Chapter 9: Final Section 4(f) Evaluation

This chapter is the final Section 4(f) Evaluation prepared for the SR 520, I-5 to Medina: Bridge Replacement and HOV Project. The draft Section 4(f)/Section 6(f) evaluation was Attachment 6 in the SDEIS. The final Section 6(f) Environmental Evaluation is provided in Attachment 15 and summarized in Chapter 10. Project correspondence related to Section 4(f) is provided in Attachment 8, and the Section 106 Programmatic Agreement is in Attachment 9.

9.1 Introduction

What is the purpose of this chapter?

Section 4(f) of the U.S. Department of Transportation Act of 1966 (49 USC 303[a]) declares that "[i]t is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites." Section 4(f) protects significant publicly owned parks, recreation areas, and refuges, as well as significant historic sites. This Final Section 4(f) Evaluation assesses the proposed use by the project of parks, recreation areas, wildlife refuges, and historic properties protected under Section 4(f).

In March 2008, publication of the Section 4(f) Final Rule (23 CFR Part 774) amended existing Section 4(f) regulations. This Final Section 4(f) Evaluation is written in accordance with these regulations.

What is Section 4(f)?

Section 4(f) restricts the use of land from a significant publicly owned park or recreation area, wildlife and waterfowl refuge, or historic property that is listed in or eligible for listing in the National Register of Historic Places (NRHP).

Section 4(f) specifies that FHWA may only approve a transportation project or program requiring the use of publicly owned land of a public park, recreation resource, or wildlife and waterfowl refuge of national, state, or local significance; or land from a historic property if:

1. There is no prudent and feasible alternative to using that land; and
2. The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic property resulting from the use; or
3. The Administration determines that the use of the property, including any measure(s) to minimize harm (such as any avoidance, minimization, mitigation, or enhancement measures) committed to by the applicant, will have a *de minimis* impact, as defined in §774.17, on the property.

Section 4(f) further requires consultation with the officials with jurisdiction over Section 4(f) properties when developing transportation projects and programs that use properties protected by Section 4(f).

Under Section 4(f), an alternative that avoids use of a Section 4(f) property must be selected if it is determined to be feasible and prudent according to 23 CFR 774.17. An alternative is not feasible if it cannot be built as a matter of sound engineering. A determination of prudence according to 23 CFR 774.17 requires confirming that the alternative will not:

- Compromise the project to a degree that is unreasonable to proceed with it in light of its stated purpose and need.
- Result in unacceptable safety or operational problems.
- Result in additional construction, maintenance, or operational costs of an extraordinary magnitude.
- After reasonable mitigation, cause:
  - Severe social, economic, or environmental impacts
  - Severe disruption to established communities
  - Severe disproportionate impacts on minority or low income populations
  - Severe impacts on environmental resources protected under other federal statutes
- Cause other unique problems or unusual factors.
- Involve multiple factors that could cumulatively cause unique problems or impacts of extraordinary magnitude.

If analysis concludes that there is no feasible and prudent avoidance alternative, then approval may only be granted for the alternative that causes the least overall harm in light of the statute's preservation purposes. Least overall harm is determined by balancing the ability to mitigate adverse impacts, the relative severity of remaining harm to the resource after mitigation, the relative significance of each Section 4(f) property, the views of the officials with jurisdiction, and the degree to which each alternative meets the purpose and need of the project. These are considered along with differences in cost for the alternatives and the magnitude of any adverse

impacts on non-Section 4(f) resources remaining after mitigation measures are applied.

What is the purpose and need of the project?

The following statement of purpose of the SR 520, I-5 to Medina project, developed in 2000, has guided the environmental review process:

The purpose of the project is to improve mobility for people and goods across Lake Washington within the SR 520 corridor from Seattle to Redmond in a manner that is safe, reliable, and cost-effective, while avoiding, minimizing, and/or mitigating impacts on affected neighborhoods and the environment.

