

18 July 2006

**SR 520 Bridge Replacement
and HOV Project Draft EIS**

Appendix P

**Draft Section 4(f)
Evaluation**



SR 520 Bridge Replacement and HOV Project EIS

Section 4(f) Evaluation



Prepared for
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Acronyms and Abbreviations

APE	area of potential effect
dBA	decibel (A-weighted scale)
FHWA	Federal Highway Administration
HABS/HAER	Historic American Building Survey/Historic American Engineering Record
HCT	high-capacity transit
IAC	Interagency Committee for Outdoor Recreation
LWCF	Land and Water Conservation Funds
MOHAI	Museum of History and Industry
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
NRHP	National Register of Historic Places
SHPO	State Historic Preservation Office



Introduction

What is Section 4(f)?

Section 4(f) of the Department of Transportation Act of 1966 (49 USC Section 303) prohibits the Federal Highway Administration (FHWA) from approving a project or program that uses land from a significant public park, recreation area, wildlife or waterfowl refuge, or historic site unless:

1. There is no feasible and prudent alternative to the use of the land.
2. The project includes all possible planning to minimize harm to the property.

If a feasible and prudent alternative that avoids such use is identified, it must be selected. If such use is unavoidable, then possible measures that minimize harm to the property must be identified and incorporated into the proposed project.

If any resources protected by Section 4(f) are used by a project, a Section 4(f) Evaluation must be prepared. The Section 4(f) Evaluation includes a description of affected resources, a discussion of the specific uses(s) of the resources, identification and evaluation of alternatives that avoid such uses, and potential measures to minimize harm resulting from unavoidable effects to Section 4(f) resources.

What are the key points of the Section 4(f) Evaluation?

There are nine parks and recreational facilities and eight historic buildings and districts that would be affected by the proposed project and that are protected under Section 4(f) regulations.

Parks and other recreational facilities acquired and/or developed using funds from the Land and Water Conservation Fund Act of 1965 are also protected, as specified in Section 6(f) of the Act, from conversion to non-recreational uses. There is one Section 6(f) resource (the Arboretum Waterfront Trail) that would be affected by the project. For more discussion of Section 6(f), see page 92 of this document.

Under the 4-Lane and/or 6-Lane Alternatives, four of the parks and recreational facilities (all in Seattle project area) and four of the historic resources (one in the Seattle project area, one in the Lake Washington



project area, and two in the Eastside project area) would experience a direct effect, or a use as defined by Section 4(f) regulations. (See the section *What constitutes a use of Section 4(f) resources?* for more detailed discussion of “use.”)

None of the proximity effects, primarily related to noise or visual effects, would be so severe as to constitute a “constructive use” of either parks and recreational facilities or historic properties. (See the sections *When would a constructive use occur?* and *When does a constructive use not occur?* for more detailed discussion of “constructive use.”)

Temporary occupancy during construction may constitute a use (see the section *When does a temporary occupancy constitute a use of a Section 4(f) resource?* for a discussion of “temporary occupancy”) at two specific Section 4(f) properties – Bagley Viewpoint and East Montlake Park.

There are no feasible prudent alternatives that avoid all Section 4(f) properties. The Washington State Department of Transportation (WSDOT) will work with each jurisdiction and relevant agency to identify appropriate mitigation measures for unavoidable uses of the Section 4(f) properties.

Properties Affected by the Project		
Section 4(f) Protected Property		
Property	4-Lane Alternative	6-Lane Alternative
Parks and Recreational Facilities		
Bagley Viewpoint	Negative effects: Acquisition of 0.06 acre, viewpoint would become unusable	Negative effects: Acquisition of 0.09 acre, viewpoint would become unusable
McCurdy Park	Negative effects: Acquisition of 1.5 acres (net loss of 0.88 acre), visual intrusion Positive effects: Noise reduction	Negative effects: Acquisition of 1.5 acres (total park loss)
East Montlake Park	Negative effects: Acquisition of 3.25 acres (net loss of 1.06 acres), visual intrusion Positive effects: Noise reduction, trail improvements	Negative effects: Acquisition of 3.25 acres (net loss of 1.38 acres), visual intrusion Positive effects: Noise reduction, trail improvements
Washington Park Arboretum	Negative effects: Acquisition of 1.7 acres (net gain of 0.04 acre), intrusion to some views Positive effects: improvement to some views, noise reduction, trail improvements	Negative effects: Acquisition of 1.8 acres (net loss of 0.70 acre) intrusion to some views Positive effects: improvement to some views, noise reduction, trail improvements
Historic Properties		
Montlake Eligible Historic District	Negative effects: Acquisition of NOAA Fisheries property/ Demolition of MOHAI Positive effects: improvement to some views, reduced noise levels	Negative effects: Acquisition of NOAA Fisheries property/ Demolition of MOHAI Positive effects: improvement to some views, reduced noise levels, lids would enhance connections
Evergreen Point Bridge	Negative effects: Demolition	Negative effects: Demolition
2851 Evergreen Point Road	Negative effects: Acquisition of property/ partial demolition	No acquisition Positive effects: increased adjacent green space, reduced visibility of SR 520, reduced noise levels
Bellevue Christian School	Negative effects: Acquisition of property Positive effects: reduced noise levels	Acquisition of property Positive effects: reduced noise levels



What are the project alternatives?

The SR 520 Bridge Replacement and HOV Project area comprises neighborhoods in Seattle from I-5 to the Lake Washington shore, Lake Washington, and Eastside communities and neighborhoods from the Lake Washington shore to 124th Avenue Northeast just east of I-405.

Exhibit 1 shows the general location of the project. Neighborhoods and communities in the project area are:

- Seattle neighborhoods—Portage Bay/Roanoke, North Capitol Hill, Montlake, University District, Laurelhurst, and Madison Park
- Eastside communities and neighborhoods—Medina, Hunts Point, Clyde Hill, Yarrow Point, the Lakeview neighborhood in Kirkland, and the North Bellevue, Bridle Trails, and Bel-Red/Northup neighborhoods in Bellevue

The SR 520 Bridge Replacement and HOV Project Draft EIS evaluates the following three alternatives:

- No Build Alternative
- 4-Lane Alternative
- 6-Lane Alternative

Each of these alternatives is described below. For more information, see the *Description of Alternatives and Construction Techniques Report* contained in Appendix A of this EIS.

What is the No Build Alternative?

Environmental impact statements describe an alternative that allows decision-makers to assess what would happen to the environment in the future if nothing were done to address the problem that a project is designed to solve. This alternative, called the No Build Alternative, would leave the existing highway the same as it is today. The No Build Alternative provides a baseline against which to measure and compare the effects of all of the project's build alternatives.



Exhibit 1. Project Vicinity Map



The SR 520 project poses problems for analysis under a No Build Alternative because the existing Evergreen Point and Portage Bay bridges may not remain intact through 2030, the project's design year. If nothing is done to replace the Portage Bay and Evergreen Point bridges, there is a high probability that one or both structures could fail and become unusable to the public before 2030. To illustrate what could happen, two scenarios representing the extremes of what is possible are evaluated as part of the No Build Alternative. These are the Continued Operation and Catastrophic Failure scenarios.

Under the Continued Operation Scenario, SR 520 would continue to operate as it does today – as a 4-lane highway without a cross-lake HOV lane, nonstandard shoulders, and without a bicycle/pedestrian path (**Exhibit 2**). Continued operation would include using the same technology that is in place today, including ramp metering, traveler information, and incident response. This scenario assumes the Portage Bay and Evergreen Point bridges would remain standing and functional through 2030. Even though it is unlikely to occur – because the bridges are not likely to last that long – and is inconsistent with WSDOT's standards for safety and reliability, this scenario is the baseline to which the EIS team compared the other alternatives.

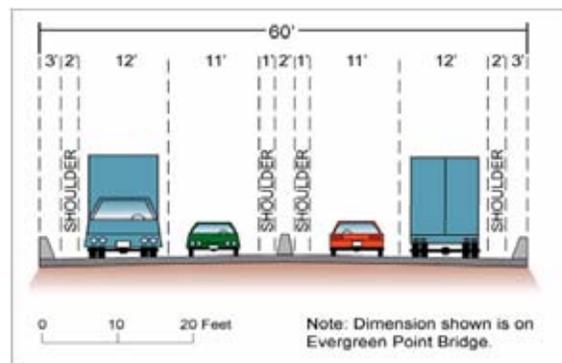


Exhibit 2. No Build Alternative

The Catastrophic Failure Scenario assumes that both the Portage Bay and Evergreen Point bridges would be lost due to some type of catastrophic event, such as an earthquake or windstorm. Although in a catastrophic event one bridge might fail while the other stands, this Draft EIS assumes the worst-case scenario – that both bridges would fail.

The No Build Alternative includes WSDOT maintenance and repair activities that would help keep the bridge in as good condition as possible for as long as possible. These include pumping water out of the pontoons, inspecting the draw span machinery regularly, repairing electrical systems as necessary, and performing needed repairs after storm damage. In the future, if damage continues to occur, it may be necessary to close the bridge at lower wind speeds than the current standard, which would add to regional traffic congestion.



What is the 4-Lane Alternative?

The 4-Lane Alternative was initially developed during the Trans-Lake Washington Project as a “minimum footprint” alternative with narrow shoulders that would replace the existing bridges to enhance safety, but would not provide any other transportation benefits. The alternative has since been changed to include standard shoulders for greater safety and better traffic flow, but it still would do little to increase SR 520’s existing traffic-carrying capacity. It would have four lanes (two general-purpose lanes in each direction), the same number of lanes as today (see **Exhibit 3**). The existing westbound HOV lane on the Eastside, between Bellevue Way and the Evergreen Point Bridge, would also be included in the 4-Lane Alternative. SR 520 would be rebuilt from I-5 to Bellevue Way. WSDOT would replace both the Portage Bay and Evergreen Point bridges and rebuild all the bridges that carry local streets over SR 520. Roadway shoulders would meet current standards to provide improved safety and better incident response, which would help enhance traffic flow.

A new regional bicycle/pedestrian path would run along the north side of SR 520 through Montlake, across the Evergreen Point Bridge, and along the south side of SR 520 through Medina, Hunts Point, Clyde Hill, and Yarrow Point to 96th Avenue Northeast, connecting to Northeast Points Drive. This path could accommodate two-way bicycle traffic and eliminate the need for bicyclists to place their bicycles on bus racks to travel across SR 520. Sound walls would be built along much of SR 520 in Seattle and the Eastside. The floating bridge pontoons of the Evergreen Point Bridge would be sized to accommodate future installation of facilities for high-capacity transit. A bridge operations building would be built under the bridge on the east shore of Lake Washington as part of the new bridge abutment. This facility would include a dock for bridge maintenance boats. New stormwater treatment facilities would collect roadway runoff and ensure that its discharge is in accordance with applicable regulatory standards.

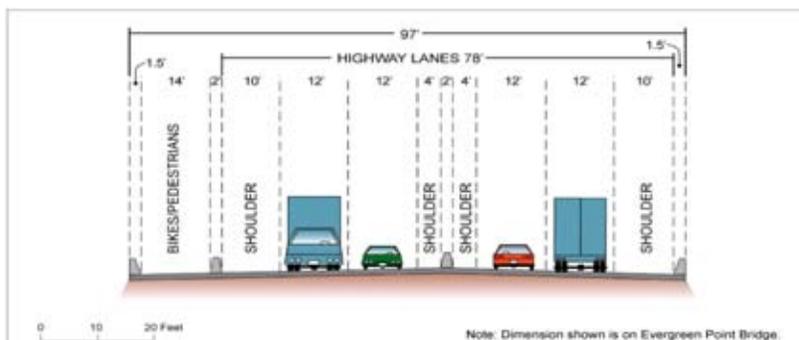


Exhibit 3. 4-Lane Alternative



WSDOT would collect tolls from vehicles crossing the bridge using electronic technology that would not require toll booths. WSDOT would also implement a flexible transportation plan, which is a set of strategies to identify alternatives to single-occupant vehicle travel and to manage traffic during and after construction. The plan would include four major components: intelligent transportation and technology, traffic systems management, vanpools, and transit.

The 4-Lane Alternative would meet two of the SR 520 project's key goals: improving safety and reliability and protecting and enhancing neighborhoods and environmental values. However, although roadway shoulders would help reduce congestion caused by accidents or disabled vehicles, no additional travel lanes would be added. Therefore, the 4-Lane Alternative would do little to advance the third goal of increasing mobility for people and goods.

What is the 6-Lane Alternative?

The 6-Lane Alternative was also recommended by the Trans-Lake Washington Study for evaluation in the EIS. It would include six lanes – two outer general-purpose lanes and one inside HOV lane in each direction (see **Exhibit 4**). WSDOT would rebuild SR 520 from I-5 to 108th Avenue Northeast in Bellevue and add an auxiliary lane on SR 520 eastbound from east of I-405 to 124th Avenue Northeast. Both the Portage Bay and Evergreen Point bridges would be replaced; bridges that carry local streets over SR 520 would also be rebuilt. Roadway shoulders would meet current standards for a 6-lane highway. The floating pontoons of the Evergreen Point Bridge would be sized to accommodate future installation of facilities for high-capacity transit.

