

STAFF REPORT

**SOUND TRANSIT
MOTION NO. M2001-75**

**Direction on Level of Environmental Documentation for the I-90 Two-Way
Transit Operations Project**

Meeting:	Date:	Type of Action:	Staff Contact:	Phone:
Board of Directors	7/26/01	Discussion/Possible Action	Agnes Govern, Director, Regional Express Jim Edwards, Program Manager, Capital Projects Andrea Tull, Project Manager, Capital Projects	(206) 398-5037 (206) 398-5436 (206) 398-5040

PROPOSED ACTION

The proposed motion requests Board direction to staff on the appropriate level of environmental documentation for the three build alternatives for the I-90 Two-Way Transit Operations project, pending Federal Highway Administration (FHWA) determination on including Alternative R-8A in the environmental analysis.

KEY FEATURES

Highlights of Proposed Action:

- ◆ Requests direction on appropriate level of documentation for evaluating environmental effects associated with the build alternatives under consideration for the I-90 Project, pending FHWA determination on including Alternative R-8A in the environmental analysis.
- ◆ Confirms that the three build alternatives will be carried forward in the analysis and compared to the No-Build alternative.
- ◆ Defers identification of a locally preferred alternative until more information is compiled on the three build alternatives.

Discussion of Proposed Action

Background:

At this time, the Board is being asked to provide direction as to the appropriate level of environmental documentation for the I-90 Project. There are two choices – preparing an Environmental Assessment (EA) or an Environmental Impact Statement (EIS). The main distinction between an EA and EIS is whether the lead agencies believe the project may have probable significant adverse environmental impacts. The lead agencies also can choose to prepare an EIS where there is significant public controversy or if they think an EIS would be helpful for decision makers. Initially, the lead agencies had determined an EA would be appropriate for this project based on the likely impacts. After Alternative R-8A was developed as an additional project alternative, FHWA expressed concern about potential accidents on the

roadway, and other stakeholder groups raised transportation-related and other concerns. Generally, an EIS involves more detailed environmental analysis, evaluation of alternatives, and public process. It also takes longer and is a more costly process (see Budget). An EIS begins with a scoping process, followed by publication of a Draft EIS, public comment period and hearing, and issuance of the Final EIS. For an EA, no scoping process would be required, but there would be publication of the EA followed by a public comment period and hearing, response to comments, and revised EA if necessary. In addition, the EA could include evaluation of multiple alternatives and detailed environmental analysis similar to an EIS.

The purpose of the I-90 Two-Way Transit Operations Project is to provide reliable two-way transit operations on I-90 between Bellevue and Seattle, while minimizing impacts on other users. Transit reliability has decreased by 100% between 1995 and 1997 as congestion increased on the I-90 outer roadways. In the PM peak hour, buses routinely operate up to nine minutes late from Bellevue to Mercer Island and up to 15 minutes late from Mercer Island to Seattle. Some buses operate only a few minutes behind schedule, while other buses have been observed to operate almost 25 minutes late.

Since the project was initiated in 1998, many roadway configurations for the I-90 Two-Way Transit Operations Project have been evaluated extensively and reviewed by the project Steering Committee and the public at open houses. The Steering Committee includes representatives from the cities and/or agencies that were signatory to the 1976 Memorandum of Agreement regarding I-90 operations: the cities of Seattle, Bellevue, and Mercer Island; King County Metro Transit, and the Washington State Department of Transportation (WSDOT); in addition to Sound Transit, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA).

The most feasible alternatives include:

- R-2B: Conversion of the center roadway to two-way for transit and carpool use.
- R-5: Transit-only use of the outer roadway shoulders in the peak periods, eastbound in the morning and westbound in the evening.
- R-8A: Narrowing of the outer roadway lanes to add a transit and carpool lane in each direction.

For more information on the alternatives under consideration, please refer to Exhibit A, attached, for a summary of the draft I-90 Project Status Report.

Based on months of review by all the partners involved with this project, the project partners have stated their various levels of support for the project and the alternatives listed above, as well as their concerns. The I-90 Steering Committee will meet on July 17, 2001 to develop a recommendation on the appropriate level of environmental documentation. This recommendation will be presented to the Sound Transit Board at its July 26 meeting. Information on the position of each partner is listed below.