This statement of purpose, part of a more detailed purpose and need statement discussed in Chapter 1, has helped the project team develop and evaluate alternatives for analysis by defining the needs that the alternatives must meet. This project addresses two key issues facing the SR 520 corridor: 1) bridge structures that are vulnerable to catastrophic failure, and 2) worsening traffic levels and congestion due to growth in jobs and housing.

The primary hazards to the floating portion of the Evergreen Point Bridge are from wind and wind-induced wave loads. The pontoons currently float about 1 foot lower than originally designed, increasing the likelihood of waves breaking onto the bridge deck. The floating bridge was originally designed for a sustained wind velocity of 57.5 mph. Due to several strengthening and improvement retrofits, the floating bridge can now withstand a 20-year storm with wind speeds of 77 mph, still well below the current 100-year design wind speed of 92 mph. It is not feasible, due to various limitations, to retrofit the floating bridge to withstand the 100-year storm loads. To bring the Evergreen Point Bridge up to current design standards and eliminate the risk of its catastrophic failure, the existing bridge must be completely replaced (WSDOT 2007a).

The possibility of an earthquake in the Seattle area poses additional risks to bridges in the SR 520 corridor. The columns of the Portage Bay Bridge and the west and east approaches to the Evergreen Point Bridge are hollow and do not meet current seismic design standards. WSDOT studies indicate that retrofitting the hollow core columns would cost nearly as much as building new structures, and would have similar environmental effects.

A second key reason for implementing this project is the severe traffic congestion in the SR 520 corridor, which limits mobility for people and goods, affects the regional economy, and generates air pollution. The traffic demand in both directions exceeds the highway's capacity, creating several hours of congestion every weekday. Another factor that currently limits mobility causing congestion is the design of the Evergreen Point Bridge. By today's engineering standards, the bridge is too narrow to maintain safe

traffic flow. The narrow shoulders provide no room for vehicles to pull over after an accident or breakdown. This slows down traffic and impedes emergency vehicle response. In addition, the westbound high-occupancy vehicle lane on the Eastside ends at the bridge, causing delay for buses and carpools that are forced to merge with congested general-purpose traffic, creating congestion as westbound HOV traffic is forced to merge with general-purpose traffic. This creates disincentives to transit and carpooling, further reducing travel efficiency and overall mobility through the corridor. Maximizing the number of person-trips through the corridor, rather than the number of vehicle trips, is a key measure of how well the project purpose and need is met. Traffic congestion is an inconvenience for drivers, but it also impairs the regional economy and the quality of our lives and communities. Delays increase business costs, discourage growth, and create disincentives for businesses to locate in the region. Congestion also generates pollutants from idling vehicles, which are less efficient than vehicles operating at higher speeds.

The SR 520, I-5 to Medina project would meet its purpose and need by increasing traffic mobility across the Montlake Cut north of SR 520. The Montlake interchange area is currently congested for several hours per day, with much of this congestion caused by vehicles traveling between SR 520 and points north such as the University of Washington (UW) and north Seattle neighborhoods. The existing Montlake Bridge is a limiting factor in the flow of traffic northward from SR 520. Under future No Build conditions, congestion along Montlake Boulevard could increase to the point where queuing traffic could impede the flow of vehicles on the SR 520 mainline. Therefore, all of the 6-Lane Alternative design options evaluated ways to provide additional traffic capacity across the Montlake Cut.

In addition, the SR 520, I-5 to Medina project would meet its purpose and need by increasing safety and mobility in the SR 520 corridor by improving SR 520 from I-5 to Evergreen Point Road. For more information about the purpose and need of the project, see Chapter 1 of this Final EIS and the 2009 Range of Alternatives and Options Evaluated (see Attachment 7 to the Final EIS). Chapter 2 of this Final EIS discusses the alternatives previously eliminated from consideration because they did not meet the purpose and need of the project. Section 9.5 of this chapter discusses avoidance alternatives that were considered and rejected because they did not meet the purpose and need of the project. This Section 4(f) analysis evaluates only the preferred alternative and the three SDEIS options, all of which meet the purpose and need.