For this alternative, WSDOT would build five 500-foot-long landscaped lids across SR 520 to help connect communities now separated by the corridor. The project's Executive Committee determined that the lids should be part of the 6-Lane Alternative to help mitigate the effects of adding two new lanes to the corridor. Two lids would be located in

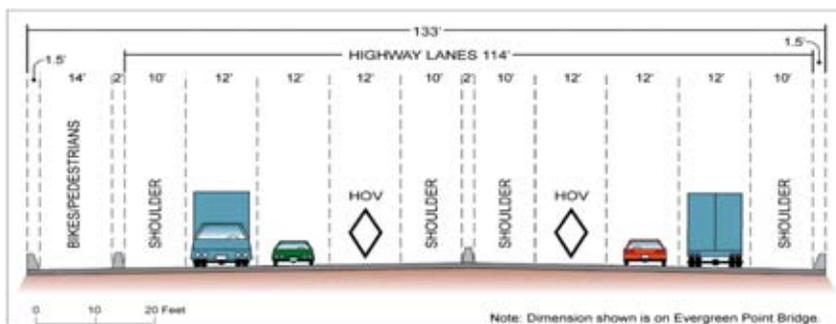


Exhibit 4. 6-Lane Alternative



Seattle— one between 10th Avenue East and Delmar Drive East, and one at Montlake Boulevard. On the Eastside, the three lids would be at Evergreen Point Road, 84th Avenue Northeast, and 92nd Avenue Northeast.

Like the 4-Lane Alternative, the 6-Lane Alternative would also include:

- A 14-foot-wide bicycle/pedestrian path
- Sound walls
- Stormwater treatment
- Bridge operations building and dock
- Tolls collected electronically
- Flexible transportation plan

The 6-Lane Alternative meets all three of the SR 520 project's goals: it would improve safety and reliability by providing new bridges; increase mobility for people and goods by including continuous HOV lanes throughout the corridor; and protect and enhance community and environmental values in the project area.

What was the methodology used to prepare the Section 4(f) Evaluation?

The Section 4(f) discipline team identified the potentially affected public parks, recreation areas, and historic sites based on the *Recreation Discipline Report* and the *Cultural Resources Discipline Report*, in Appendices O and D, respectively, of this EIS. No designated wildlife or waterfowl refuges were identified in the project area. Consequently, this Section 4(f) Evaluation focuses on public parks, recreation areas, and historic sites.

The cultural resources discipline team surveyed all historic resources in the project area that predate 1961. The year 1961 was conservatively selected to cover all cultural resources that would be 45 or more years old when the Record of Decision for the SR 520 Bridge Replacement HOV Project is issued and could be 50 or more years old by the time some parts of the project are built. Please refer to Appendix D, *Cultural Resources Discipline Report*, for more detailed information on cultural resources.

We prepared the Section 4(f) Evaluation based on the guidance contained within the FHWA Section 4(f) Policy Paper issued September 24, 1987, and revised March 1, 2005; Title 23 of the Code of Federal Regulations, Section 771.135 (Section 4(f)); and the WSDOT



Environmental Procedures Manual published in September 2005. These guidance documents provide the methodology used in the preparation of this evaluation.

What are Section 4(f) resources?

In accordance with 23 CFR 771.135, public parks and recreation areas are considered Section 4(f) resources if they:

- Are considered to be significant by the federal, state, or local official having jurisdiction over the facility;
- Are intended for public recreational purposes and function as such; and
- Are open and available for use by all members of the public.

In addition, historic sites are considered Section 4(f) resources if, in consultation with the State Historic Preservation Office (SHPO) and appropriate local officials, they are identified as properties of local, state or national significance as determined by the federal, state, or local officials having jurisdiction over the site, including properties on or eligible for the National Register of Historic Places (NRHP).

What constitutes a use of Section 4(f) resources?

In accordance with 23 CFR 771.135(p)(1) and (2), use of Section 4(f) resources occurs when:

- Land is permanently incorporated into a transportation facility (in other words, the land is acquired to accommodate proposed improvements);
- There is a temporary occupancy of land that is adverse in terms of the statute's preservationist purposes; or
- Proximity effects are so severe that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are substantially impaired and/or diminished (commonly referred to as a "constructive use").

What are the Criteria for Listing on the NRHP?

To qualify for listing on the NRHP, a property must have historic significance and integrity and be at least 50 years old. Certain properties are exempt from the 50-year rule if they possess exceptional importance. Historic significance in American history, architecture, archeology, engineering, and culture may be present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, material, workmanship, feeling, and association. A property must demonstrate significance in at least one of the following areas:

- A Association with events that have made a significant contribution to the broad patterns of our history; or
- B Association with the lives of persons significant in our past; or
- C Embodiment of the distinctive characteristics of a type, period, or method of construction or representative of the work of a master, or possessing high artistic value, or representative of a significant and distinguishable entity whose components may lack individual distinction; or
- D Yielding, or likely to yield, information important in prehistory or history.

Historic significance is the importance of a property to a community, state or the nation. In addition to the above criteria, significance is defined by the area of history in which the property made important contributions and by the period of time when these contributions were made (National Register Bulletin 16: NPS 1991).



When would a constructive use occur?

In accordance with 23 CFR 771.135(p)(4), a constructive use would occur when:

- The projected noise level increase attributable to the project substantially interferes with the use and enjoyment of the noise-sensitive resource, such as enjoyment of a historic site where a quiet setting is a generally recognized feature or attribute of the site's significance, or enjoyment of an urban park where serenity and quiet are significant attributes;
- The proximity of the proposed project substantially impairs aesthetic features or attributes of the resource, where such features or attributes are considered important contributing elements to the value of the resource, such as the location of a roadway that obstructs or eliminates a view or substantially detracts from the setting of a park or historic site that derives its value in substantial part due to its setting;
- The project results in a restriction on access which substantially diminishes the utility of the resource; or
- The vibration impact from operation of the project substantially impairs the use of the resource.

In all instances, a "substantial impairment" of the resource is necessary for a constructive use to occur; an adverse effect or considerable change to a resource resulting from a proximity effect is not sufficient to cause a constructive use.

When does a constructive use not occur?

In accordance with 23 CFR 771.135.(p)(5), a constructive use does not occur when:

- In consultation with the SHPO, in compliance with Section 106 of the National Historic Preservation Act, it is agreed that the proximity effects of the proposed action on a National Register-listed or -eligible historic site result in a finding of "no effect" or "no adverse effect";
- The projected traffic noise levels of the proposed project do not approach or exceed the FHWA noise abatement criterion as contained in Table 1 of 23 CFR Part 772;
- The projected noise levels exceed the relevant threshold in 23 CFR Part 772 because of high existing noise, but the increase in the projected noise levels with the project is barely perceptible (3 dBA



or less), when compared to projected noise levels without the project;

- There are proximity effects, but a governmental agency's right-of-way acquisition, an applicant's adoption of project location, or FHWA's approval of a final environmental document established the location for a proposed project before the designations, establishment, or change in the significance of the resource;
- There are effects, but the proposed project and the resource are concurrently planned or developed;
- Overall (combined) proximity effects caused by the proposed project do not substantially impair the activities, features, or attributes that qualify a resource for protection under Section 4(f);
- Proximity effects will be mitigated to a condition equivalent to, or better than, that which would occur under a no-build scenario;
- Change in accessibility will not substantially diminish the utilization of the resource; or
- Vibration levels from project construction are mitigated, through advance planning and monitoring of the activities, to levels that do not cause a substantial impairment of the resource.

When does a temporary occupancy constitute a use of a Section 4(f) resource?

Temporary occupancy of Section 4(f) resources during construction may or may not constitute a use of land. In accordance with 23 CFR 771.135(p)(7), it would not be a use if the following conditions are satisfied:

- The duration is temporary (i.e., less than the time needed for construction of the project) and there should be no change in ownership of the land.
- The scope of the work is minor (i.e., both the nature and the magnitude of the changes to the resource are minimal).
- There are no anticipated permanent adverse physical effects, nor will there be interference with the activities or purposes of the resource on either a temporary or permanent basis.
- The land being used will be fully restored (i.e., the resource must be restored to a condition which is at least as good as that which existed prior to the project).
- There must be documented agreement by the appropriate official having jurisdiction over the resource regarding the above conditions.



What are feasible and prudent avoidance alternatives?

In analyzing alternatives that avoid the use of Section 4(f) resources, the guidance documents require that each avoidance alternative be evaluated in terms of whether they are *feasible* and *prudent*. In accordance with 23 CFR 771.135(a)(2), an alternative is feasible if it is technically possible to design and build to operate both efficiently and safely. FHWA's *Section 4(f) Policy Paper*, March 1, 2005, indicates that an alternative may not be considered prudent for any of the following reasons:

1. It does not meet the project purpose and need.
2. It involves extraordinary operational or safety problems.
3. It has unique problems or truly unusual factors.
4. It results in unacceptable and severe adverse social, economic, or other environmental effects.
5. It would cause extraordinary community disruption.
6. It has additional construction costs of an extraordinary magnitude.
7. There is an accumulation of factors that collectively, rather than individually, have adverse effects that present unique problems or reach extraordinary magnitudes.

What coordination was conducted with other agencies?

The Section 4(f) discipline team assessed existing conditions at each resource through site visits, review of relevant documents, and meetings with FHWA, WSDOT, and the local officials with jurisdiction. In accordance with Section 4(f) guidance, WSDOT solicited written correspondence from the local officials with jurisdiction in terms of the significance of the resource, the nature and magnitude of the potential impact, and the acceptability of proposed mitigation (copies of these letters are included as Attachment 1).

The discipline team prepared and submitted determinations of eligibility for historic properties affected by the project to SHPO for concurrence. Although no NRHP-listed historic properties were found in the project area, several NRHP-eligible properties were identified. These properties, discussed in detail below, have been determined eligible by WSDOT and submitted to the SHPO for concurrence on



those determinations. (Note: concurrence from SHPO may not occur before publication of the DEIS.)

Because portions of the project are within the boundaries of Seattle, we contacted the Seattle Landmarks Preservation Board staff and City Historic Preservation Officer to determine if any City Landmarks or districts would be affected by this project. For the project area outside of Seattle, we contacted the King County Landmarks Commission. No city or county landmarks or districts were identified within the area of potential effect (APE). For a detailed discussion of the APE, see Appendix D, *Cultural Resources Discipline Report*.

Because one of the resources within the project area was funded using Section 6(f) of the Land and Water Conservation Act funds, we contacted the Interagency Committee for Outdoor Recreation (IAC) and the National Park Service about that specific resource and Section 6(f) requirements.

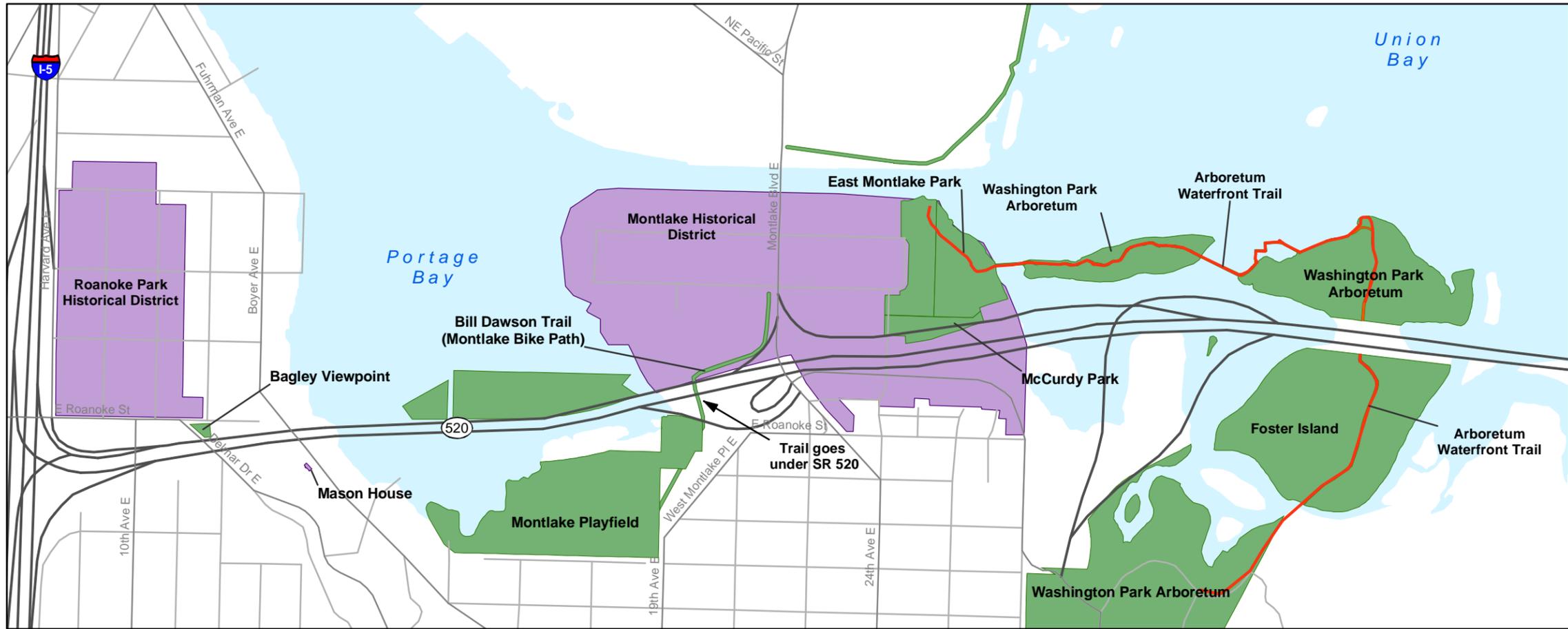
What are the Section 4(f) properties associated with this project?

This section describes those parks, recreational facilities, and historic properties (including historic districts) along the SR 520 alignment that would be affected by the proposed project and are protected under Section 4(f) regulations. **Exhibit 5** shows the location of these properties. During the course of conducting the technical analysis for this project, we determined that no designated wildlife or waterfowl refuges would be affected by the alternatives under consideration. Each property is described below in terms of its character, value to the community, and what makes it a Section 4(f) protected resource. The text is organized by the three project areas—Seattle, Lake Washington, and Eastside—and the two categories of affected properties—parks and historic properties.