City of Bellevue	Council Interest statement (4/19/99, reaffirmed 9/20/99) in support of two-way transit and HOV on I-90.
City of Mercer Island	Action (9/18/00) to "Direct the City's representatives to the Sound Transit Steering Committee...to report that Mercer Island's locally preferred alternative for the I-90 roadway is R-8A".

WSDOT	Supports additional analysis of all three alternatives in environmental documentation.
King County	County Council motion (1/16/01) endorsed continued study of Alternatives R-2B and R-8A with the following conditions: <ul style="list-style-type: none"> • Completion of environmental documentation. • Appropriate mitigation of environmental impacts. • Achievement of a safe and cost-effective design. • Goal of not reducing the width of the existing bike/pedestrian pathway.
City of Seattle	Council Transportation Committee action (6/5/01) in support of an EIS to evaluate Alternatives R-2B and R-8A with the following conditions: <ul style="list-style-type: none"> • R-8A must maintain current restrictions in center roadway. • Analysis of R-8A must consider physical and operations improvements to reduce projected increases in accident rates. • Detailed analyses of effects to transportation of hazardous materials must be considered. • Further analysis of R-2B must consider transportation demand measures to mitigate projected traffic impacts. • Impacts to the bicycle/pedestrian facility must be avoided or mitigated.
Washington State Transportation Commission	Has been briefed on the project by WSDOT staff on a quarterly basis since 1998.
FHWA	Federal co-lead for the project with FTA. May 18, 2001, letter noting concerns about safety on I-90, including lane and shoulder widths and projected accident data. Not supportive of R-8A moving forward in environmental analysis at this time based on current information. FHWA determination on including R-8A in the environmental process is needed.
Steering Committee	The project Steering Committee will meet on July 17, 2001, and will develop a recommendation on the appropriate level of environmental documentation for the project. The Sound Transit Board will be asked to take action on the level of environmental documentation at its July 26 meeting.

At this time, FHWA has expressed concern about the proposed narrowing of the outer roadway lanes and shoulders to accommodate a fourth lane for transit and carpools as would occur under Alternative R-8A. According to preliminary analysis, the narrowing of the lanes and shoulders would result in an increase in projected accident rates. FHWA support is needed to be able to proceed with environmental documentation for the project. FHWA will have to approve roadway deviations and, therefore, is one of the federal lead agencies under NEPA along with FTA, who may provide federal funding for the project. As lead agencies, FHWA and FTA administer the NEPA process, including determining whether to proceed with an environmental review, the level of environmental review such as an EA or EIS, and approval of the environmental document in either a Record of Decision or Finding of No Significant Impact. The environmental document will then be used to inform FHWA's action on the deviations and FTA's action regarding commitment of grant funds.

WSDOT is completing a limited cost/benefit analysis and developing modifications to the I-90 roadway to improve safety for Alternative R-8A. Potential modifications include reduced speeds, improved lane delineation and lighting. It is possible that with these improvements projected accident rates can be significantly reduced. Sound Transit and WSDOT are working closely to address FHWA's concerns about safety.

FUTURE BOARD ACTIONS RELATED TO THIS REQUEST

The Finance Committee may be asked to take action on amendments to both the consultant and WSDOT contracts to provide funds for the completion of the environmental analysis and preparation of the environmental documentation. In addition, the Board may be asked to take action regarding funding for the I-90 Two-Way Transit Operations project. Currently, the funding shortfall for the project ranges from \$20 to \$40 million in year 2000 dollars, based on preliminary cost estimates prepared by WSDOT consultants. Potential funding sources are being evaluated and include: regional and statewide sources, transit and roadway funds, potential reprogramming of unobligated grant funds, East King County unanticipated revenues, WSDOT funds from the 2001 Legislature, Statewide STP funds, and Bus Rapid Transit grant funds. In addition, the U.S. House of Representatives-passed version of the FY 2002 transportation appropriations bill includes \$1 million for "I-90 Two-Way Transit Operations." A final recommendation on this FY 2002 federal funding will be made in the fall of 2001.

BUDGET

The I-90 Two-Way Transit Operations project will have a significant funding shortfall, estimated at between \$20 and \$40 million, depending on the alternative selected for construction. Potential funding sources to cover the budget shortfall are being evaluated, as discussed in the preceding section on future board items. The project Steering Committee will be developing a funding strategy over the next several months. Sound Transit will present a funding proposal to the Board for review later this year.

