

These effects would increase visual intrusion because of the additional traffic lanes and wider footprint of SR 520, which would modify the visual setting of this historic district. The existing bridges at 10th Avenue East and Delmar Drive East would be replaced by a single landscaped lid that would accommodate both streets and would have Olmsted style landscaping to visually link the bridges with Roanoke Park. The lid would have beneficial effects because it would provide a pedestrian passageway between the North Capitol Hill and Roanoke/Portage Bay neighborhoods currently separated by SR 520, increase landscaped green space in the area, and reduce noise levels. Existing sound levels range from 61 to 77 dBA. Construction of the lid would change levels to 59 to 78 dBA. Of the 12 noise monitoring locations in the historic district, seven would have decreased noise levels of 1 to 4 dBA, one would have increased noise levels of 1 dBA, and four locations would have no changes in noise levels. For more information, see Appendix M, *Noise Discipline Report*.

Mason House

The Mason House at 2545 Boyer Avenue East (determined NRHP eligible) would experience increased visual intrusion because of the wider footprint of SR 520 and the Portage Bay Bridge. However, because the bridge is expanding mainly to the north, away from the house, the adverse effect would be much less than if it were expanded to the south. Installation of a sound wall along SR 520 and the Portage Bay Bridge would have a beneficial effect on the Mason House because of reduced sound levels. The existing noise level at the receptor closest to this point is 70 dBA. The construction of sound walls would result in a noise level of 58 dBA, a substantial decrease of 12 dBA.

Proposed Montlake Historic District, Including NOAA Northwest Fisheries Science Center and MOHAI

The 6-Lane Alternative would have proximity effects on selected buildings in the NRHP-eligible Montlake historic district (**Exhibit 41**) because of the additional lanes, new sound walls, and new or widened bicycle/pedestrian paths. Buildings located on the south side of East Hamlin Street would lose some of the landscaped buffer zone behind their rear property lines, thereby increasing visual intrusion. However, the 6-Lane Alternative would have a beneficial effect by installing sound walls along SR 520. Existing sound levels range from 60 to 75 dBA. Installing sound walls would lower levels to 53 to 73 dBA, which would decrease the noise levels in this historic district. Of the 31 noise monitoring locations in the historic district, 23 would have decreased noise levels from 1 to 9 dBA, three would have increased



noise levels of 1 dBA, and one would have no change in noise levels. See Appendix M, *Noise Discipline Report*, for more information.

In addition, the project would lower the SR 520 roadway up to 10 feet and place a lid at the Montlake Boulevard bridge. The lid would be landscaped in the Olmsted style, with a pedestrian passageway and green space along the sides. The beneficial effects of the lid would be to reduce visual intrusion and noise from the roadway, as well as to reunite the two sides of the NRHP-eligible Proposed Montlake historic district currently separated by SR 520.

The main building of the NOAA Northwest Fisheries Science Center on Montlake Boulevard (eligible for the NRHP) would experience some surrounding property loss, as well as visual intrusion from the new sound wall and closer proximity to the Portage Bay Bridge and added new traffic lanes. As a beneficial effect, the introduction of sound walls would help decrease sound levels as noted above, as well as provide some visual screening from the roadway. Existing noise levels in this area range from 66 to 69 dBA. The construction of sound walls would lower these levels to 60 to 61 dBA, decreasing sound levels in this area of the historic district.

On the north side of SR 520, the houses along East Park Drive, East Shelby Street, and the east end of East Hamlin Street would experience a visual effect from the new 24th Avenue East bridge, which would be higher than the existing bridge, and from the introduction of the new bicycle/pedestrian path reaching from the SR 520/24th Avenue East bridge through McCurdy Park along East Park Drive.

On the south side of SR 520, houses near the 24th Avenue East bridge would experience an increased visual effect from the rebuilt bridge, which would be higher than the existing bridge. Houses at the west end of Lake Washington Boulevard East and those facing East Montlake Place East would experience increased visual and audible effects because of the expansion of SR 520, widening of East Montlake Place East, and reconstruction of the Montlake Boulevard/Lake Washington Boulevard East intersection. However, the installation of sound walls at the on- and off-ramps of SR 520 and construction of the Montlake Boulevard lid (discussed earlier) would reduce noise levels.