What Section 4(f) properties are in Seattle?

Parks, recreational facilities, historic sites, and historic districts are located along SR 520 in Seattle.





- Historical Properties
- 6(f) Property
- Parks and Recreational Facilities

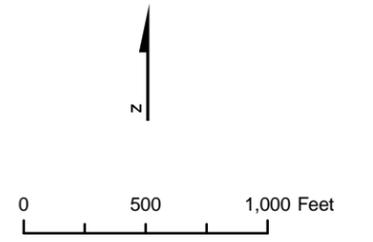
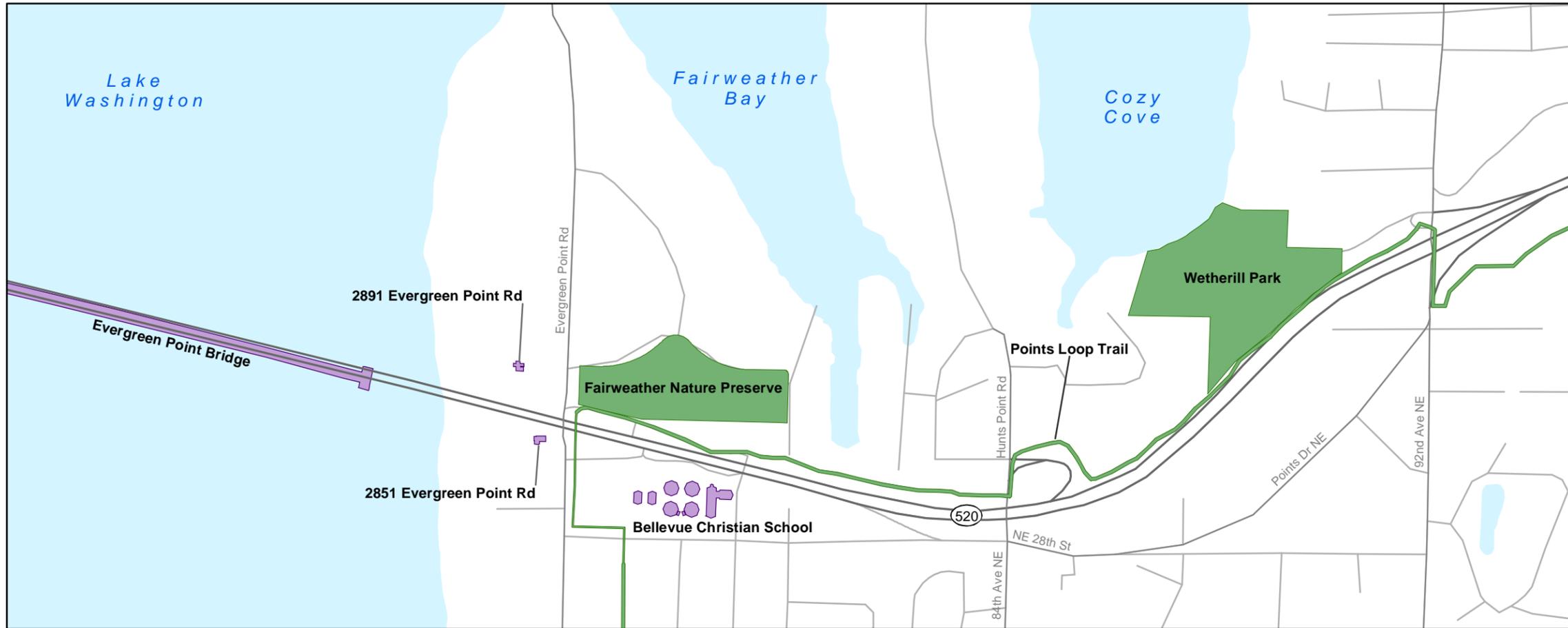


Exhibit 5. Section 4(f)/6(f) Properties Identified in the Project Area
SR 520 Bridge Replacement and HOV Project

What parks and recreational facilities are in Seattle?

Bagley Viewpoint

Bagley Viewpoint is a small (0.15 acre) publicly owned facility, the primary value of the which is to offer views of Portage Bay, Lake Washington, and the Cascade Mountains (**Exhibit 6**). The viewpoint was originally part of Interlaken Park to the south, but was separated from the remainder of the park when SR 520 was constructed in 1963. The viewpoint contains a sitting bench and limited parking. The facility is infrequently used, in part because of the high level of traffic noise (current noise levels average approximately 75 dBA).

The view to the east has been diminished in recent years by the growth of vegetation up the slope. Bagley Viewpoint is included in the City's *Draft Vegetation Management for Seattle Parks Viewpoints* (City of Seattle 2004), which calls for restoration of this view through a series of prescribed strategies and long-term maintenance (including tree removal and pruning). Bagley Viewpoint is also included on Seattle's SEPA-protected viewpoint list. This listing means that Seattle has designated this as an important viewpoint and that the view is an important attribute of the resource.



Exhibit 6. Bagley Viewpoint

Montlake Playfield

Montlake Playfield is a 27-acre neighborhood park owned by Seattle Parks and Recreation along the south side of SR 520 (**Exhibit 7**). Created in the 1920s, the playfield originally extended north of the current SR 520 alignment. Because of the rising water level of Portage Bay, however, 6.8 acres of the original playfield (in addition to the 27-acre usable site) are now submerged in Portage Bay. Although a portion of the submerged land would be acquired from Seattle for the build alternatives, the affected submerged land is not currently used for recreational purposes, is not accessible to the public for recreational use, and is not designated as parkland on the Seattle Park Guide. There are no plans for its recreational use in the future. As a result, we have determined that the affected submerged lands are not protected by Section 4(f).



Exhibit 7. Community Center at Montlake Playfield



The usable site provides a childrens' play area east of the Community Center building, picnic tables, lighted tennis courts, a soccer/football field encircled by a running track, two softball fields, and a parking lot.

The *Draft Vegetation Management Plan for Seattle Parks Viewpoints* (City of Seattle 2004) identifies Montlake Playfield as “high priority” for restoring intended views because invasive species and overgrown vegetation obscures the views to a high degree.

Bill Dawson Trail (Montlake Bike Path)

Bill Dawson Trail (Montlake Bike Path) extends under SR 520 between the northeast corner of the Montlake Playfield and the southern edge of the National Oceanic and Atmospheric Administration (NOAA) Northwest Fisheries Center. The trail receives considerable use because it connects to the larger citywide trail system.

McCurdy Park

McCurdy Park is situated along a narrow strip between the northside of SR 520 and the southern boundary of East Montlake Park (**Exhibit 8**). This 1.5-acre facility was part of the original route for the Lake Washington Ship Canal; it became available for park use after an alternative route (the current Montlake Cut) was selected in 1917. The southern portion of the Museum of History and Industry (MOHAI), a contributing element to the NRHP-eligible Montlake historic district built between 1950 and 1952, is located in the park. This facility is designated by the city as a neighborhood park, but because of limited space and facilities (picnic tables) and its proximity to SR 520, it is not a highly used recreational resource. The *Draft Vegetation Management Plan for Seattle Park Viewpoints* notes that overgrown mature alders and dense understory vegetation along the shoreline have diminished the park's water views; the plan calls for trimming of the tree groves and removal of some trees. McCurdy Park is also one of Seattle's SEPA-protected viewpoints for views of Marsh and Foster Islands and limited views of Lake Washington.



Exhibit 8. McCurdy Park. Vegetation in park separates SR 520 and MOHAI.

East Montlake Park

East Montlake Park is a 7.1-acre neighborhood waterfront park (**Exhibit 9**). The park was created from land deeded to the City of Seattle from a 1909 plat



Exhibit 9. East Montlake Park



dedication. Additional land, formerly referred to as the “Canal Lease,” is to the east of the originally dedicated property and was part of the canal reserve held by the Port of Seattle until the 1940s.

The Port deeded the western one-third to the Seattle Parks and Recreation Department and the eastern two-thirds to the Arboretum Foundation. While the split in ownership of the land is still in effect, the entire area is signed and recognized by the public as East Montlake Park and is designated as such in Seattle Parks and Recreation Department planning documents. East Montlake Park is another of Seattle’s SEPA-protected viewpoints. The northern half of MOHAI is located in the southern section of the Seattle-owned property and the southwest corner of the Arboretum Foundation-owned property. A 100-car parking lot is located in the southern portion of the Arboretum Foundation property. East Montlake Park provides trail connections for both the Arboretum Waterfront Trail (within and to east of the park) and the Ship Canal Waterside Trail (to the north of the park along the Ship Canal), as well as a popular launch point for canoes and kayaks.

The land encircled by the on- and off-ramps to Lake Washington Boulevard is owned by WSDOT. It is used primarily for transportation facilities and is not protected by Section 4(f). An April 1966 agreement between the City of Seattle and WSDOT states that while the state would allow the city to use, and therefore maintain, portions of the property for its own park-oriented use, the property would remain within WSDOT ownership and the city would need to adhere to a 90-day relinquishment clause.

Washington Park Arboretum

Washington Park Arboretum is a popular 193-acre public facility that is part of the Olmsted Plan for Seattle Parks, Boulevards, and Playgrounds. The University of Washington manages the Arboretum and its plant collections and owns Marsh Island. Seattle owns the Arboretum’s land and buildings and the Parks and Recreation Department is responsible for the maintenance of the park functions. The Arboretum Foundation manages fundraising, membership, and volunteer services.

Foster Island, which is part of the Washington Park Arboretum, is an environmentally sensitive area consisting of marshes, reeds, and cattails that provides valuable wildlife habitat. The island was bisected in 1963 when SR 520 was constructed.

The Arboretum Waterfront Trail, constructed in 1967 using Land and Water Conservation Fund Act of 1965 funds, extends along the northern edge of the Arboretum through Marsh and Foster Islands, turns south and passes under SR 520 in the middle of Foster Island, and ends in the main area of the Arboretum.



What historic properties are in Seattle?

Mason House

2545 Boyer Avenue East

Victor Steinbrueck, a prominent Seattle architect and designer of the Space Needle, designed this Modern-style house in 1949 for artist Alden Mason (**Exhibit 10**). This flat-roofed house is visually striking, situated on the hill overlooking Portage Bay, and is an excellent example of its style. The Mason house was published in *Architectural Record*, April 1953 (pp. 159-163), "Houses of the Northwest." The house is eligible for the NRHP under Criterion C (see Appendix D, *Cultural Resources Discipline Report*, for detailed information on NRHP criteria) for distinctive characteristics unique to its period and as the work of a master architect, and under criterion B for its association with Alden Mason, noted Seattle artist and influential long-time faculty member at the University of Washington.



Exhibit 10. The Mason House, 2545 Boyer Avenue East

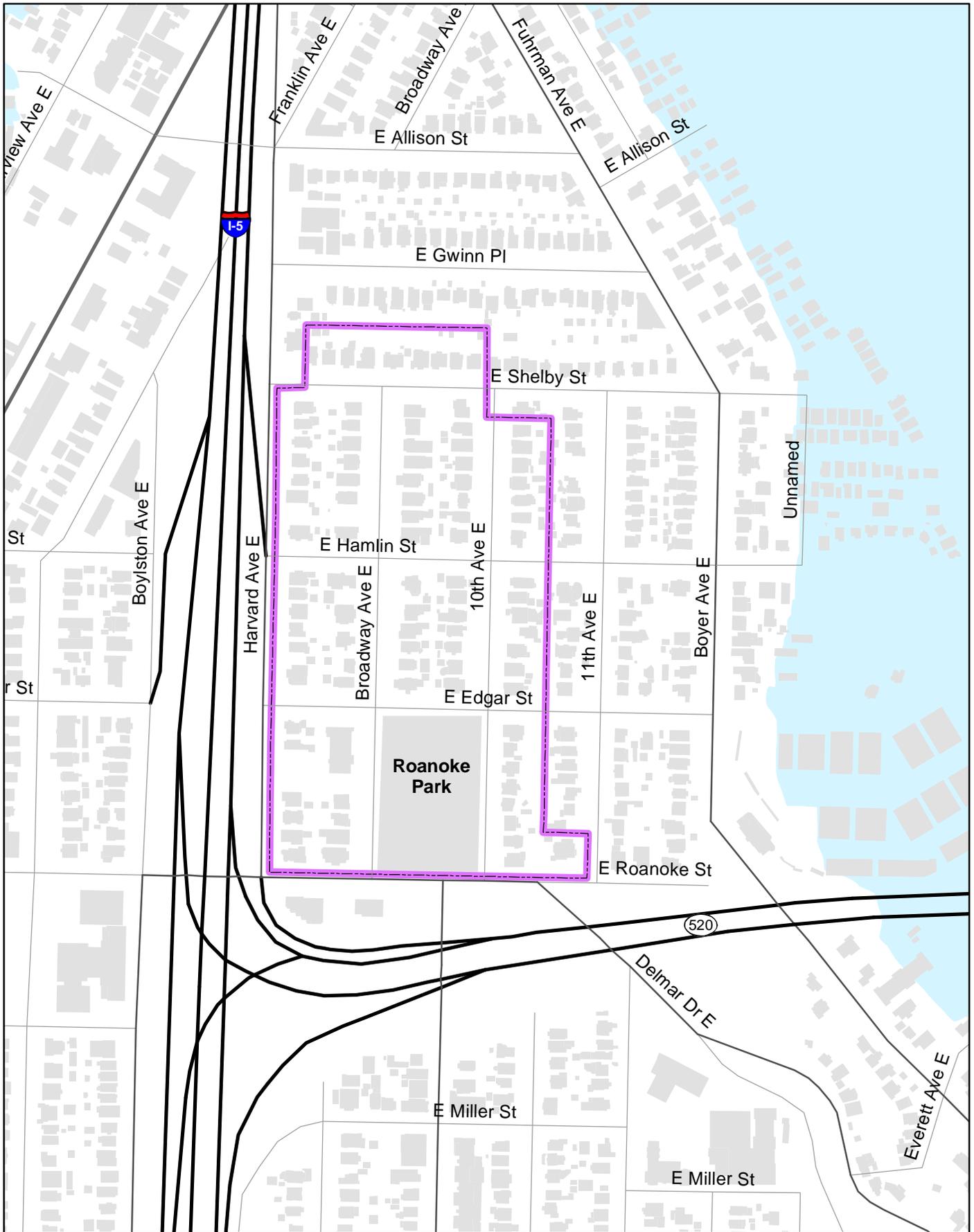
NRHP-Eligible Roanoke Park Historic District

The boundaries of the NRHP-eligible Roanoke Park historic district are shown in **Exhibit 11**. Representative properties within the historic district are shown in the two photos below (1018 Roanoke and 2601 Broadway).