No additional funds are being requested at this time. The Adopted 2001 budget includes \$18.9 million in YOES for the I-90 Two-Way Transit project and \$12.8 million for the Mercer Island Station Park-and-Ride Lot project for a total of \$31.7 million (the two projects are being jointly managed through the preliminary engineering phase). Actual expenditures and outstanding commitments for the combined projects total \$5.5 million for the two projects.

Preparation of an environmental impact statement would add 9 to 12 months to the project schedule and approximately \$1 to \$1.5 million to the project cost, due to the additional environmental analysis and the preparation of a draft and final document.

ALTERNATIVES

1. The Board could direct staff to complete an EA for the project. FHWA determination on including Alternative R-8A in the environmental analysis would be needed prior to completing an EA.
2. The Board could direct staff to complete an EIS for the project. FHWA determination on including Alternative R-8A would be needed prior to proceeding with an EIS.
3. The Board could defer making a decision on the level of environmental analysis, pending determination by FHWA on including Alternative R-8A in the environmental analysis.

CONSEQUENCES OF DELAY

Board direction is needed on the I-90 project. With no action taken on how to proceed on the project, continued support from regional partners is at risk. Analysis needs to be completed to address the questions and issues that have been raised by FHWA and others.

Without action on the project, transit operations will continue to be degraded on I-90, resulting in longer and varying transit travel times and increased transit operating costs for Sound Transit and King County Metro Transit. The increased operating costs affect the numbers of transit trips that can be provided which in turn affects ridership.

REGIONAL PARTNERSHIP AND COOPERATION

Steering Committee members include representatives from the agencies that signed the 1976 Memorandum of Agreement on I-90: the Cities of Bellevue, Mercer Island, and Seattle; King County Metro Transit, and WSDOT, with the addition of Sound Transit; FHWA; and FTA. A project management team comprised of representatives from WSDOT, Mercer Island, King County, and Sound Transit manages the project on a daily basis.

The U.S. House of Representatives transportation appropriations bill for FY 2002 includes the following reference to the R-8A alternative and the EIS process in its accompanying report: "The FHWA shall consider the R-8A proposal for two-way transit operations on Interstate 90 as part of the environmental study process. The report accompanying Senate transportation appropriations bill also includes language: "The FHWA is expected to continue working with the I-90 Steering Committee in Washington State to advance the R-8A alternative through the environmental review process."

PUBLIC INVOLVEMENT

An extensive public involvement process has been implemented for this project, including four project newsletters and nine open houses and workshops. The project mailing list is continually being updated to add interested people. The list currently consists of 11,000 people, including Seattle, Bellevue, and Mercer Island residents and businesses. In addition, a web page has been developed for this project which is updated regularly to include new project information and public meetings. The Steering Committee meetings are open to the public and regularly attended by citizens, representatives of various interest groups, and the media. The Steering Committee has met approximately monthly since 1998, for a total of 23 meetings to date.

Public open houses would be held to take public comment during the environmental scoping process if direction is provided to prepare an EIS for the project.

Sound Transit staff has met with representatives from 1000 Friends of Washington, the Transportation Choices Coalition, the Bicycle Alliance of Washington, Cascade Bicycle Club, the League of Women Voters, and the Seattle Community Council Federation several times over the last six months to discuss the project. This group has expressed interest in the completion of an EIS for the project. They also support evaluating transportation demand management (TDM) measures to mitigate the congestion impacts of Alternative R-2B and to reduce auto trips on I-90. They are concerned that the cumulative effects of the I-90 project be evaluated as well as its relationship to other transportation projects in the region.

Other public comment has been solicited at a project open house in October 2000. People attending the meeting expressed support for Alternatives R-8A and R-2B and concerns about preserving the width of the bicycle/pedestrian path.

LEGAL REVIEW

MBL 7/16/01

SOUND TRANSIT

MOTION NO. M2001-75

A motion of the Board of the Central Puget Sound Regional Transit Authority to provide direction to Sound Transit staff on the appropriate level of environmental documentation for the three build alternatives for the I-90 Two-Way Transit Operations Project, pending Federal Highway Administration (FHWA) determination on including Alternative R-8A in the environmental analysis.