What is a Section 4(f) use?

Section 23 CFR 774.17 defines what constitutes a "use" of an eligible Section 4(f) property as a result of transportation project actions:

1. When land is permanently incorporated into a transportation facility;
2. When there is a temporary occupancy of land that is adverse in terms of the statute's preservation purpose and that occupancy does not meet any of the exceptions to 4(f); or
3. When land is not incorporated into a transportation project, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify a property for protection under Section 4(f) are substantially impaired, resulting in a constructive use. A determination of constructive use is based on the criteria in 23 CFR 774.15.

The Preferred Alternative and each of the SDEIS options would result in a "use" of at least one property protected under Section 4(f). This Final Section 4(f) Evaluation is based on the guidance contained in 23 CFR 774; the FHWA Section 4(f) Policy Paper (issued September 24, 1987, and revised March 1, 2005); and the WSDOT *Environmental Procedures Manual* updated in October 2010 (WSDOT 2010a).

Temporary Occupancy

An exception to a Section 4(f) use is a temporary occupancy of land that is "so minimal as to not constitute a use within the meaning of Section 4(f)" as determined by the criteria in Section 774.13(d). The following conditions must be satisfied:

1. Duration must be temporary, i.e., less than the time needed for construction of the project, and there should be no change in ownership of the land;
2. Scope of the work must be minor, i.e., both the nature and the magnitude of the changes to the Section 4(f) property are minimal;
3. There are no anticipated permanent adverse physical impacts, nor will there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis;
4. The land being used must be fully restored, i.e., the property must be returned to a condition which is at least as good as that which existed prior to the project; and
5. There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.

According to 23 CFR Part 774.13(d)(5), "there must be documented agreement of the official(s) with jurisdiction over the Section 4(f) resource" that the criteria above have been satisfied and the proposed temporary occupancy is so minimal that it does not constitute a use under Section 4(f).

There would be no temporary occupancy exceptions of Section 4(f) resources under the Preferred Alternative or any of the SDEIS options.

Constructive Use

Under Section 4(f), a use may occur when there is a *constructive* use of land, which is defined in 23 CFR 774.15(a) as follows:

A constructive use occurs when the transportation project does not incorporate land from a Section 4(f) property, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially impaired.

Substantial impairment occurs only when the protected activities, features, or attributes of the property are substantially diminished.

A determination of constructive use is based on multiple criteria as stipulated in 23 CFR 774.15. WSDOT and FHWA have consulted with the State Historic Preservation Officer (SHPO) on the constructive use determinations and the SHPO has agreed with the determination of no constructive use of historic properties associated with the SR 520, I-5 to Medina project. Analysis of park and recreation resources with no physical Section 4(f) use concluded there are no constructive uses of park and recreation resources in the project area. According to 23 CFR 775.15(c) "the Administration is not required to document each determination that a project would not result in a constructive use of a nearby Section 4(f) property."

For the SR 520, I-5 to Medina project, the Section 106 process for historic properties did not culminate in property-by-property findings of effect from the project. Rather, the criteria of adverse effect were applied to each historic property in the Area of Potential Effects (APE), resulting in a finding that the project as a whole would adversely affect historic properties. The SHPO has concurred with this assessment. Because this process did not culminate in property-by-property findings of effect, there are no properties in the APE that were found to have No Adverse Effect. Therefore, each historic property that does not experience a physical use must be evaluated for constructive use. The detailed evaluation is in the Section 4(f) Constructive Use Analysis Technical Memorandum (see Attachment 17 to this Final EIS). Due to the large number of historic properties within the project APE, the following methodology was established for determining if there is substantial impairment of the properties; that is, if the activities, features, or attributes of the properties are substantially diminished and thus there is a constructive use of the historic properties as a result of the SR 520, I-5 to Medina project.