The original owners of the land, David T. Denny and Henry Fuhrman, named Roanoke Street after Roanoke, Virginia, the first English settlement in the United States. The City acquired the land that is now Roanoke Park in 1908 and designated it for "park and parkway purposes," (Sherwood 1974a) and it continues to serve as a neighborhood park, surrounded on three sides by historic residences (**Exhibits 12 and 13**). The property inventory form on file with Office of Archaeology and Historic Preservation describes this eligible historic district as follows:

The Roanoke Park Historic District is a collection of well-preserved historic resources that possess historic and architectural significance based on their associations with the





-  Historic District
-  Building



Exhibit 11. Roanoke Park Historic District
 SR 520 Bridge Replacement and HOV Project

physical development of North Capitol Hill and the careers of several notable Seattle architects, as well as their distinctive architectural character. The Roanoke Park neighborhood stands apart stylistically and developmentally from the adjacent neighborhoods. While platted as part of the 1890 Denny-Fuhrman Addition to the City of Seattle, the neighborhood did not see significant development until the later years of the first decade of the twentieth century. Displaying a variety of architectural styles, the majority of the architect- and builder-designed homes were constructed between 1908 and 1912, with the remaining lots filled in by 1950. The period from 1908 to 1912 saw an explosion of growth in the neighborhood with the construction of some sixty homes, approximately two-thirds of the total number built. Architects and builders worked in a variety of styles, including Craftsman, Mission, Colonial Revival, Classic Box, Swiss Chalet, Tudor Revival, and Mediterranean Revival. Most of the homes are large, two-story wood frame dwellings set in attractive landscaping and clad with wooden shingles or clapboard siding. The use of stucco and brick is also common, especially in the revival styles.



Exhibit 12. 1018 Roanoke, Roanoke Park Historic District



Exhibit 13. 2601 Broadway, Roanoke Park Historic District



NRHP-Eligible Montlake Historic District

The Montlake neighborhood was first developed in 1909. The main era of construction was the 1910s through the 1930s, and the side streets appear to have been paved in 1926 (Gould 2000). The residential styles in the district are cohesive, mainly Craftsman, Tudor Revival, and Colonial Revival, but the houses are “individually distinctive” (Gould 2000) (**Exhibits 14 and 15**). Several high-style, distinguished houses along East Lake Washington Boulevard include turreted Tudor Revivals and stuccoed California Mediterraneans. There are noteworthy nonresidential structures in the neighborhood, including the Montlake Bridge; MOHAI; the Seattle Yacht Club; the NOAA Northwest Fisheries Science Center building; and structures such as gateways, pavilions, the Arboretum Aqueduct, and other bridges in Washington Park Arboretum, which borders the neighborhood.



Exhibit 14. 2158 East Shelby, Montlake Historic District



Exhibit 15. 2159 East Shelby, Montlake Historic District

Based on the survey conducted by the cultural resources discipline team, historical resources in the APE and those in the surrounding area comprise an eligible National Register Historic District (period of significance 1909-1952) under Criterion C. These properties are significant for their architectural characteristics, representing the distinct design styles from the early twentieth century, terminating with the early mid-century design of MOHAI (designed in 1950). As a group, they represent a distinguishable entity recognizable as the Montlake historic district. Resources within this district include the following:

- An architecturally cohesive residential neighborhood, largely developed from 1909 until about 1945



- The Seattle Yacht Club, which was established in 1892 and moved to its current Montlake location on Portage Bay in 1920 when the present clubhouse was constructed
- MOHAI, designed in 1950 by noted Seattle architect Paul Thiry and completed in 1952, a local museum that focuses on Seattle area history and development
- The NOAA Fisheries Science Center building, the first federal fisheries building constructed on the West Coast, designed by John Graham, Sr. and built in 1931.

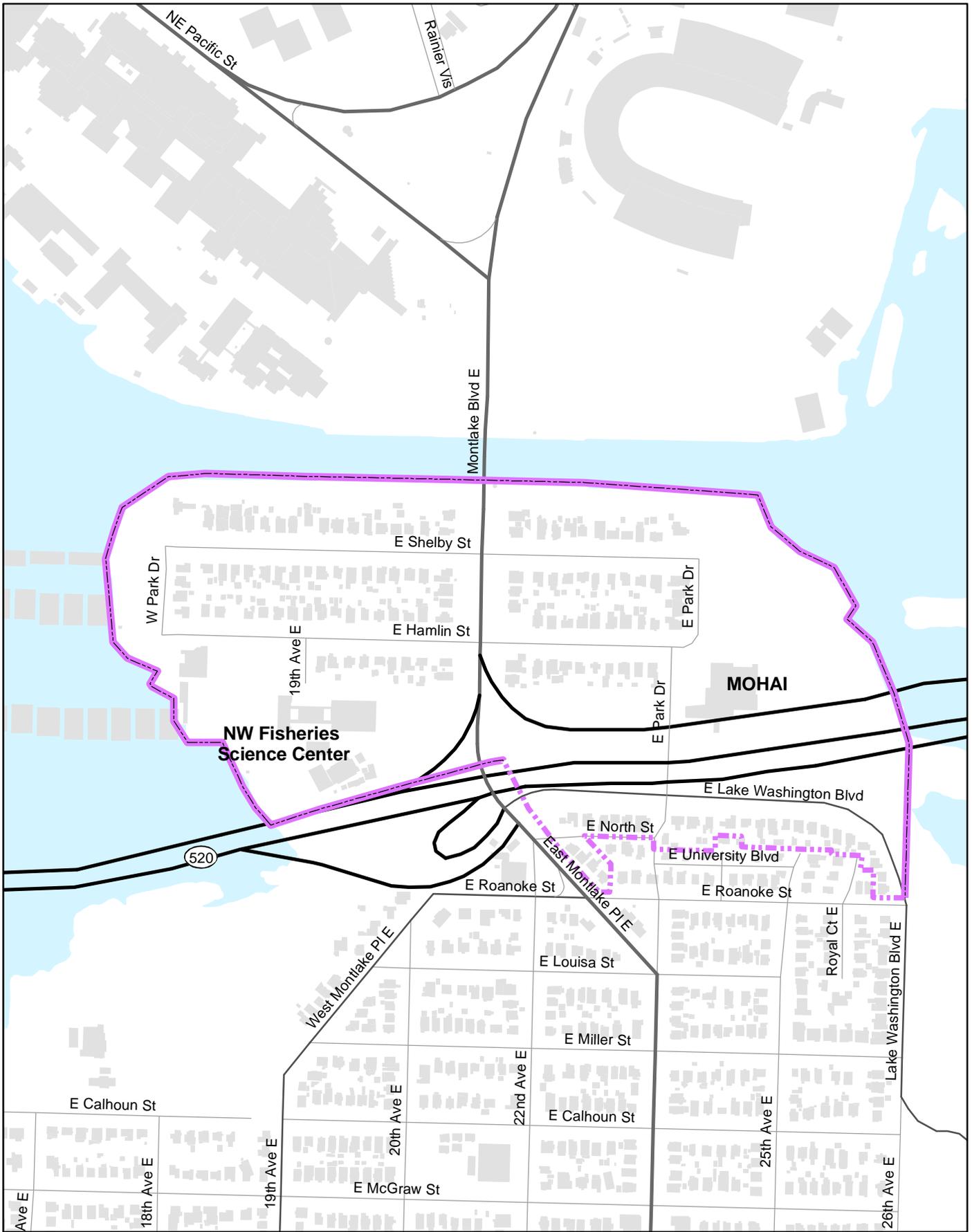
The nonresidential resources noted above are located on the periphery of the district and contribute to the physical and cultural fabric of the district's residential core. The Seattle Yacht Club and MOHAI are recreational and/or cultural institutions that support and enhance the residential quality of the neighborhood. The NOAA Fisheries Science Center building, constructed during the time of greatest development in the neighborhood, is geographically contiguous with the historic district. Its development on the "canal reserve land" is intimately tied to the history of the Montlake Cut and the original log canal, important elements of the Montlake area.

Exhibit 16 shows the proposed boundaries of the NRHP-eligible Montlake historic district. The period of significance is 1909 to 1952, which started with the platting of the neighborhood and ended with the construction of MOHAI (**Exhibit 17**).

For the purposes of this study, the north, east, and west boundaries are the traditional and natural geographic boundaries of the original Montlake Park Addition, the section between the lakes defined by East Shelby and East Hamlin Streets. The southern boundary was drawn along the rear property lines of those lots facing East Lake Washington Boulevard between Montlake Boulevard and East Roanoke Street, and along the rear property lines of those lots facing East Montlake Place East between East North Street and East Roanoke Street. This boundary was drawn to include houses along East Lake Washington Boulevard, which are some of the finest architectural examples in the neighborhood, as well as the completely intact streetscape.

The area south of SR 520 (originally known as Interlaken) was developed separately from, though concurrently with, the section of the neighborhood north of SR 520. Two brothers, Calvin and William Hagan, along with partner James Corner (Sherwood 1974c) seem to





-  Historic District
-  Building



0 250 500 Feet



Exhibit 16. Montlake Historic District

SR 520 Bridge Replacement and HOV Project

have originated the name Montlake as they developed the Montlake Park Addition. At the same time, John Boyer of the Interlaken Investment Company was developing the southern part of the neighborhood, the section now on the south side of SR 520. Boyer preferred the name Interlaken but later agreed to Montlake as the name of the entire neighborhood (Gould 2000), which is generally accepted today. The name Montlake frequently appears on maps such as the Thomas Guide as the label for the entire neighborhood, but the southern boundary is often listed as Interlaken Park or Interlaken Boulevard from the Washington Park Arboretum to Portage Bay.



Exhibit 17. MOHAI, 2161 East Hamlin, Montlake Historic District

A windshield survey, which involved driving around the blocks in the original Interlaken area south of East Lake Washington Boulevard, indicated a decrease in integrity with a greater rate of intrusions (houses less than 50 years old) as one progressed southward. An intensive survey was conducted only for the resources in the Montlake area within the APE. However, further intensive surveys in the future could determine that more of this area should be included in the historic district.

Although the Montlake neighborhood was compromised by the construction of SR 520 in the early 1960s, most of the neighborhood remains intact. Taken as a whole, it represents a significant, cohesive collection of residential architecture typical of early twentieth century Seattle, with a combination of builders' houses and high-style, architect-designed buildings.

As noted above, the NRHP-eligible Montlake historic district contains some noteworthy non-residential structures, including MOHAI, designed by architect Paul Thiry and built between 1950 and 1952. Located at 2161 East Hamlin Street, MOHAI is a contributing element to the Montlake historic district for its remaining architectural significance, its contributing presence to the neighborhood, and its cultural significance. However, the multiple additions and unsympathetic alterations to the building are too significant to allow MOHAI to be individually eligible for the NRHP.



The NOAA Northwest Fisheries Science Center research complex at 2725 Montlake Boulevard East in the NRHP-eligible Montlake historic district contains multiple buildings and has restricted access (**Exhibits 18 and 19**). While most of the buildings are of newer construction and considered noncontributing to the district, the original building constructed in 1931 is contributing. The original building, known as the west wing, was the first federal fisheries building constructed on the West Coast (Peacock pers. comm. 2004). Facing Portage Bay, the fisheries building was designed in the Art Deco style by noted architect John Graham, Sr.; it is ornamented with terra cotta details that reflect the marine nature of the facility, such as sea shells, coral, sea horses, and waves with fish. The west wing contains offices and dry labs.



Exhibit 18. NOAA Northwest Fisheries Science Center, Montlake Historic District – View from Portage Bay



Exhibit 19. NOAA Northwest Fisheries Science Center, Montlake Historic District

Washington Park Arboretum

Although the Arboretum is a recreational resource, it is also recognized as a historic resource for its historic landscape, historic park structures, and significance in the history of Seattle as one of the city's first parks and one planned by the renowned Olmsted Brothers. Only a small portion of the Arboretum is actually in the project area. The Arboretum contains one NRHP listed resource, the Arboretum Aqueduct (**Exhibit 20**; a Seattle landmark, listed in the NRHP [Historic Bridges/Tunnels in



Exhibit 20. Arboretum Aqueduct in Washington Park Arboretum



Washington State] and the WHR). The Arboretum Aqueduct is not within the project area. In addition, the *Cultural Resources Discipline Report* has recommended further study to determine if Foster Island, along the northern edge of the Arboretum, is eligible for the NRHP as a traditional cultural place. If Foster Island is identified as eligible for the NRHP, further Section 4(f) evaluation would be completed. The rest of the Arboretum has not been listed or formally determined eligible for listing in the NRHP or as a Seattle landmark.