Background:

The purpose of the I-90 Two-Way Transit Operations Project is to provide reliable two-way transit operations on I-90 between Bellevue and Seattle, while minimizing impacts on other users. Since the project was initiated in 1998, many roadway configurations for the I-90 Two-Way Transit Operations Project have been evaluated extensively and reviewed by the Steering Committee and the public at open houses. The most feasible alternatives include:

- R2-B: conversion of the center roadway to two-way for transit and carpools.
- R-5: transit-only use of the outer roadway shoulders in the peak periods, eastbound in the morning and westbound in the evening.
- R-8A: narrowing of the outer roadway lanes to add a transit/carpool lane in each direction.

At this time, the Board is being asked to provide direction as to the appropriate level of environmental documentation for the I-90 Project. There are two choices – preparing an Environmental Assessment (EA) or an Environmental Impact Statement (EIS). The main distinction between an EA and EIS is whether the lead agencies believe the project may have probable significant adverse environmental impacts. The lead agencies also can choose to prepare an EIS where there is significant public controversy or if they think an EIS would be helpful for decision-makers. Initially, the lead agencies had determined an EA would be appropriate for this project based on the likely impacts. After Alternative R-8A was developed as an additional project alternative, FHWA expressed concern about potential accidents on the roadway, and other stakeholder groups raised transportation-related and other concerns. Generally, an EIS involves more detailed environmental analysis, evaluation of alternatives, and public process. It also takes longer and is a more costly process. An EIS begins with a scoping process, followed by publication of a Draft EIS, public comment period and hearing, and issuance of the Final EIS. For an EA, no scoping process would be required but there would be publication of the EA followed by a public comment period and hearing, response to comments, and revised EA if necessary. In addition, the EA could include evaluation of multiple alternatives and detailed environmental analysis similar to an EIS.

Based on months of review by all the partners involved with this project, the project partners have stated their various levels of support for the project and the alternatives listed above, as well as their concerns. The Seattle City Council has expressed their support for the completion of an EIS for the project. At this time, FHWA has expressed concern about the proposed narrowing of the outer roadway lanes and shoulders to accommodate a fourth lane for transit and carpools, as would occur under Alternative R-8A. FHWA support is needed to be able to proceed with environmental documentation for the project.

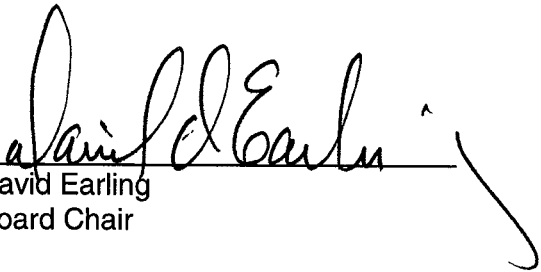
In addition, members of the environmental and bicycling community have expressed their preference for an EIS due to potential environmental effects.

The I-90 Steering Committee will meet on July 17, 2001 to develop a recommendation on the appropriate level of environmental documentation. This recommendation will be presented to the Sound Transit Board at its July 26 meeting.

Motion:

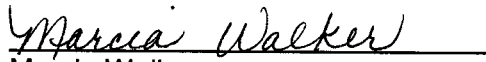
It is hereby moved by the Board of the Central Puget Sound Regional Transit Authority that Sound Transit staff is directed to prepare an Environmental Impact Statement on the three build alternatives for the I-90 project.

APPROVED by the Board of the Central Puget Sound Regional Transit Authority at a regular meeting thereof held on the 26th day of July 2001.



David Earling
Board Chair

ATTEST:



Marcia Walker
Board Administrator

ATTACHMENT A

Draft I-90 Project Status Report--Summary

BACKGROUND

This project status report summarizes the findings of the data collection and technical analyses that have been performed to date for Sound Transit's proposed I-90 Two-Way Transit Operations Project. This project includes the design and construction of modifications to I-90 between Bellevue and Seattle to improve the reliability of transit service on I-90. The project is proposed as part of the region-wide Sound Move program.

NEED FOR THE PROJECT

The need for the project is to provide reliable two-way transit operations on I-90 between Seattle and Bellevue. By providing reliable two-way transit operations, the project supports regional transportation goals. The proposed project would also improve the reliability of connections to the region-wide transit network.