The historic properties within the APE were clustered into 11 analysis groups, determined based on several factors, including geographic proximity, anticipated project impacts, and NRHP criteria. Within each analysis group, the property with the greatest proximal project impacts was

evaluated for constructive use under Section 4(f) regulations. If after analysis it was determined that the selected property would not have a constructive use from the project, then the remaining properties in that cluster, meeting the same eligibility criteria, by extrapolation also would not experience a constructive use.

Potential haul routes (shown in Exhibit 9-1) could introduce proximity impacts, so the effects from potential haul routes were considered when analyzing constructive use. The Final Transportation Discipline Report (see Attachment 7 to the Final EIS) includes a more detailed discussion and explanation of the haul routes, effects on traffic volumes, and scheduling.

The constructive use analysis includes the following information for the representative properties: a description of the historic property, noting the relevant NRHP eligibility criteria and any significant features or attributes; an explanation of the specific proximity impacts of the Preferred Alternative on the historic property; and an evaluation of the project impacts to determine whether they result in a substantial impairment of the protected activities, features, or attributes of the property.

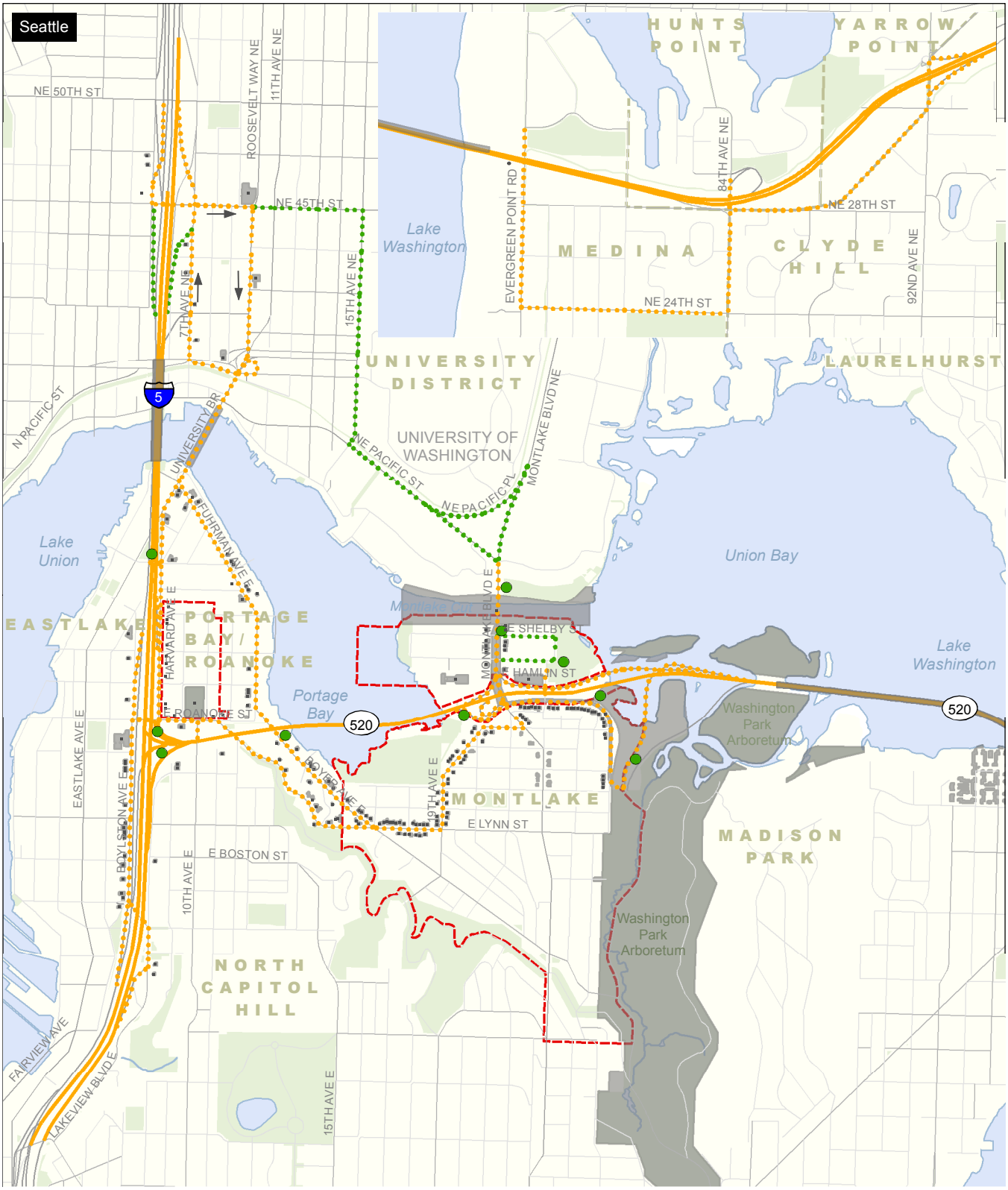
There are two properties identified in Chapter 5 as having no physical project impacts during construction or operation, but that would experience diminished historic integrity due to construction-related activities. The integrity of the Seattle Yacht Club and the Montlake Bridge would be diminished during construction of the Preferred Alternative, as discussed in Chapter 5 and the Final Cultural Resources Assessment and Discipline Report (see Attachment 7 to this Final EIS). A summary of the constructive use analyses for each of these properties from the technical memorandum follows. The Constructive Use Analysis Technical Memorandum is provided in Attachment 17 to this Final EIS.