The Arboretum was first known as Washington Park and was one of the city's first parks, created from 1900 to 1904. Originally owned by the Puget Mill Company, it was logged and slated for development, along with the adjacent area that is now known as Broadmoor. But the financial panic of 1893 put the company's plans on hold. In order to get needed infrastructure improvements from the city, Puget Mill Company deeded 62 acres of land that would become the park. More acreage was added over the next few years, and by 1916, it had a total of 165.22 acres (BOLA and Kiest 2003). As early as 1903, the Olmsted Brothers came to Seattle and prepared a plan for Seattle's park system, including Washington Park. In March 1924, Washington Park was officially set aside as a botanical garden and arboretum by the Board of Park Commissioners. In 1925, the "Old Government Canal" property was leased to the city by the federal government for 99 years, to be used for park purposes (Sherwood 1974b). It was considered an expansion of Washington Park and was the location of the first official plantings done in the park in 1935-36. The first formal plan for the Arboretum was drawn up by the Olmsted Brothers in March 1936.

The area south of SR 520 near Foster Island and along the shoreline, north of East Foster Island Road and the road to Broadmoor, was included in both the 1904 and 1936 Olmsted plans as an area of lagoons. The lowering of Lake Washington in 1916 changed the shoreline and created a marsh at the north end of the Arboretum around Foster Island. By 1936, this area was "extensive marshlands, interrupted by landfills, following two decades of exposure since the lowering of the lake. The plan proposed the introduction of waterways labeled "lagoons" to be developed through dredging of the marshland. Dredge spoils would be used to raise the adjacent marshland and to cover the dumps. A future Alpine collection could expand into the area surrounding Foster Island, from the primary Alpine garden proposed west of the nursery" (BOLA and Kiest 2003). To implement the lagoon plan, extensive dredging was done in 1938-39, dredging out 1.25 miles



of lagoons. In 1939, extensive planting of 16 species of bamboo and 3,500 Japanese iris took place; however, few of these survived after World War II. After construction of SR 520 through this area, landscape architect Hideo Sasaki was hired in 1964 to salvage what was left of the northern Arboretum area. Few elements of his plan were implemented, except for the Waterfront Trail. A historic review conducted by BOLA Architecture and Karen Kiest/Landscape Architects in 2003 stated: "An estimated 60 acres were lost in the lagoon area, which had been part of the Olmsted Brothers proposed plan for the Arboretum. Excavations, which extended along the east side of 26th Avenue, filled with water. The resulting topography and the presence of the off-ramps eliminated the possibility of further development at the north end of the Arboretum" (BOLA and Kiest 2003). The integrity of this area was severely compromised by the construction of SR 520 and the Evergreen Point Bridge.

The undeveloped property north of SR 520 behind the houses facing East Hamlin Street is what remains of the "canal reserve land," the location of the original log canal between Lake Union and Lake Washington. This piece of land was not included in the Olmsted plans for the park, but as noted above, was one of the first areas formally planted. Frederick W. Leissler, Jr., who was appointed assistant director of the Arboretum in 1936, directed WPA crews in planting Yoshino cherry trees and incense cedars on the "canal land" during the winter of 1935-36. The Seattle Garden Club, who had funded the 1936 Olmsted plan, expressed concern over these plantings, fearing that they might be detrimental to the overall plan, but the trees remained until the construction of SR 520 in 1961. At that time, many of the cherry trees were relocated to the liberal arts quad of the University of Washington. They were removed in 1998 because of their advanced age (BOLA 2003). Two of the cherry trees that were not relocated remain today; however, most of the surrounding land and plantings have been removed, and the introduction of SR 520 severely compromised the integrity of this early landscape.



What Section 4(f) properties are in Lake Washington?

What parks and recreational facilities are in Lake Washington?

While numerous recreational activities occur on Lake Washington, there are no formally designated parks or recreational facilities in the Lake Washington project area that would be protected by Section 4(f).

What historic properties are in Lake Washington?

Evergreen Point Bridge

The Evergreen Point Bridge (**Exhibit 21**), the second span built across Lake Washington, lies 4 miles north of the first floating bridge, the Lacey V. Murrow Memorial Bridge. The Evergreen Point Bridge forms the center portion of the 5.8-mile project connecting the area's two main north-south highways, Seattle's Interstate 5 and the Interstate 405 on the Eastside (Hobbs and Holstine 2004). Construction on the Evergreen Point Bridge began in August 1960 and took almost 3 years (837 days) to complete (Hobbs and Holstine 2004). Its opening ceremony was held August 28, 1963.



Exhibit 21. Evergreen Point Bridge, Seattle

Although still generally referred to as the Evergreen Point Bridge, it was officially renamed the Governor Albert D. Rosellini Bridge in 1988 (Mauldin, no date).

At the time of its construction, the Evergreen Point Bridge was the largest floating span in the world at 1.4 miles long. It cost \$24,972,000 (the floating section alone was \$10.9 million), making it the most expensive floating bridge in the world (Hobbs and Holstine 2004). The State Toll Bridge Authority issued a \$30 million bond for the bridge, with a 40-year retirement limit. The bridge had a 35-cent toll from 1963 to 1979 (**Exhibit 22**). In June 1979, the bond was paid in full (20 years ahead of schedule) and the toll booths were removed.

The floating section of the bridge is 7,578 feet long with 35 pontoons, the largest of which measures 360 feet long by 60 feet wide and 14.8 feet deep, and weighs 6,700 tons. There are 62 reinforced-concrete anchors, each weighing 77 tons, connected to the pontoons by two $\frac{3}{4}$ -inch steel cables. The roadway accommodates four lanes of traffic and is 54 feet wide. It has a 2-foot-wide median and 3-foot-wide maintenance walkway. The Evergreen Point Bridge was designed with a “no bulge”



lift-draw span, which opens to 200 feet to allow passage of ships (**Exhibit 23**). The lift spans are raised 7 feet, allowing retraction of the moveable pontoons. At each end of the floating section, elevated steel truss spans with fixed columns connect to the shore and provide enough vertical clearance to accommodate large pleasure craft (Hobbs and Holstine 2004).

The bridge has had few substantial alterations over its lifetime, and appears today much as it did when completed in 1963. It continues to fulfill its original function, although it now must handle more than twice its intended capacity. With the sinking of the original Lake Washington floating bridge, the Evergreen Point Bridge became the oldest remaining floating bridge across Lake Washington, exemplifying an engineering feat of outstanding proportions. As noted above, it was also the longest and most expensive. The bridge is already over 40 years old and will meet the 50-year mark in August 2013. However, due to its exceptional significance, it is already eligible for the NRHP. It is significant as a structure under Criterion C for its outstanding and innovative engineering design that meets the criteria of exceptional significance. It is also significant under criterion A for its effect on the development of the Seattle metropolitan area, especially on the communities on the Eastside.

What Section 4(f) properties are on the Eastside?

What parks and recreational facilities are on the Eastside?

Fairweather Park

Fairweather Park is a public park in Medina consisting of 11 acres of forested open space (**Exhibit 24**). This unique component of the Medina community has an ecological diversity remarkable in a suburban setting, with over 53 species of plants, 6 species of mammals, and 20 species of birds. The terrain ranges from upland forest to wetland, and is bisected by a spring-fed stream. In the western area of the park are tennis courts and a small grassy playfield.

Points Loop Trail

Points Loop Trail is a 5.6-mile trail that links the communities of Medina, Hunts Point, Clyde Hill, and Yarrow Bay (**Exhibit 25**).



Exhibit 22. Evergreen Point Bridge Toll Plaza, Eastside (historic photo, no date)

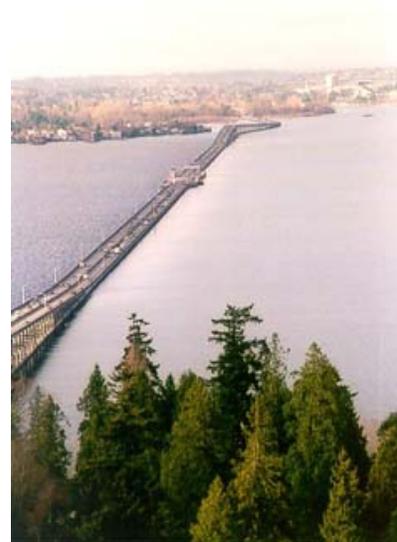


Exhibit 23. Evergreen Point Bridge, from Eastside

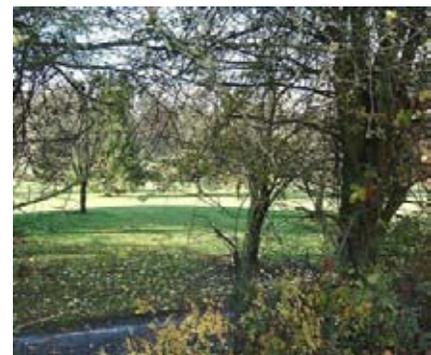


Exhibit 24. Fairweather Park



The trail passes along the south side of Fairweather Park, Hunts Point Park, and Wetherill Park and is located completely within the WSDOT right-of-way in the project area. The primary use of highway right-of-way is for transportation purposes; recreational uses within right-of-way are secondary. WSDOT has General Maintenance Agreements with the adjacent communities to ensure upkeep and policing of the trail.



Exhibit 25. Points Loop Trail

Wetherill Park

Wetherill Park is a 16-acre public facility shared by the communities of Hunts Point and Yarrow Point (Exhibit 26). It is maintained through volunteer efforts and contributions. The 1988 deed to the communities specified that the land should be preserved as a nature retreat. Conifers grow in the higher areas within the park; only deciduous trees grow in the damp soil near Lake Washington. An extensive plant and animal list is provided at the kiosk at the entrance to the trail within the park.



Exhibit 26. Wetherill Park

What historic properties are on the Eastside?

2891 Evergreen Point Road

This Modern-style house was built in 1953 on a bluff overlooking Lake Washington (Exhibit 27). It is architecturally striking and appears to be architect-designed, although no architect of record was discovered during research. Originally the property sloped down to an unobstructed view of the water with an L-shaped wooden dock. In 1979, a new house (2895 Evergreen Point Road) was built between the water and the existing historic house.



Exhibit 27. 2891 Evergreen Point Road, Medina



Although currently vacant and mildly deteriorated, the house still retains its historic features. It has a flat roof, concrete foundation, and cedar siding. The rear of the house faces the road with an unprepossessing facade, with a carport and a partially roofed porch enclosed with a vertical wood divider. The front of the house faces the water and is much more dramatic, featuring a two-story glass extension with a sloped shed roof and a wide horizontal brick chimney. The house also features large panes of glass, especially on the front. Access to the site is limited due to its distance from the road. The house is eligible for the NRHP under Criterion C for its distinctive architectural characteristics uniquely representative of its mid-century period.

2851 Evergreen Point Road

This Modern-style residence was constructed in 1953 (**Exhibit 28**). Its L-shaped design surrounds an interior courtyard, with a separate rear deck that originally looked over Lake Washington. That view is now obscured by a 1970s house. The house has a poured concrete foundation, is clad in vertical wood siding, and features a pair of low, wide, intersecting gable roofs punctuated by wide brick chimneys. It has extensive plate glass windows. The only apparent alteration to the building is the enclosure of the original front carport to form an enclosed garage. Research did not reveal an architect for this house, although it is likely from its appearance that it was architect-designed. The house is eligible for the NRHP under Criterion C for its distinctive architectural characteristics, uniquely representative of its mid-century period.



Exhibit 28. 2851 Evergreen Point Road, Medina



Bellevue Christian School

Originally built as the Three Points Elementary School in 1961, located at 7800 Northeast 28th Street in Medina, this collection of Modern buildings was designed by noted Seattle architectural firm Narramore, Bain, Brady and Johanson, now known as NBBJ (**Exhibit 29**). Founded in 1943, NBBJ became a regional leader in the Pacific Northwest. Over the years, the firm has grown to become the third largest design practice in the United States and the fifth largest in the world. The school was built for the Bellevue Public School District and consists of four octagonal school room buildings, connected by a series of covered walkways, anchored by a rectangular building that is bisected by a breezeway. Next to this rectangular building, which holds classrooms, the library, and administrative offices, is a two-story rectangular block that contains the cafeteria and assembly space. The complex has had few alterations and is very intact and well-maintained. It is currently leased by the private Bellevue Christian School for use as their elementary school. It will meet the 50-year age criteria in 2011. At that time, it will be eligible for the NRHP under Criterion C for its distinctive architectural characteristics, representational of educational design theories of its period, and as the work of a masterful, world-renowned architectural firm.



Exhibit 29. Bellevue Christian School/Three Points Elementary, Medina

How would the project alternatives use the Section 4(f) properties?

Both the 4-Lane and 6-Lane alternatives would result in the acquisition of portions of specific Section 4(f) properties and would thus directly "use" these properties in terms of Section 4(f) regulations. In addition, each build alternative would have new long-term proximity effects on some of these properties. None of these proximity effects, however, would result in a "constructive use." Several of the Section 4(f) properties would also experience short-term construction effects. We determined that temporary occupancy during construction could constitute a use at Bagley Viewpoint and East Montlake Park. The following text is organized by the three project areas – Seattle, Lake Washington, and Eastside; the two categories of affected resources –



Parks and Historic Properties; and the nature of the effect – long-term direct or proximity effects and short-term construction effects.

How would the project alternatives use Section 4(f) parks and recreational facilities in Seattle?