ROADWAY SEGMENT TO BE MODIFIED

The section of I-90 between Interstate 5 in Seattle and the Bellevue Way Interchange in Bellevue is the roadway segment proposed to be modified. The existing I-90 roadway is comprised of three independent freeway alignments: three-lane eastbound and westbound outer roadways, and a two-lane, barrier-separated center roadway. The center roadway is commonly referred to as the I-90 Express Lanes and forms a portion of the region's high occupancy vehicle (HOV) system.

ALTERNATIVES CONSIDERED

Seven alternatives were originally considered and screened to three feasible alternatives: the No Build alternative (R-1); a two-way use of the center roadway (R-2); and the use of the shoulders on the outer roadway (R-5). Since that time, a fourth alternative (R-8) has been added which would add HOV lanes to the outer roadway. There are also a number of operational options for the use of each alternative. The alternatives currently being considered are listed below:

- Alternative R-1: No Build (options would vary based on extent of restrictions on center lane use)
(3 outer lanes in each direction with 2 center reversible lanes)
 - **Option A:** HOV 2+, Mercer Island general purpose (GP) traffic in center roadway (existing operation)
 - **Option B:** HOV 2+, no Mercer Island GP traffic in center roadway
 - **Option C:** HOV 3+, no Mercer Island GP in center roadway
 - **Option D:** HOV 3+, Mercer Island GP in center roadway

- Alternative R-2 Modified: Two-Way Center Roadway (options would vary based on extent of restrictions on center lane use)
(3 outer lanes in each direction with 2 center lanes, one in each direction)
 - **Option A:** Two-way center roadway, transit only
 - **Option B:** Two-way center roadway, transit and HOV
 - **Option C:** Two-way center roadway, transit, HOV and Mercer Island GP traffic

- Alternative R-5 Modified: Transit Shoulders on Outer Roadway
(3 outer lanes in each direction, with two reversible center lanes; peak-hour transit use of existing outer roadway shoulders)
- Alternative R-8A: Add HOV Lanes to Outer Roadway
(Convert outer roadway shoulders to traffic lanes, resulting in 4 outer lanes in each direction, with two reversible center lanes; options vary based on potential center lane restrictions)
 - **Option A:** Existing Restrictions; Mercer Island GP traffic only allowed from Rainier Avenue to Island Crest Way
 - **Option B:** Express Lane Option; Mercer Island GP traffic allowed from Rainier Avenue to Bellevue Way/I-405

SUMMARY OF PRELIMINARY CONCLUSIONS

This section summarizes studies that have been performed to date in connection with the identification and consideration of project alternatives. Due to the nature of project development, the focus has been on transportation benefits and impacts of the various alternatives under consideration, although other issues have also been subject to preliminary study. An extensive public process has occurred to assist in the development of alternatives and to gain information on the potential issues and concerns. A summary of the preliminary information gathered to date is provided. Additional information on the studies, their results, and the public process is set forth below in the body of the project status report.

TRANSPORTATION

Operational changes are expected to occur on I-90 between Seattle and Bellevue with any of the alternatives currently under consideration, including the No Build Alternative. The 1976 Memorandum of Agreement that resulted in the current configuration of I-90 has provisions for consideration of "...efficient transit flow, equitable access for Mercer Island and Bellevue traffic, and traffic-related impacts on Seattle" in determining changes to the mode of operation of I-90. The agreement also includes provisions for operation of the center roadway, and prioritizes access to the center roadway to transit, carpools, and Mercer Island traffic, in that order of priority. Projections of increases in traffic demands in the corridor indicate that an operational change in the current center roadway operation would likely be required between the years 2005 and 2010 to maintain the 45 mph average speed criterion specified in the agreement. The Agreement also requires that proposed changes in the operation of I-90 be considered in consultation with and involvement of representatives from the cities and agencies that were signatory to the 1976 Agreement.

The three build alternatives currently under consideration would all improve transit travel times and reliability relative to the No-Build Alternative operational scenarios that have been analyzed to date. However, each would have varying impacts on other, non-transit users of the I-90 corridor between Seattle and Bellevue.