Historic structures located at the east end of Lake Washington Boulevard East would experience increased visual intrusion because of the addition of new elevated HOV ramps and the higher roadway at





- 6-Lane Footprint
- Not NRHP Eligible
- NRHP Eligible Historic District**
- Contributing
- Non-Contributing

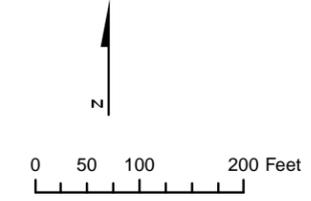


Exhibit 41. Effects of the 6-Lane Alternative on Historic Resources in Proposed Montlake Historic District
SR 520 Bridge Replacement and HOV Project

the west approach of the Evergreen Point Bridge. As a beneficial effect, the 6-Lane Alternative would remove the existing ramps and rebuild the new bridge structure east of the current location, farther from the historic structures. The installation of sound walls would reduce noise levels, as discussed earlier.

The 6-Lane Alternative would demolish MOHAI, which is located at 2161 East Hamlin Street within the NRHP-eligible proposed Montlake historic district (**Exhibit 41**). Even if a portion of the building could be retained, the original historic southern portion of the building would be removed. The expanded lanes and closer proximity of SR 520 to the building would severely affect the setting. In addition, the new bicycle/pedestrian path and the stormwater treatment wetland would eliminate most of the existing parking for MOHAI, greatly reducing its viability as a public facility and further affecting the setting. The higher elevation of the 24th Avenue East bridge and west approach to the Evergreen Point Bridge would also affect the setting and have an adverse visual effect on the site.

Washington Park Arboretum

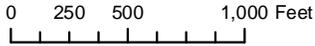
In the northern section of the Arboretum, a beneficial effect would be the redevelopment of the existing trail system and the addition of two new trail connections (**Exhibit 42**). Redevelopment and expansion of the trail system in this area would help complete the loop trail through the Arboretum and provide additional links north and south of SR 520.

The proposed westbound lanes of SR 520 would intrude roughly 83 feet northward onto Foster Island. The total area of acquisition would be 1.8 acres, or 5.7 percent of Foster Island, but less than 1 percent of the total area of the Arboretum. The highway mainline would be elevated approximately 43 feet above the Arboretum Waterfront Trail on Foster Island; the land underneath the footprint of the highway could, therefore, be returned to park use after construction, except for the area required for the piers necessary to support the highway structure. Because of the proposed northern shift of the highway alignment, the area of Foster Island south of SR 520 that is currently occupied by WSDOT right-of-way (roughly 1.1 acre) could be returned to park use after construction of the proposed project (this is in addition to the area under the proposed highway footprint that could be returned to park use after construction). The resulting net loss would be 0.70 acre or 2.2 percent of the existing park area.





-  6-Lane Footprint
-  Washington Park Arboretum



**Exhibit 42. Effects of the
6-Lane Alternative on
Washington Park Arboretum**
SR 520 Bridge Replacement and HOV
Project

Current noise levels in the northern part of the Arboretum (Foster Island and the adjacent Marsh Island) are expected to decrease by 6 dBA to as much as 13 dBA (depending on location) due to the proposed sound walls on both sides of SR 520. Because the highway mainline would be elevated approximately 43 feet above the Arboretum Waterfront Trail, the highway would become a more dominant and highly visible feature that would affect the visual environment of the Waterfront Trail. Similarly, the visual landscape, looking north to Marsh and Foster islands from the south side of SR 520 would also change with the addition of new, higher west-to-south and north-to east Lake Washington Boulevard ramps.

The Waterfront Trail currently crosses under SR 520 in a tunnel. The increased elevation of the SR 520 structure would allow the trail to be reconstructed at-grade, instead of passing through the tunnel. Although slight shading could occur on the trail, the beneficial effect of daylighting the trail (the SR 520 structure would be more than four stories above the trail) would outweigh any shading that could occur. New west-to-south and north-to-east Lake Washington Boulevard ramps would be built south of the proposed SR 520 mainline. As discussed earlier, although this area is perceived to be part of the Arboretum, it is within WSDOT right-of-way. While some of the existing mature trees and grass would be removed to accommodate the new ramps, the existing ramps would be removed and that area would be available for recreational use. Additionally, because the new ramps would be placed closer together, less overall area would be covered, resulting in larger contiguous portions of open space available for park use. For more information of effects to park resources, see Appendix O, *Recreation Discipline Report*.