Seattle Yacht Club

The Seattle Yacht Club Main Station, located within the Montlake Historic District and fronting on Portage Bay, is listed in the NRHP under Criterion A for its association with the social and maritime history of Seattle. A cultural institution of the Seattle Yacht Club is the traditional Opening Day ceremonies held at the beginning of May each year in the Montlake Cut and on Portage Bay.

During construction of the Preferred Alternative, the Seattle Yacht Club could experience the following proximity impacts: fugitive dust, glare from nighttime construction lighting, intermittent interruption of marine access, intermittent restrictions on vehicular access, and possible vibration from demolition of the existing Portage Bay Bridge and construction of work bridges, the new Portage Bay Bridge, and the new bascule bridge. Work bridges and barges used to demolish and reconstruct the Portage Bay

Exhibit 9-1. **Historic Properties adjacent to Potential Haul Routes**



Potential primary haul route (Preferred Alternative and Options A, K, and L)

Potential secondary haul route (Preferred Alternative and Options A, K, and L)

Potential secondary haul route (Options K and L)

Potential staging area

Historic building located adjacent to haul route

Historic properties

Historic district

N

0 1,000 2,000 Feet

Bridge might occasionally interfere with the Seattle Yacht Club's maritime activities in Portage Bay.

Although marine and land access to the Seattle Yacht Club would be maintained at all times, there may be periods during construction when some limitations on access to the Seattle Yacht Club and Portage Bay may be necessary. However, some access would be maintained at all times throughout the construction process.

The new Portage Bay Bridge would operate approximately 110 feet north of the current bridge, bringing the bridge closer to the Seattle Yacht Club and changing its view toward the bay. Although the setting would be affected by this closer location, the visual effect would not be substantial as the Seattle Yacht Club is already located in close proximity to the bridge. The new viewshed would not be significantly different from the existing viewshed. The setting and feeling of the Seattle Yacht Club would be altered by the larger, closer bridge, but the property would retain integrity of location, association, design, workmanship, and materials. As stipulated in the Section 106 Programmatic Agreement (Attachment 9), the community will be involved in the context-sensitive design process for the new Portage Bay bridge in an effort to minimize visual impacts of the new bridge, and WSDOT will implement noise reduction strategies to minimize noise, as warranted.