- **Alternative R-2B Modified** would likely provide the most reliable transit travel times, assuming that the center roadway were managed to limit the total volume of traffic to levels at which reliable operations could be maintained. Provisions for transit/HOV direct access ramps serving the Mercer Island transit station would allow nearly all transit bus trips to have preferential treatment for the length of the corridor. Traffic operations analyses indicate that

it would be necessary to increase the carpool definition in the corridor from the current HOV 2+ person eligibility to an HOV 3+ eligibility requirement in order to provide reliable transit operations. This, in combination with the displacement of Mercer Island traffic from the center roadway to the I-90 outer roadways, would result in severe congestion levels in the peak direction of the outer roadways, despite offering reverse-peak direction transit and carpool access to the center roadway. Because of the congestion levels in the outer roadways, in the year of opening Alternative R-2B modified would have the highest total person hours of travel of the alternatives evaluated to date. This is an indicator of the magnitude of the increase in congestion that would occur with the operational changes that would be associated with this alternative.

- **Alternative R-5 Modified** would have a more modest effect on transit reliability. The physical modifications to I-90 with this alternative would be focused on the westbound PM peak hour transit operations, which currently have increasing travel times and worsening reliability associated with increasing duration and intensity of congestion for this direction and travel period. The proposed transit shoulder operation would improve transit travel times and reliability, but not to the degree of the other build alternatives. However, transit operators have expressed their concern about the limited speeds, restricted sight distance, and weaving movements that would be required to access the transit-only lane, as well as the shared use of the lane for vehicle breakdowns.

Congestion impacts on other traffic would be modest, with congestion levels for non-transit I-90 traffic similar in degree to those that would be expected to occur with the No-Build Alternative. This alternative could, however, adversely affect the safety of the corridor as indicated by a potential increase of 25% to 30% in the total number of accidents of resulting from the geometric changes, including reductions in the width of travel lanes and shoulders, in the westbound outer roadways. The potential increase in accidents could be reduced through additional safety measures, such as speed limit reductions, increased signage, improved lighting and reflective lane markers.

- **Alternative R-8A** is the only alternative analyzed to date that would result in reduced congestion levels for most users of the I-90 corridor. It would improve transit travel times and reliability, but not to the same degree as Alternative R-2B Modified because direct access ramps could not be provided for all transit movements out of the Mercer Island transit station. The key distinguishing feature of Alternative R-8A from the standpoint of traffic operations is that it would allow for higher numbers of carpools in both directions within the corridor, and would accommodate an HOV 2+ eligibility requirement on I-90 further into the future than any other alternative. Increases in total traffic volumes within the corridor would occur, but these increases would be constrained by existing bottlenecks on westbound I-90 east of Bellevue Way, and on eastbound I-90 at the I-5 interchange. Increases of 40% to 60% in the total number of potential accidents in the corridor could be expected as a result of reduced travel lane and shoulder widths, if potential safety issues were not addressed. A number of ways of enhancing safety have been identified: reducing the speed limit in places, increased signage, improved lighting, and reflective lane markers. All would be expected to contribute to reducing the predicted increase in the number of accidents. The Washington Department of Transportation (WSDOT) is continuing discussions with the Federal Highway Administration (FHWA) over potential measures that could be implemented to improve the safety aspects of Alternative R-8A.

A limited benefit/cost analysis of the estimated travel time benefits, potential accident cost increases, increases in WSDOT's I-90 operational costs, and estimated construction costs for the build alternatives under consideration indicated that only Alternative R-8A would have a net

benefit, with a benefit/cost ratio of 3:1 or greater over the 15-year analysis period. Alternatives R-2B and R-5 Modified would have negative benefit/cost ratios; due to increased recurring congestion with the former and due to potential increases in non-recurring congestion and accident costs with the latter.

In addition to the I-90 impacts discussed above, the build alternatives would have limited impacts to associated street networks and related facilities. For example, potential increases in traffic volumes within Seattle would be affected more by changes in the street network associated with the SR 519 project (on Atlantic and Royal Brougham Streets between 4th Avenue South and 1st Avenue South) than with any of the I-90 build alternatives. Alternative R-2B would shift carpool traffic from the 4th Avenue/SR 519 ramps to the 5th Avenue ramp while Alternative R-8A could result in higher traffic volumes in the south downtown area, but again at lesser volumes than would be expected with the SR 519 project.

Alternatives R-5 modified and R-8A would result in modifications to the Homer M. Hadley floating bridge that would affect the existing multi-use pedestrian/bicycle path across the bridge. With either alternative, the existing multi-use path would be narrowed or shifted to the north, and motorized traffic on westbound I-90 would operate closer to the path due to shoulder width reductions on the bridge. Analyses to date indicate that it would be technically feasible to maintain the existing pathway width by widening the floating portion of the structure by two feet. It may be possible to mitigate the impact of shifting westbound traffic closer to the path with screening and other measures.