Although no recorded archaeological sites have been encountered on Foster Island in the Arboretum, it is a known area of cultural significance that may be affected by the 6-Lane Alternative. Subsurface archaeological testing and an investigation of the island's geomorphology, which will determine the historic and prehistoric footprints of Foster Island, would help WSDOT to avoid disturbing this high probability area.

Attachment 5 summarizes the effects of the 6-Lane Alternative on historic resources that have been determined eligible for the NRHP in the Seattle project area. **Exhibits 40, 41, and 42** graphically display the historic resources identified in Attachment 5.



Lake Washington

How would the project permanently affect eligible archaeological or traditional cultural resources in the Lake Washington project area?

Neither the 4-Lane nor the 6-Lane Alternative would permanently affect any archaeological or traditional cultural resources that are listed in or eligible for listing in the NRHP or WHR. Construction in archaeological high probability areas, if not mitigated through scientific data recovery or other suitable measures, could result in adverse effects if eligible archaeological sites are discovered prior to or during construction. There are no areas of high archaeological probability in the Lake Washington project area.

How would the project permanently affect eligible historic buildings and structures in the Lake Washington project area?

The Evergreen Point Bridge is eligible for the NRHP and WHR. The following discusses the potential effects of the alternatives on the bridge.

No Build Alternative

Conditions under the Continued Operation Scenario would remain as they are today. The continued use of the current Evergreen Point Bridge would have no further effects on any listed or eligible historic resources, other than continued normal wear on the bridge itself, which is eligible for the NRHP and WHR. Therefore, the Continued Operation Scenario would not have any additional effects on historic resources.

The Catastrophic Failure Scenario would result in the demolition of the bridge and the complete loss of this NRHP and WHR eligible bridge structure, which would be an adverse effect.

4-Lane Alternative

The 4-Lane Alternative would remove the existing Evergreen Point Bridge and construct a new bridge. This would necessitate the removal of the current structure, which is eligible for the NRHP and WHR, resulting in an adverse effect.

6-Lane Alternative

The 6-Lane Alternative would remove the existing Evergreen Point Bridge and construct a new Evergreen Point Bridge. This would



necessitate the demolition and removal of the current structure, which is eligible for the NRHP and WHR, resulting in an adverse effect.

Eastside

How would the project permanently affect eligible archaeological resources in the Eastside project area?

Neither the 4-Lane nor the 6-Lane Alternative would permanently affect any known archaeological or ethnographic sites that are listed in or eligible for listing in the NRHP or WHR. Construction in archaeological high probability areas, if not mitigated through scientific data recovery or other suitable measures, could result in adverse effects if eligible archaeological sites are discovered prior to or during construction. The shoreline below SR 520 could potentially contain temporary campsites, but the steep bluff makes regular use of the lakeshore in this spot unlikely, and the original SR 520 construction may have significantly disturbed the lakeshore deposits. The till uplands could contain shallow special-purpose or camp sites along travel routes (but non-lithic materials are unlikely to be preserved in acidic soils). Low spots between the uplands, adjacent to marshes and creeks, could contain archaeological materials (BOAS 2005:99). Subsurface archaeological investigations should be conducted in all accessible locations identified as high probability for archaeological resources (BOAS 2005: Appendix H). The type and extent of investigations would be specific to each area identified, ranging from shovel probe excavation with hand tools, to investigation using mechanical coring and backhoes.

How would the project permanently affect eligible traditional cultural resources in the Eastside project area?

There are no known traditional cultural properties in the Eastside project area. However, WSDOT has determined that additional work should be conducted prior to selection of either the 4-Lane or the 6-Lane Alternative. This work includes the collection of oral histories from tribes with members of Lakes Duwamish descent and subsurface investigations of accessible locations where there is a probability for the discovery of archaeological deposits. This would could be conducted concurrently so that data from one could enhance interpretation of data from the other.