No Build Alternative

The No Build Alternative's Continued Operation Scenario would not result in property acquisition or other long-term direct uses of parks and recreational facilities. Current proximity effects would continue, most notably noise from vehicles traveling on SR 520. A proximity effect that could occur would be an increase in noise because of more congestion along the SR 520 corridor. The projected increase, however, would not preclude the continued use and enjoyment of the parks.

Under the Catastrophic Failure Scenario, existing elevated ramps and the mainline could collapse into portions of adjacent parks, rendering those areas inaccessible for recreational use until removal of the debris.

4-Lane Alternative

Bagley Viewpoint, Direct Effects

The northern edge of the westbound lanes would intrude into the southern 45 feet of the viewpoint, requiring the acquisition/direct use of 0.06 acre, or 40 percent, of the total park area (**Exhibit 30**). Because of its small size, the remainder of the viewpoint (0.09 acre) may become unusable, depending on whether access and parking can be provided, and thus a further direct use may occur.

Bagley Viewpoint, Proximity Effects

Current noise levels within Bagley Viewpoint are approximately 75 dBA. Construction of the proposed sound walls would result in reduced 2030 noise levels in the vicinity of the viewpoint. A residence on the north side of East Roanoke Street immediately north of the viewpoint would be expected to experience a 2 dBA decrease in noise levels in 2030 compared to existing conditions and a 4 dBA decrease in 2030 compared to the No Build Alternative. Bagley Viewpoint would experience similar reductions in noise levels with the project. However, Bagley Viewpoint would remain a high noise location, in excess of the FHWA noise abatement criteria for parklands of 67 dBA. The existing noise adversely affects the use and enjoyment of the facility and, if the facility were continued to be used, would be similarly affected in the future. In addition, the 10-foot-high sound walls along the sides of the





-  Park Property Line
-  Limits of Construction
-  Area to be acquired

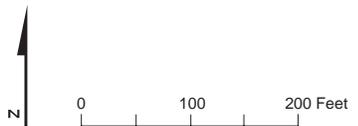


Exhibit 30. 4-Lane Alternative, Bagley Viewpoint
 SR 520 Bridge Replacement and HOV Project

highway could obstruct views to the south from the viewpoint if still in use, and because of the wider Portage Bay Bridge, views to the east would change as well. If the facility remained open, these changes in views would not be expected to substantially impair its use.

Bagley Viewpoint, Construction Effects

Construction would likely result in the temporary occupancy of the portion of the viewpoint that would not be initially acquired. Because the viewpoint would be located immediately adjacent to the area of construction, it would likely be fenced (and thus inaccessible) during the construction period to accommodate access to the construction site, to stage equipment and materials, and to ensure public safety. Based on the conditions defining whether a temporary occupancy does or does not constitute a use of the land within the meaning of Section 4(f), closure of this remaining portion of the viewpoint would likely constitute a use. This conclusion is based on the fact that there would be interference with the activities and purposes of the resource temporarily during construction, and possibly on a long-term basis if the remainder of the viewpoint became unusable because of its resulting small size.

Bill Dawson Trail (Montlake Bike Path), Proximity Effects

There would be no direct use of the Bill Dawson Trail. The trail would continue to pass beneath SR 520, and because of the widened highway, the length of the trail under the roadway would increase from 100 feet currently to 180 feet. While the trail would be beneath the roadway for an additional 80 feet, it is not anticipated that this effect would significantly impair the continued use of the trail. Trail users would benefit from an improved, direct tunnel connection to the trail under Montlake Boulevard, rather than the need to use surface streets as is currently the case, and reduced noise levels because of the proposed sound walls along the north side of the roadway that would lower noise levels by 5 dBA at that location in 2030 compared to existing conditions and 6 dBA in 2030 compared to the No Build Alternative.

Bill Dawson Trail (Montlake Bike Path), Construction Effects

During construction, the trail under the highway would likely be periodically closed for public safety reasons. The envisioned temporary occupancy would not constitute a use because the closure would be temporary and over a shorter duration than the construction of the full project, a detour would be provided during the closures to allow for the



continuity of the trail, and the trail would be fully restored following construction.

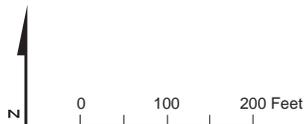
McCurdy and East Montlake Parks, Direct Effects

All of McCurdy Park (1.5 acres) and 3.25 acres of East Montlake Park would be acquired to accommodate the proposed project, as shown in **Exhibit 31**. McCurdy Park would be used because of the highway improvements, while the required portion of East Montlake park would accommodate the proposed stormwater treatment wetland to be located within the footprint of the existing parking lot that serves the museum and the park (all 100 existing parking spaces would be lost). Once the project is completed, it is anticipated that portions of both parks could be returned to park use. For example, the northwest corner of McCurdy Park (approximately 0.62 acre) that would be initially acquired for the project could be returned to park use as shown in **Exhibit 31**. That portion of the park that could be returned to park use would constitute 41 percent of the current park area. (In other words, the park could experience a net loss of 0.88 acre, or 59 percent of its current size.) It is estimated that approximately 67 percent (or 2.19 acres) of East Montlake Park that would be initially acquired could be returned to park use; the resulting net loss of park land would be 1.06 acres, or 15 percent of the existing park area.

The area that would be initially acquired in both the McCurdy and East Montlake parks contains the MOHAI building. As a result, the structure would be removed to accommodate the highway improvements and associated construction activities. This building is a contributing element to the Montlake historic district. In addition, removal of the building would require relocation of the museum operations (if not already moved by 2009 as planned) and identification of replacement facilities for the future potential use of the building by the Arboretum.

While the stormwater treatment wetland would remain within the new WSDOT right-of-way, it could become an amenity to the park and could provide a positive visual effect by replacing a parking lot with a more natural-appearing landscape appropriate to the adjacent shoreline. In addition, a new bicycle and pedestrian path would be constructed along the east side of the wetland that would proceed south under SR 520 and connect to other trails proposed in the Arboretum Master Plan. A second bicycle and pedestrian path would extend from the existing trail kiosk along the north edge of the wetland to 24th





**Exhibit 31. 4-Lane Alternative,
McCurdy and East Montlake Parks**
SR 520 Bridge Replacement and HOV Project

Avenue East, thus completing an areawide trail network linking areas north and south of SR 520.

McCurdy and East Montlake Parks, Proximity Effects

Current noise levels in McCurdy Park are approximately 75 dBA; noise levels modeled at a single location within East Montlake Park are approximately 63 dBA. Construction of the proposed sound walls would result in the reduction of future (2030) noise levels within that portion of the park that could eventually be returned to recreational use. A residence across Park Drive East from that portion of McCurdy Park that could be returned to park use would experience a 4 dBA decrease in noise levels in 2030 compared to existing conditions and a 5 dBA decrease in 2030 compared to the No Build Alternative; similar reductions would be expected within the park. Noise levels in East Montlake Park would experience a 3 dBA decrease in 2030 compared to existing conditions and a 4 dBA decrease in 2030 compared to the No Build Alternative.

Currently, SR 520 is virtually unseen from areas within East Montlake Park; the view to the south is blocked by the MOHAI building and trees in McCurdy Park. The removal of those trees and the building could degrade the southward view for park users. The effect, however, is not anticipated to be so severe as to substantially impair the continued use and enjoyment of the park.

McCurdy and East Montlake Parks, Construction Effects

During construction, a pipeline from the stormwater treatment wetland to an existing outfall on the Ship Canal would be laid through East Montlake Park. Open trench excavation would be used, resulting in the removal of mature trees and other vegetation along the pipe alignment and the generation of fugitive dust and construction-related noise and vibration. The pipe would cross under the Arboretum Waterfront Trail and would require the periodic temporary closure (up to 1 month at a time) of the trail during construction. Access to the northeast portion of the park surrounding the pipeline alignment would likely be closed for safety purposes and, in combination with the use of the southern half of the park for construction of the stormwater treatment wetland, the only area of the park that would be easily accessible during construction would be the northwest corner. As previously noted, the existing parking lot would be removed to construct the proposed stormwater treatment wetland and access to the canoe and kayak launch point would temporarily be denied. As a result, the temporary occupancy of



East Montlake Park may constitute a use according to Section 4(f) regulations.

Washington Park Arboretum, Direct Effects

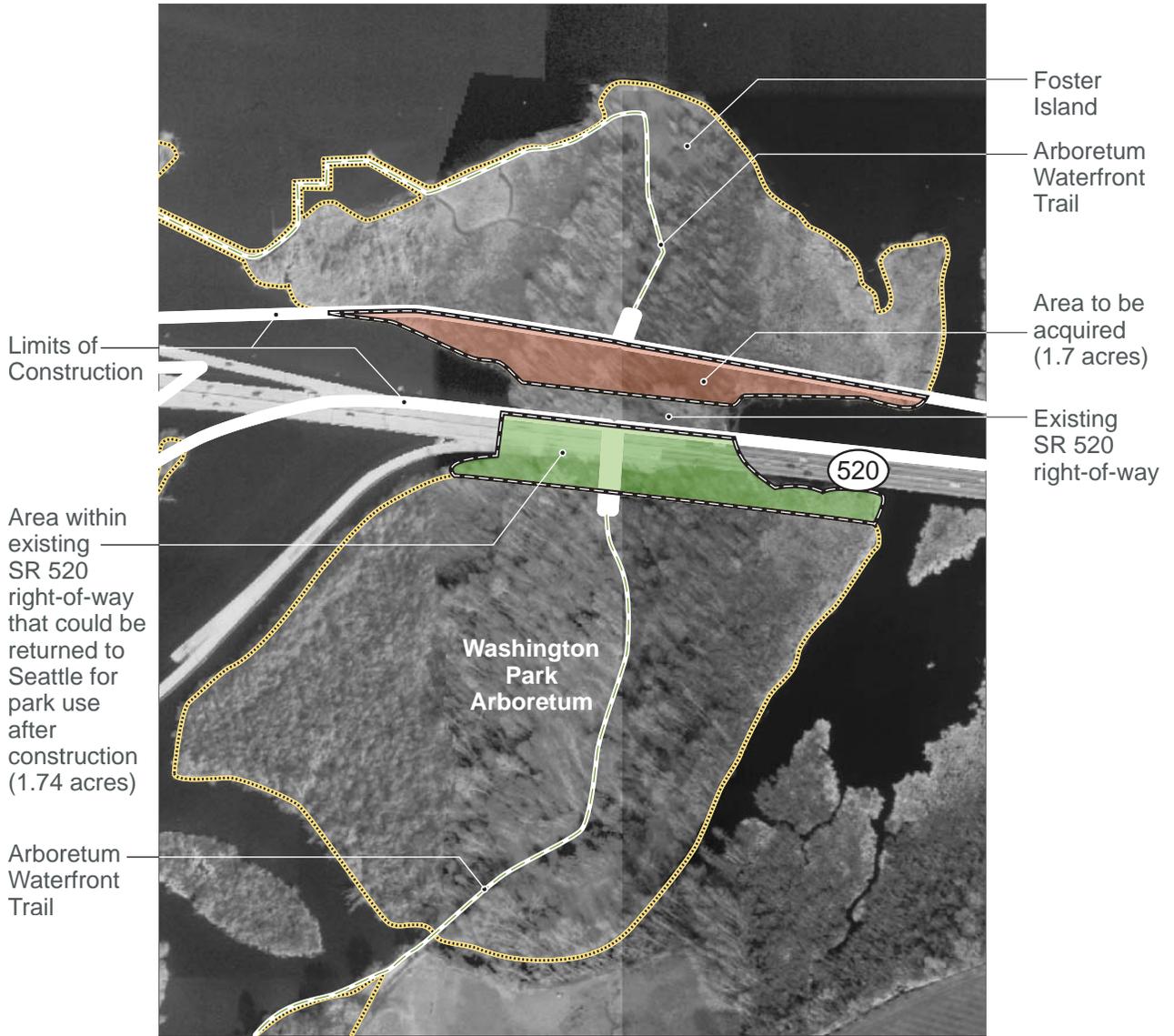
The westbound lanes would intrude roughly 81 feet northward into Foster Island (**Exhibit 32**), requiring the acquisition of 1.7 acres of parkland (5.5 percent of Foster Island and less than 1 percent of the total acreage of Washington Park Arboretum). Because of this northern shift, the area of the existing SR 520 footprint (roughly 0.64 acre) and the current right-of-way south of SR 520 (roughly 1.1 acres) could be returned to the City of Seattle for park use after construction (1.74 acres total). The resulting net gain of parkland would be approximately 0.04 acre, as presented in **Exhibit 33**.

In addition to this net gain of parkland, the SR 520 mainline would be elevated approximately 43 feet above the Arboretum Waterfront Trail on Foster Island. While the land beneath the footprint of the highway would be within the WSDOT right-of-way, it could be available for park use after construction (except for the area required for the columns necessary to support the highway structure). The increased elevation of the SR 520 structure (more than four stories above the trail) would allow the trail to be reconstructed at-grade instead of passing through the current low and narrow tunnel that many trail users find unpleasant and uncomfortable.

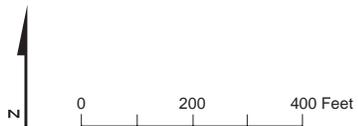
Washington Park Arboretum, Proximity Effects

Current noise levels in the northern part of Washington Park Arboretum (Foster Island and the adjacent Marsh Island) range from 63 dBA along the Arboretum Waterfront Trail at the northern tip of Foster Island to 71 dBA along the Arboretum Waterfront Trail immediately north and south of the SR 520 mainline. Construction of the proposed 8-foot-high sound walls (**Exhibit 34**) on both sides of SR 520 would be expected to result in a 6 dBA decrease in noise levels in 2030 at the northern tip of the island compared to either existing conditions or to the No Build Alternative and an 8 dBA to 12 dBA decrease in noise levels in 2030 along the trail just south and north, respectively, of SR 520 compared to existing conditions and 9 dBA to 13 dBA decrease compared to the No Build Alternative.