Through the measures stipulated in the Programmatic Agreement, effects on the historic property will be avoided where possible, minimized to the greatest extent feasible, and mitigated where necessary. WSDOT has committed to various minimization and mitigation measures for the anticipated effects of the project on the Seattle Yacht Club to reduce the proximity impacts on the property, including maintaining marine access during construction, involving the community in the design process, and other measures stipulated in the Programmatic Agreement. The significant functions of the Seattle Yacht Club, such as sailing, boating, teaching, racing, and providing a gathering place, would be limited periodically during construction, but for the most part would continue unimpeded. The Seattle Yacht Club would not lose marine access to most of the bay or to the Montlake Cut, and stipulations have been made to avoid or minimize effects on its Opening Day ceremonies. WSDOT has committed to not transport pontoons through the Montlake Cut or Portage Bay during Opening Day events, including the week before and the week after the ceremonies. Development of a coordination plan and communication process negotiated between the Seattle Yacht Club and WSDOT are stipulated in the Programmatic Agreement, which will include a process to address coordination of in-water construction with maritime activities..

After construction, all the features and attributes that make the property historically significant would be fully functional, and permanent changes to the setting and feeling would be minor. The maritime activities, features,

and attributes of the Seattle Yacht Club would not be substantially diminished by the project, and the significance of the Seattle Yacht Club would not be meaningfully reduced or lost. Therefore, the effects from the Preferred Alternative would not substantially impair the property's association with Seattle's maritime history, which is the attribute that makes it a protected resource and, thus, there would not be a constructive use of the property.

Montlake Bridge

The Montlake Bridge over the Montlake Cut, an active bascule bridge, is listed in the NRHP under Criterion C for its significant engineering and architectural design as a part of the Historic Bridges/Tunnels in Washington State NRHP nomination. It is significant for its type as a moving bascule bridge and for its unique architectural features.

The Preferred Alternative includes a new bascule bridge immediately east of the existing historic Montlake Bridge. Bridge construction, which is expected to last approximately 29 months, would introduce increased noise, fugitive dust, glare from nighttime construction lighting, and possible vibration to the Montlake Bridge. Because of the close physical proximity, constructing a new bascule bridge immediately adjacent to the historic Montlake Bridge would affect the setting and feeling of the bridge as a result of noise, construction activity, and change of views from and of the bridge. The Programmatic Agreement stipulates that safeguards will be put in place to protect the historic Montlake Bridge and to ensure that it is not physically affected in any way during construction of the new bascule bridge.

When completed, the new bascule bridge immediately adjacent to the historic Montlake Bridge would modify the setting and feeling of the historic bridge. Views to the east from the bridge for those crossing it would be affected and the view of the historic bridge from the east also would be affected by the adjacent bridge. A context-sensitive design for the new bridge would minimize visual effects on the historic bridge by decreasing the visual impact, allowing the historic Montlake Bridge and its iconic towers to be more visually prominent than the new structure. Minimization and mitigation measures, including community involvement in the new bridge design, are stipulated in the Programmatic Agreement (see Attachment 9 to this Final EIS).

The Montlake Bridge is an active bascule bridge that accommodates marine traffic through a navigational channel. During and after project construction, the bridge would continue to operate as a bascule bridge. The new bridge immediately adjacent to the historic bridge would reduce the integrity of setting and feeling. The integrity of design, materials, workmanship, association, and location would not be impacted. The significant engineering and architectural features would not be substantially

impaired by the project due to the context-sensitive design of the new bridge and the continued operation of the historic bridge during construction and operation of the project. The activities, features, and attributes of the historic Montlake Bridge would not be substantially diminished by the project, and the significance of the historic bridge under Criterion C would not be meaningfully reduced or lost. Therefore, there would be no constructive use of the Montlake Bridge from the Preferred Alternative.

Summary of Constructive Use Analysis

None of the Section 4(f) properties in the constructive use analysis would experience impacts under the Preferred Alternative that would substantially impair the significant features and attributes of the properties. Although many properties would experience effects from construction, none of these construction effects would substantially impair the activities or features that qualify the resources for Section 4(f) protection. As discussed in the Section 4(f) Constructive Use Analysis Technical Memorandum (see Attachment 17 to this Final EIS), there are no properties with a constructive use from the Preferred Alternative.