Oral history interviews should be conducted by a qualified anthropologist with a thorough familiarity with local tribes and



ethnographic data. Oral history interviews should be conducted with tribal elders in the Duwamish Tribe, Muckleshoot Indian Tribe, Snoqualmie Tribe, and Suquamish Tribe, according to protocols for such interviews established at each tribe. The anthropologist should request to review data from earlier oral history interviews available in tribal archives.

The anthropologist should also conduct oral history interviews with elders who are affiliated with other tribes and who have ancestral ties to the project area (possibly Lummi Nation, Tulalip Tribes, and Yakama Nation). The extent of data available for the SR 520 area at each of these tribes should be determined during initial tribal meetings.

How would the project permanently affect eligible historic buildings and structures in the Eastside project area?

No Build Alternative

The Continued Operation Scenario would not have any additional direct effects on historic resources. Conditions would remain as they are today. The most notable of the current effects are visual intrusion from SR 520 and noise from vehicles traveling on it. The existing SR 520 is near NRHP-eligible residences at 2851 and 2891 Evergreen Point Road, and a WHR site at 2857 Evergreen Point Road. These properties experience highway noise, air pollution, and visual intrusion from the highway and bridge. The historical setting of the WHR site at 2857 Evergreen Point Road, which is located at the base of the Evergreen Point Bridge, is strongly affected by the physical, visual, and audible presence of the highway and the bridge.

The Bellevue Christian School, an NRHP-eligible property near SR 520, currently experiences the same effects as the three sites noted above.

The Catastrophic Failure Scenario would not have any additional direct effects on historic resources on the Eastside.

4-Lane Alternative

The project could have long-term proximity effects on several historic resources in the Eastside project area.

The 4-Lane Alternative would have proximity effects on an NRHP-eligible residence, 2891 Evergreen Point Road, and a WHR site at 2857 Evergreen Point Road. The residence at 2891 Evergreen Point Road would experience increased visual intrusion from the relocation of the Evergreen Point Bridge to the north, resulting in greater proximity of



the highway to the property. The removal of structures and vegetation that currently buffer and screen the property from the roadway and the installation of new sound walls would also have a negative visual effect. However, the installation of a sound wall at this location would provide a beneficial effect through reduced noise levels. Current noise levels at this site are 73 dBA. Sound walls would reduce the noise level to 67 dBA.

The project would build a new bridge operations facility next to the WHR site at 2857 Evergreen Point Road. Construction of this facility, which would comprise a structure tucked into the hillside inside the bridge abutment as well as a dock, could slightly increase noise in the area during times of use, and would increase visual intrusion. See Appendix S, *Visual Quality and Aesthetics Discipline Report*, for further information. In addition, a bicycle/pedestrian path and the bridge operations facility access road would lie adjacent to this site, which is currently secluded and not accessible by the public. The higher elevation of the Evergreen Point Bridge would have a visual effect on the site. However, the site would experience a beneficial effect when the location of the bridge is shifted north, away from the site, and from the installation of sound walls. Current noise levels near this site are 68 dBA. The sound walls would reduce the noise level to 57 dBA. See Appendix M, *Noise Discipline Report*, for more information.

The NRHP-eligible residence at 2851 Evergreen Point Road would be directly affected by the project. Part or all of the garage and possibly a portion of the northeast corner of the structure would be demolished to accommodate the new bicycle/pedestrian path and bridge operations facility access road. The garage, originally a carport, is not an original part of the design of the house, but a later addition. The house would experience a beneficial proximity effect with the installation of a sound wall along SR 520. Current noise levels near this site are 64 dBA. Sound walls would lower the noise level to 58 dBA.

The Bellevue Christian School, an NRHP-eligible property, would lose a small piece of its property to accommodate a new bicycle/pedestrian path. However, the 4-Lane Alternative would have a beneficial effect on the property because of the construction of sound walls along SR 520 to reduce noise levels. The current noise levels range from 66 to 71 dBA. The proposed sound walls would reduce the levels to 59 to 63 dBA, resulting in a decrease in noise at this historic property.