-  Park Property Line
-  Limits of Construction
-  Area to be acquired
-  Area that could be returned to Seattle after construction



**Exhibit 32. 4-Lane Alternative,
Washington Park Arboretum**
SR 520 Bridge Replacement and HOV Project

Exhibit 33. Net Parkland Gain at Washington Park Arboretum in Seattle under the 4-Lane Alternative

Resource	4-Lane Alternative (in acres)		
	Acquired	Returned to Parkland	Net Gain or Loss
Washington Park Arboretum	1.7	1.74	+0.04

The elevated SR 520 structure would become a more dominant and noticeable feature, which could affect the visual environment for some Arboretum Waterfront Trail users along that portion of the trail from which the highway would be visible, as shown in **Exhibit 34**. However, it is not anticipated that these effects would substantially impair the aesthetic features or attributes of the trail or preclude the continued use and enjoyment of the trail by most recreationalists. In addition, the existing unused R.H. Thompson Expressway ramps would be removed, which would open views for park users and improve the visibility across the land and water. The wider spacing of the new columns supporting the elevated structure (250 feet as compared to 100 feet currently) would also contribute to the positive change.

Washington Park Arboretum, Construction Effects

Construction of the proposed highway improvements would require the periodic closure of that section of the Arboretum Waterfront Trail located under SR 520. During these closures, trail users would be unable to use the trail in its entirety between East Montlake Park and the main area of the Arboretum. If access were possible at its northern terminus in East Montlake Park (as previously noted, trail access at that location during construction is likely to be difficult or denied), users of the trail would be able to walk to the northern portion of Foster Island before having to turn around. Trail users coming from the Arboretum to the south would be required to turn around at the fenced limits of construction. It is anticipated that the periodic closures of the trail would not be more than 180 consecutive days.

The project would also require construction of a 60-foot-wide detour bridge along the south side of the SR 520 mainline to allow traffic to operate while the new structures are being constructed. The detour bridge would be located primarily within the existing WSDOT right-of-way, except for a 0.25-acre strip within the park directly south of the right-of-way. The detour bridge would temporarily occupy the park.



Existing View



4-Lane Alternative



Looking northwest along pedestrian path toward tunnel under SR 520 that connects to Foster Island trail



Exhibit 34. View of Arboretum Trail, Existing Conditions and 4-Lane Alternative

SR 520 Bridge Replacement and HOV Project

However, because the duration of the occupancy would be less than the duration needed for construction of the full project, the area of effect would be very small compared to the size of the park, there should be no permanent adverse physical effects or interference with the activities or purposes of the park, and the land would be fully restored; therefore the temporary occupancy would not constitute a use according to Section 4(f) regulations.

6-Lane Alternative

Bagley Viewpoint, Direct Effects

The northern edge of the westbound lanes would intrude into the southern 65 feet of the viewpoint and require the acquisition/direct use of 0.09 acre, or 60 percent, of the total park area (**Exhibit 35**). Because of its small size, the remainder of the viewpoint (0.06 acre) may become unusable, depending on whether access and parking can be provided, and thus a further direct use may occur.

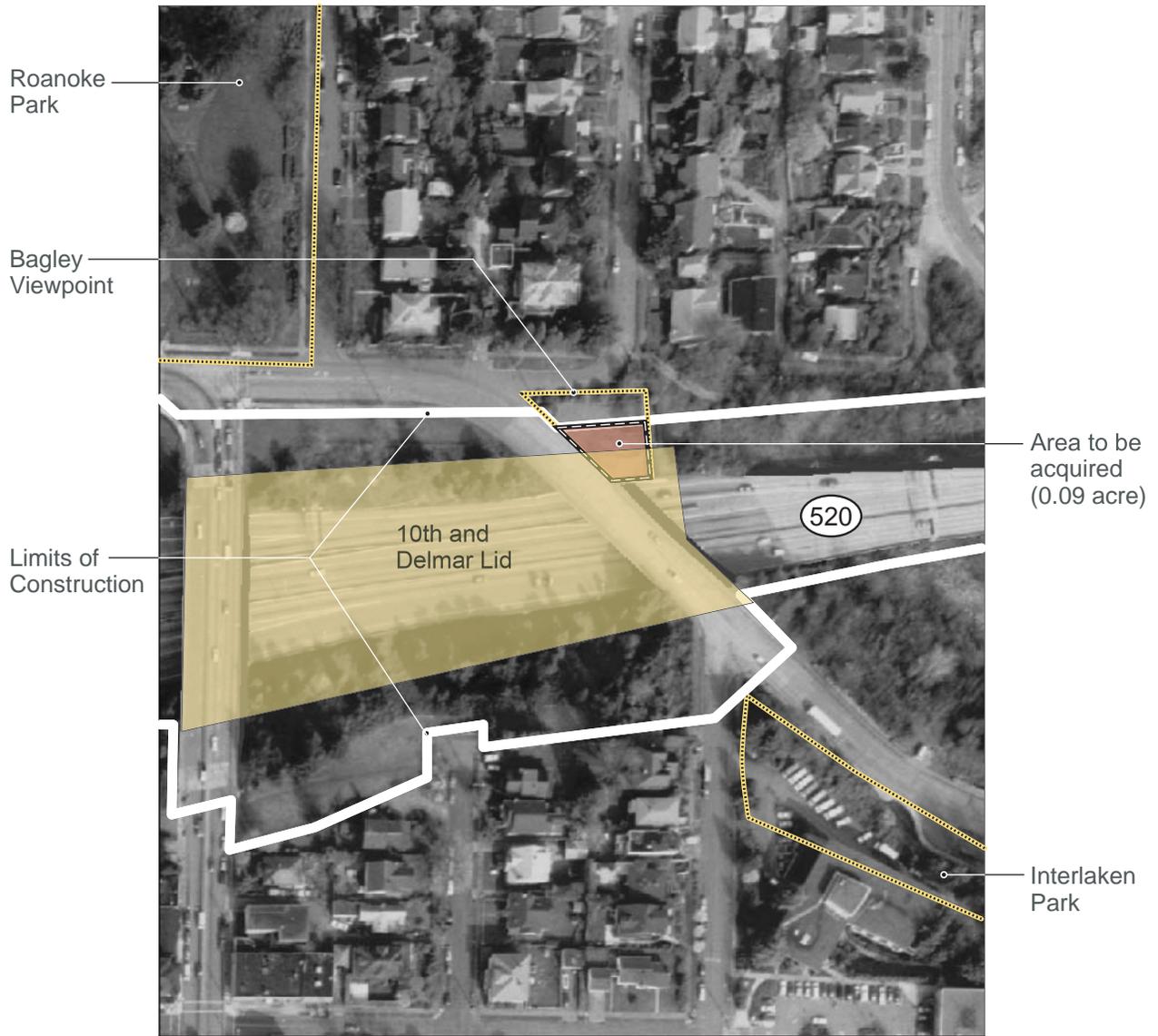
Bagley Viewpoint, Proximity Effects

Current noise levels within Bagley Viewpoint at peak-hour traffic are approximately 75 dBA. The noise analysis assumed that the remainder of the viewpoint would be unusable after project construction and thus did not estimate future (2030) noise levels. Construction of the proposed sound walls would, however, result in reduced noise levels in the vicinity. A residence on the north side of East Roanoke Street immediately north of the viewpoint would be expected to experience a 4 dBA decrease in noise levels in 2030 compared to existing conditions and a 5 dBA decrease in 2030 compared to the No Build Alternative. Bagley Viewpoint would experience similar reductions in noise levels with the project. However, Bagley Viewpoint would remain a high noise location in excess of the WSDOT noise abatement criteria for parklands of 67 dBA. The existing noise adversely affects the use and enjoyment of the facility and the facility, if it were continued to be used, would be similarly affected in the future.

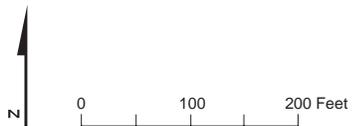
Bagley Viewpoint, Construction Effects

Construction would likely result in the temporary occupancy of the portion of the viewpoint that would not be initially acquired. Because the viewpoint would be located immediately adjacent to the area of construction, it would likely be fenced (and thus inaccessible) during the construction period to accommodate access to the construction site, to stage equipment and materials, and to ensure public safety. Based on the conditions defining whether a temporary occupancy does or does





-  Park Property Line
-  Limits of Construction
-  Area to be acquired



**Exhibit 35. 6-Lane Alternative,
Bagley Viewpoint**
SR 520 Bridge Replacement and HOV Project

not constitute a use of the land within the meaning of Section 4(f), closure of this remaining portion of the viewpoint would likely constitute a use. This conclusion is based on the fact that there would be interference with the activities and purposes of the resource temporarily during construction, and possibly on a long-term basis if the remainder of the viewpoint became unusable because of its resulting small size.

Bill Dawson Trail (Montlake Bike Path), Proximity Effects

There would be no direct use of the Bill Dawson Trail. The trail would continue to pass beneath SR 520, and because of the widened highway, the length of the trail under the roadway would increase from 100 feet currently to 215 feet. While the trail would be beneath the roadway for an additional 115 feet, it is not anticipated that this effect would substantially impair the continued use of the trail. Trail users would benefit from an improved, direct tunnel connection to the trail under Montlake Boulevard, rather than the need to use surface streets as is currently the case, and reduced noise levels because of the proposed sound walls along the north side of the roadway that would result in a 5 dBA reduction in noise at that location in 2030 compared to existing conditions and 6 dBA in 2030 compared to the No Build Alternative.

Bill Dawson Trail (Montlake Bike Path), Construction Effects

During construction, the Bill Dawson Trail under the highway would likely be periodically closed for public safety reasons. The envisioned temporary occupancy would not constitute a use because the closure would be temporary and over a shorter duration than the construction of the full project, a detour would be provided during the closures to allow for the continuity of the trail, and the trail would be fully restored following construction.

McCurdy and East Montlake Parks, Direct Effects

All of McCurdy Park (1.5 acres) and 3.25 acres of East Montlake Park would be acquired to accommodate the proposed project, as shown in **Exhibit 36**. McCurdy Park would be used because of the highway improvements, while the required portion of East Montlake Park would accommodate the proposed stormwater treatment wetland to be located within the existing parking lot that services the museum and the park (all 100 existing parking spaces would be lost). Unlike the 4-Lane Alternative, it is not expected that any of McCurdy Park could be returned to park use when the project is completed. On the other hand, it is anticipated that approximately 58 percent (or 1.87 acres) of East



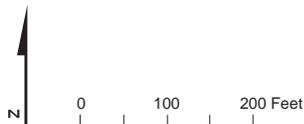


Exhibit 36. 6-Lane Alternative, McCurdy and East Montlake Parks
 SR 520 Bridge Replacement and HOV Project

Montlake Park that would be initially acquired could be returned to park use; the resulting net loss of parkland would be 1.38 acres, or 19 percent of the existing park area.

Similar to the 4-Lane Alternative, it is anticipated that the MOHAI building would be removed to accommodate the highway improvements and associated construction activities. This building is a contributory element to the Montlake historic district. In addition, removal of the building would require relocation of the museum operations (if not already moved by 2009 as planned) and identification of replacement facilities for the future potential use of the building by the Arboretum.

While the stormwater treatment wetland would remain within the new WSDOT right-of-way, it could become an amenity to the surrounding remaining park and could provide a positive effect by replacing a parking lot with a more natural-appearing landscape appropriate to the adjacent shoreline. In addition, a new bicycle and pedestrian path would be constructed along the east side of the wetland that would proceed south under SR 520 and connect to other trails proposed in the Arboretum Master Plan. A second bicycle and pedestrian path would extend from the existing trail kiosk along the north edge of the wetland to 24th Avenue East, thus completing an areawide trail network linking areas north and south of SR 520.

McCurdy and East Montlake Parks, Proximity Effects

Current noise levels modeled at a single location within East Montlake Park are approximately 63 dBA. Construction of the proposed sound walls would result in a 4 dBA decrease in noise levels in 2030 compared to existing conditions and a 5 dBA decrease in 2030 compared to the No Build Alternative. (Because these results relate to the single modeling location within the park, noise could vary depending on the proximity of other locations to SR 520.)

