections at the Montlake interchange/lid and developed recommendations to ensure an adequate level of midday service between the University of Washington/Montlake and the Eastside after the Montlake Freeway Transit Station is closed. The ESSB 6392: Design Refinements and Transit Connections Workgroup Recommendations Report is included in Attachment 16 of the Final EIS.

F-003-017

The SDEIS assumed that 100 percent of the native materials would be hauled off site to an approved disposal site rather than reused. This assumption continues in the Final EIS and the approved location would be determined by the contractor.

F-003-018

During project construction and operation, WSDOT will comply with its Construction Manual, Environmental Procedures Manual, Highway Runoff Manual, and with all permits and approvals. Further, WSDOT will prepare a construction management plan for the project that will include appropriate best management practices, mitigation commitments, and ongoing consultation and coordination with local communities.

WSDOT ensures compliance with all commitments made during the environmental process (NEPA, ESA, Section 106, and permitting) using a number of closely coordinated tools and mechanisms of a department developed Environmental Management System (EMS). That system includes the policies, procedures, tools, training, and auditing elements required to ensure that environmental requirements are effectively and efficiently met. An EMS is usually built on four common principles; Plan, Do, Check, and Act. In WSDOT's case, these core principles are defined and detailed for review on our public EMS webpage at http://www.wsdot.wa.gov/Environment/EMS/default.htm.

In ensuring project compliance with all permit requirements and mitigation commitments, WSDOT will coordinate directly with federal, state, regional, and local regulatory agencies, utilities, and emergency service providers. WSDOT will follow all appropriate best management practices during operation and maintenance of the project.