GEOLOGY AND SOILS

The construction activities associated with each of the roadway alternatives have the potential to cause erosion; however, these impacts could be minimized by implementing best management practices. When construction has been completed, the paved surfaces and roadside landscaping associated with the roadway alternatives would control all potential erosion/sedimentation from the I-90 corridor.

AIR QUALITY

Air quality is not anticipated to be substantially affected by any of the alternatives.

HYDROLOGIC SYSTEMS AND SURFACE WATER RUNOFF

During construction of the I-90 modifications associated with each of the alternatives, there would be the potential for surface water to become polluted by oil, grease, sediment, and construction/general domestic wastes. However, these potential impacts would be minimized by treating surface water from the construction areas in the existing stormwater management systems and installing temporary control measures such as silt fences. When operational, increased runoff volumes and flows would occur in areas of I-90 where the road pavements are widened and new ramps constructed. However, given that these areas represent a small increase in the total paved area within the I-90 corridor, the volume of increased runoff is not expected to overload existing stormwater drainage systems and cause flooding. Additional water quality treatment facilities could be installed on Mercer Island and near the HOV ramp at the Bellevue Way interchange to ensure that stormwater is adequately treated before being discharged to the receiving waters.

Reallocation of the roadway deck space on the floating bridges would necessitate the relocation of existing grate inlets and the installation of additional scuppers to reduce gutter flow widths.

PLANTS AND ANIMALS

Construction of the proposed I-90 modifications would necessitate the removal of some landscape plantings within the existing road corridor but would not change the vegetated areas surrounding the corridor. Although eagle habitat is located near the project, no impacts are expected due to the limited or lack of habitat within the roadway corridor itself. Further, the construction activities would not be expected to negatively impact salmon habitat because these activities would take place in the existing highly modified I-90 corridor would not require stream or fish habitat modification or destruction of riparian vegetation and stormwater mitigation measures would be put in place during construction. A biological assessment that addressed potential effects to habitat would be prepared as part of the environmental documents for the project.

NOISE

Studies that have occurred to date have been limited to noise monitoring on Mercer Island and modeling of potential noise level changes at those monitoring locations. Additional monitoring and modeling in the vicinity of the Corwin curves will be required in order to identify noise impacts associated with the roadway alternatives.

HAZARDS AND RISKS

No hazardous materials have been identified within the corridor. The potential risk of spills or releases during construction could be minimized through the use of spill prevention and response methods. Further, a hazardous materials management plan can serve to minimize any adverse effects associated with any discovery of hazardous materials during construction. As a result, no, or minimal, effects from hazardous materials in the area are expected for any of the proposed project alternatives.

VISUAL QUALITY

Construction activities would temporarily compromise the visual quality of the I-90 corridor through the removal of existing landscaping, generation of dust and debris, and the presence of large items of construction equipment. However, measures such as using street sweepers to clean up debris and soils would minimize these impacts. Removal of vegetation to accommodate the proposed I-90 modifications would diminish the visual quality of the corridor for motorists after construction has been completed. To minimize these impacts, additional landscaping would be provided in some areas to compensate for the loss of landscaping in others, and structures such as the new ramps would be consistent with the architectural design of the existing I-90 structures.

LAND USE/DISPLACEMENTS

No displacements would occur as a result of any of the alternatives.

RECREATION [SECTIONS 4(F) AND 6(F)]

During construction, dust emissions, noise generation, and construction traffic may temporarily affect the recreational use of the sculpture garden park located on the south side of Interstate

90 near the Mercer Island central business district. When constructed, the I-90 modifications would not affect the use of the park.

HISTORICAL/ARCHAEOLOGICAL/CULTURAL RESOURCES

No historical, archeological, or cultural resources are located within the I-90 corridor.

SOCIAL JUSTICE

An environmental justice analysis would be prepared for the project in compliance with EO 12898.

PUBLIC SERVICES AND UTILITIES

The construction activities, such as the excavation and widening of roadways and construction of new HOV ramps, may temporarily disrupt existing services. These effects could be lessened by careful planning of street closures and detours, and the hours of closures, with local agencies. No long-term disruptions or impacts to public services and utilities are expected to result from any of the project alternatives.