Attachment 6 summarizes the effects of the 4-Lane Alternative on historic resources that have been determined eligible for the NRHP or the WHR in the Eastside project area. **Exhibit 43** graphically displays the historic resources identified in Attachment 6.

6-Lane Alternative

The project could have long-term proximity effects on several historic resources in the Eastside project area.

The 6-Lane Alternative would have proximity effects on two NRHP-eligible residences, 2851 Evergreen Point Road and 2891 Evergreen Point Road, and a WHR site at 2857 Evergreen Point Road.

The NRHP-eligible residence at 2891 Evergreen Point Road would experience increased visual intrusion because of the relocation of the Evergreen Point Bridge to the north and the resultant proximity of the highway to the property, the installation of new sound walls, and the removal of structures and vegetation that currently buffer and screen the property from the roadway. However, the installation of a sound wall at this location would provide a beneficial effect through reduced noise levels. Current noise levels near this site are 64 dBA. Sound walls would lower the noise level to 59 dBA.

The Evergreen Point Road lid would have beneficial visual and audible effects on the NRHP-eligible residence at 2851 Evergreen Point Road. This landscaped lid would increase green space adjacent to the property and reduce the visibility of SR 520 from the property, which would partially restore the original setting, and it would decrease noise levels. The current noise level at this site is 73 dBA. The lid would reduce the noise level to 62 dBA.

The project would build a new bridge operations facility next to the WHR site at 2857 Evergreen Point Road. Construction of this facility, which would comprise a structure tucked into the hillside inside the bridge abutment as well as a dock, could slightly increase noise in the area during times of use, and would increase visual intrusion. See Appendix S, *Visual Quality and Aesthetics Discipline Report*, for further information. In addition, a bicycle/pedestrian path and a bridge operations facility access road would lie adjacent to this site, which is currently secluded and not accessible by the public. The higher elevation of the Evergreen Point Bridge would have a visual effect on the site. However, the site would experience a beneficial effect when the location of the bridge is shifted north, away from the site, and from the construction of new sound walls. Current noise levels near this site are





- 4-Lane Footprint
- WHR Eligible
- Not NRHP Eligible
- NRHP Eligible



0 50 100 Feet



Exhibit 43. Effects of the 4-Lane Alternative on Historic Resources in the Eastside Project Area

SR 520 Bridge Replacement and HOV Project

68 dBA. The sound walls would reduce the noise level to 55 dBA. See Appendix M, *Noise Discipline Report*, for more information.

The Bellevue Christian School, an NRHP-eligible property, would lose a small piece of its property to accommodate a new bicycle/pedestrian path. However, the school would benefit from construction of the Evergreen Point Road lid and new sound walls, which would reduce the existing sound levels of 66 to 71 dBA to 58 dBA to 65 dBA. See Appendix M, *Noise Discipline Report*, for more information.

Attachment 7 summarizes the effects of the 6-Lane Alternative on historic resources that have been determined eligible for the NRHP in the Eastside project area. **Exhibit 44** graphically displays the historic resources identified in Attachment 7.

What temporary project construction effects are common to the entire project area?

Nearly all resources of the historic built environment within the APE would be affected by noise and vibration during construction. Fugitive dust generated during construction might also temporarily affect these historic buildings, most of which are residential. Traffic from construction equipment accessing the work site could generate short-term noise, vibration, and dust.

How would project construction temporarily affect eligible cultural resources in the Seattle project area?

The 4-Lane and 6-Lane Alternatives would affect the following historic resources in the Seattle project area. In the NRHP-eligible proposed Roanoke Park historic district, 1004 and 1018 East Roanoke Street may have access restricted during construction, particularly during the widening and reconstruction of the 10th Avenue East and Delmar Drive bridges. Properties within the historic district may be affected by vibrations, especially during construction of the elevated HOV ramp from I-5 to SR 520, and during demolition and construction of the 10th Avenue East and Delmar Drive bridges/lid. The Mason House on Boyer Avenue may be affected by vibration that would occur during demolition and reconstruction of the Delmar Drive Bridge and the