Currently, SR 520 is virtually unseen from areas within East Montlake Park; the view to the south is blocked by the MOHAI building and trees in McCurdy Park. The removal of those trees and the building could degrade the southward view for park users. The effect, however, is not anticipated to be so severe as to substantially impair the continued use and enjoyment of the park



McCurdy and East Montlake Parks, Construction Effects

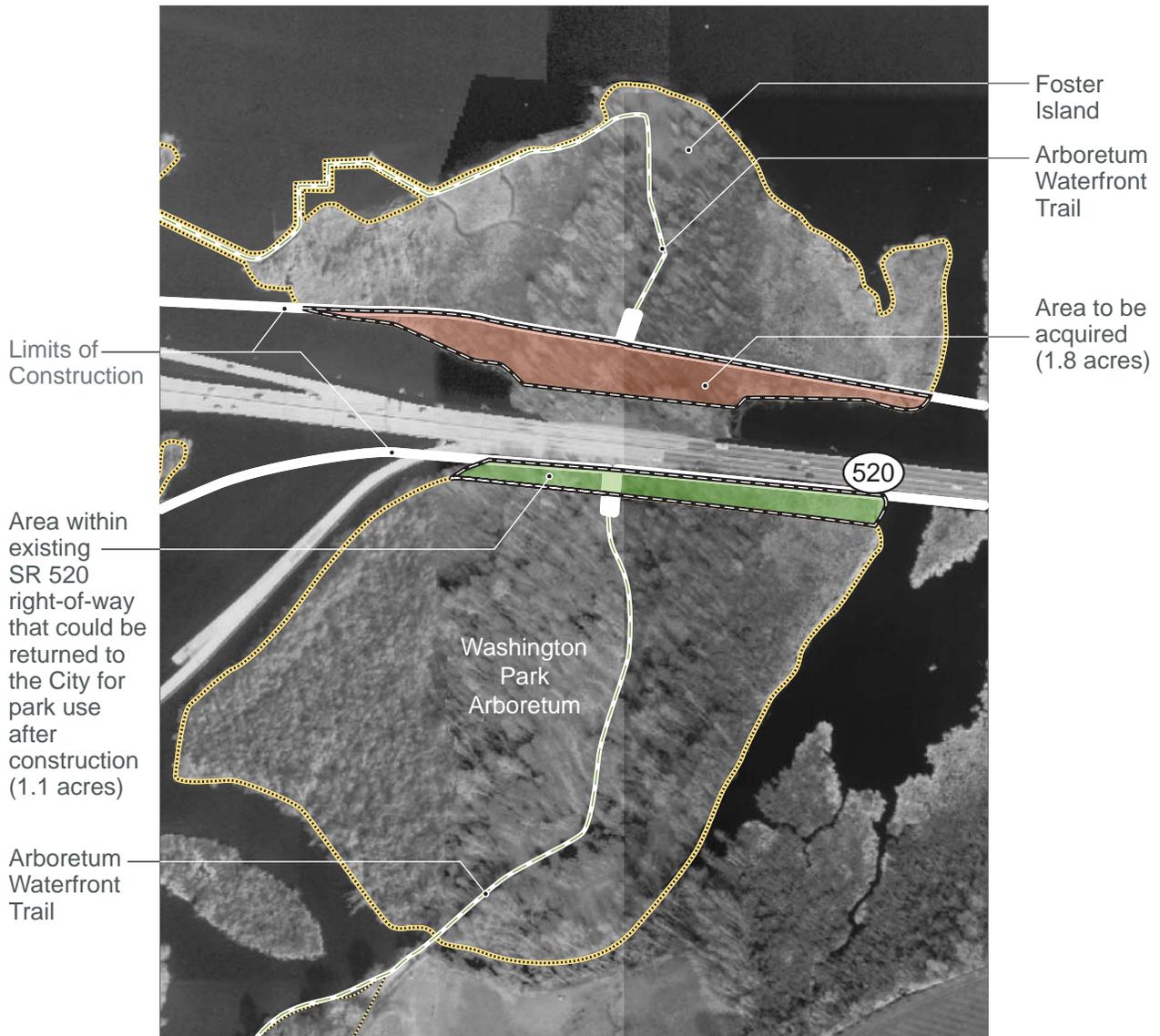
During construction, a pipeline from the stormwater treatment wetland to an existing outfall on the Ship Canal would be laid through East Montlake Park. Open trench excavation would be used, resulting in the removal of mature trees and other vegetation along the pipe alignment. The pipe would cross under the Arboretum Waterfront Trail and would require the periodic temporary closure of the trail during construction. Access to the northeast portion of the park surrounding the pipeline alignment would likely be closed for safety purposes and, in combination with the use of the stormwater treatment wetland, the only area of the park that would be easily accessible during construction would be the northwest corner. As previously noted, the existing 100-car parking lot would be removed to construct the proposed stormwater treatment wetland and access to the canoe and kayak launch point would temporarily be denied. As a result, the temporary occupancy of East Montlake Park would constitute a use according to Section 4(f) regulations.

Washington Park Arboretum, Direct Effects

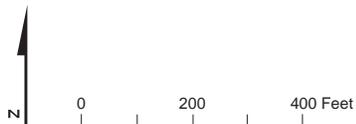
The westbound lanes would intrude roughly 83 feet northward into Foster Island and require the acquisition of 1.8 acres of parkland (5.7 percent of Foster Island and less than 1 percent of the total acreage of Washington Park Arboretum) (**Exhibit 37**). Because of this northern shift, the area south of SR 520 that is currently occupied by WSDOT right-of-way (roughly 1.1 acres) could be returned to Seattle for park use after construction. The resulting net loss of parkland would be approximately 0.7 acre (or 2.2 percent of the existing park), as shown in **Exhibit 38**.

The SR 520 mainline would be elevated approximately 43 feet above the Arboretum Waterfront Trail on Foster Island. While land beneath the footprint of the highway would be within the WSDOT right-of-way, it could be available for park use after construction (except for the area required for the columns necessary to support the highway structure). The increased elevation of the SR 520 structure (more than four stories above the trail) would allow the trail to be reconstructed at-grade instead of passing through the current low and narrow tunnel that many trail users find unpleasant and uncomfortable.





-  Park Property Line
-  Limits of Construction
-  Area to be acquired
-  Area that could be returned to Seattle after construction



**Exhibit 37. 6-Lane Alternative,
Washington Park Arboretum**
SR 520 Bridge Replacement and HOV Project

Washington Park Arboretum, Proximity Effects

Current noise levels in the northern part of Washington Park Arboretum (Foster Island and the adjacent Marsh Island) range from 63 dBA along the Arboretum Waterfront Trail at the northern tip of Foster Island to 71 dBA along the Arboretum Waterfront Trail immediately north and south of the SR 520 mainline. Construction of the proposed 8-foot-high sound walls on both sides of SR 520 would be expected to result in a 6 dBA decrease in noise levels in 2030 at the

Exhibit 38. Net Parkland Loss at Washington Park Arboretum in Seattle under the 6-Lane Alternative

Resource	6-Lane Alternative (in acres)		
	Acquired	Returned to Parkland	Net Gain or Loss
Washington Park Arboretum	1.8	1.1	-0.7

northern tip of the island compared to either existing conditions or to the No Build Alternative and a 9 dBA to 12 dBA decrease in noise levels in 2030 along the trail just north and south, respectively, of SR 520 compared to existing conditions and a 10 dBA to 13 dBA decrease compared to the No Build Alternative.

The elevated SR 520 structure (including two HOV flyover ramps that would be 60 to 65 feet above the water and above the mainline) would become a more dominant and noticeable feature which could affect the visual environment for some Arboretum Waterfront Trail users along that portion of the trail from which the highway would be visible, as shown in **Exhibit 39**. However, it is not anticipated that these effects would substantially impair the aesthetic features or attributes of the trail or preclude the continued use and enjoyment of the trail by most recreationalists. In addition, the existing unused R.H. Thompson Expressway ramps would be removed, which would open views for park users and improve the visibility across the land and water. The wider spacing of the new columns supporting the elevated structure (250 feet as compared to 100 feet currently) would also contribute to the positive change.

Washington Park Arboretum, Construction Effects

Construction of the proposed highway improvements would require the periodic closure of that section of the Arboretum Waterfront Trail



Existing View



6-Lane Alternative



Looking northwest along pedestrian path toward tunnel under SR 520 that connects to Foster Island trail



Exhibit 39. View of Arboretum Trail, Existing Conditions and 6-Lane Alternative

SR 520 Bridge Replacement and HOV Project

located under SR 520. During these closures, trail users would be unable to use the trail in its entirety between East Montlake Park and the main area of the Arboretum. If access were possible at its northern terminus in East Montlake Park (as previously noted, trail access at that location during construction is likely to be difficult or denied), users of the trail would be able to walk to the northern portion of Foster Island before having to turn around. Trail users coming from the Arboretum to the south would be required to turn around at the fenced limits of construction. It is anticipated that the periodic closures of the trail would not be more than 180 consecutive days.

The project would also require construction of a 60-foot-wide detour bridge along the south side of the SR 520 mainline to allow traffic to operate while the new structures are being constructed. The detour bridge would be located primarily within the existing WSDOT right-of-way, except for a 0.25-acre strip within the park directly south of the right-of-way. The detour bridge would temporarily occupy the park. However, because the duration of the occupancy would be less than the duration needed for construction of the full project, the area of effect would be very small compared to the size of the park, there shall be no permanent adverse physical effects or interference with the activities or purposes of the park, and the land would be fully restored; therefore, temporary occupancy would not constitute a use according to Section 4(f) regulations.

How would the project use Section 4(f) historic properties in Seattle?

No Build Alternative

Under the Continued Operation Scenario of the No Build Alternative, there would not be any property acquisition or other long-term direct uses of any historic sites. Current proximity effects would continue, most notably, visual intrusion from SR 520 and noise from vehicles traveling on the highway. A minor (1 dBA) increase in noise is likely for most historic resources in the Seattle project area due to more congestion along the unimproved SR 520 corridor. This projected increase, however, is imperceptible and would not preclude the continued use and enjoyment of any historic properties.

Under the Catastrophic Failure Scenario, the Evergreen Point Bridge and the Portage Bay Bridge would collapse. While this would limit access to the NRHP-eligible Montlake historic district, it would not



result in a restricted access that would substantially diminish the utility of the resource. It would also render areas of the historic Washington Park Arboretum inaccessible until removal of the debris.

4-Lane Alternative

NRHP-Eligible Roanoke Park Historic District, Proximity Effects

The 4-Lane Alternative would result in no direct use of property within the NRHP-eligible Roanoke Park historic district (see **Exhibit 40**). Two existing bridges over SR 520, at 10th Avenue East and Delmar Drive East, would be reconstructed to accommodate wider shoulders, which would increase the visual effect that the current bridges have on the district but would not be a substantial increase over the existing condition. New 10-foot-high sound walls would be built along the perimeter of SR 520 between 10th Avenue East and Delmar Drive East and then eastward from the Delmar Drive East bridge to the Portage Bay Bridge.

Further visual intrusion on the character of the district would result from the new sound walls, but the walls would be located along the outer perimeter of the historic district and would not be a major visual intrusion. The sound walls would have a beneficial effect by helping to visually screen the traffic on SR 520 and decreasing the noise levels from the highway for many locations in the historic district. Existing sound levels in the area adjacent to the proposed sound wall range from 61 to 67 dBA. The installation of the sound wall in this area would lower noise levels slightly to 60 to 66 dBA. Of the 12 noise monitoring locations in the historic district, 4 locations would have decreases of 1 to 2 dBA, 3 locations would have increases of 1 to 2 dBA, and 5 locations would have no changes. Given the small change in sound levels, there would be no audible effect on the district. See Appendix M, *Noise Discipline Report*, for more detailed information.

These visual and audible proximity effects would not substantially impair important features or other significant attributes of the NRHP-eligible Roanoke Park historic district.

NRHP-Eligible Roanoke Park Historic District, Construction Effects

Construction effects on the historic district would be limited to temporary noise associated with construction activities; fugitive dust; possible limited access to selected elements of the district during construction, particularly during the widening and reconstruction of the 10th Avenue and Delmar Drive bridges; and possible vibrations,



especially during construction of the elevated HOV ramp from I-5 to SR 520, and during demolition and construction of the 10th Avenue and Delmar Drive bridges. No temporary occupancy of any site within the historic district is anticipated, and while access may be restricted to selected properties within the district, it would not be precluded and would not substantially diminish the use of the resources. Vibrations and noise from project construction would be monitored to ensure compliance with local regulations (see the *Noise Discipline Report* for details on noise regulations and construction monitoring). The proximity effects from construction would not substantially impair significant features of the historic district. Therefore, there would be no use of the historic district as defined by Section 4(f).

Mason House, Proximity Effects

The 4-Lane Alternative would have only beneficial effects on the Mason House at 2545 Boyer Avenue East. The new Portage Bay Bridge adjacent to the house would be higher than the existing bridge, but it would be shifted north, away from the house, which would slightly decrease the visual effects on the site. The slope of the Portage Bay Bridge would be more gradual than it is currently, with parts of the bridge 20 feet higher than the existing bridge. The bridge would connect with the western land connection at the existing elevation. Columns supporting the structure would generally be spaced 250 feet apart, compared to the current bridge's 100-foot column spacing. The bridge would include an additional westbound lane that would merge buses from the Montlake transit stop and cars from Montlake Boulevard westbound. The bridge alignment would shift to the north to accommodate the widened bridge. The southern edge of the bridge would move north 19.66 feet at the western edge of the bridge, 42.65 feet in the middle of the bridge, and 24.5 feet at the eastern edge of the bridge (see **Exhibit 40**). In addition, the installation of a sound wall along SR 520 would decrease audible effects. The existing noise level at the receptor closest to this point is 70 dBA. See Appendix M, *Noise Discipline Report*, for more information about the location of noise receptors. The construction of the proposed sound wall would result in a noise level of 58 dBA, a substantial decrease of 12 dBA.

Mason House, Construction Effects

Construction effects include temporary noise associated with construction activities; fugitive dust; and vibrations that would occur during demolition and reconstruction of the Delmar Drive East bridge and the Portage Bay Bridge, including pile driving for new columns.



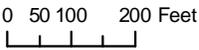
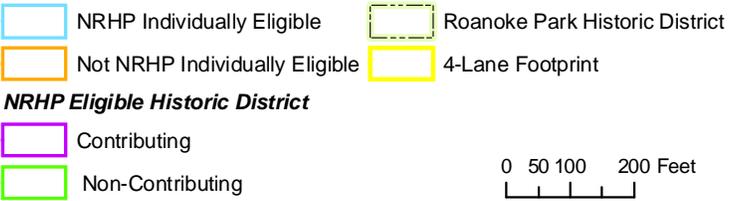


Exhibit 40. Effects of the 4-Lane Alternative on Historic Resources in the Roanoke, Portage Bay, and North Capitol Hill Neighborhoods
 SR 520 Bridge Replacement and HOV Project