De minimis Use

FHWA may also determine that a use is so minor that it may be considered *de minimis*. FHWA's *Guidance for Determining de Minimis Impacts to Section 4(f) Resources* (FHWA 2005a) states that "once the U.S. Department of Transportation determines that a transportation use of Section 4(f) property, after consideration of any impact avoidance, minimization, and mitigation or enhancement measures, results in a *de minimis* impact on that property, an analysis of avoidance alternatives is not required and the Section 4(f) evaluation process is complete."

For *de minimis* to be applicable, a project must meet specified impact criteria. The criteria and associated determination requirements are different for parks and recreation areas than for historic properties:

- *De minimis* impacts on publicly owned parks, recreation areas, and wildlife and waterfowl refuges are defined as those that do not "adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f)."
- *De minimis* impacts on historic properties are defined as impacts that, in compliance with Section 106 of the National Historic Preservation Act (NHPA), have resulted in a determination "that no historic property is affected by the project or that the project will have 'no adverse effect' on the historic property in question."

Based on FHWA guidance for determining *de minimis* impacts (FHWA 2005a), the official with jurisdiction must concur that the project effects would not adversely affect the activities, features, and attributes of the

Section 4(f) property. A letter of concurrence from the official with jurisdiction on a finding of *de minimis* would be required.

For the SR 520, I-5 to Medina project, the Section 106 process for historic properties did not culminate in property-by-property findings of effect from the project. The criteria of adverse effect were applied to each historic property in the APE, resulting in a finding that the project as a whole would adversely affect historic properties. The SHPO has concurred with this assessment.

Based on the previous analysis in the SDEIS, WSDOT and FHWA made preliminary *de minimis* determinations under SDEIS Options A, K, and L with respect to six historic properties:

- Fire Station #22 (Options A, K, and L)
- Montlake Cut (Options A, K, and L)
- Montlake Historic District (Option K)
- 2220 East Louisa Street (Option A)
- National Oceanic and Atmospheric Administration (NOAA) Northwest Fisheries Science Center (Options K and L)
- Canoe House (Option A, K, and L)

Because there were no property-specific effects findings in the Section 106 process, these properties will no longer be recommended as *de minimis* impacts under the SDEIS options. There were no *de minimis* determinations on any park and recreation resources in the SDEIS.

Under the Preferred Alternative, WSDOT and FHWA will make no *de minimis* determinations with respect to Section 4(f) properties. No park or recreation property qualified for *de minimis* determinations. Because there are no findings of No Adverse Effect for specific properties, it is not possible to recommend any Section 4(f) uses of historic properties as *de minimis* as stipulated in the regulations.

What are the key points of this evaluation?

- The Preferred Alternative and the three SDEIS options have the potential to affect15 park and recreation facilities and 367 historic properties that are protected under Section 4(f) regulations. Of the 15 park and recreation resources and 367 historic properties, a total of 6 parks, 3 trails, and 12 historic properties would experience a use as defined by Section 4(f), depending on the alternative or option implemented. The Preferred Alternative would use 6 parks, 3 trails, and 8 historic properties.
- The following 9 park and recreation resources are Section 4(f) properties within the study area that are analyzed for potential Section 4f) use:

A Section 4(f) 'use' occurs when:

- Land is permanently incorporated into a transportation facility;
- There is a temporary occupancy of Section 4(f) property that is adverse in terms of the statute's preservation purpose; or
- Land is not incorporated into a transportation facility, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially impaired.

  - Bagley Viewpoint
  - Montlake Playfield
  - East Montlake Park
  - McCurdy Park
  - Ship Canal Waterside Trail
  - UW Open Space
  - East Campus Bicycle Route
  - Washington Park Arboretum
  - Arboretum Waterfront Trail
- There are 367 historic properties in the APE, including 2 historic districts, 8 historic bridges, 1 historic waterway, 2 historic landscapes, 1 traditional cultural property (TCP), and over 350 historic buildings that are listed in or eligible for listing in the NRHP. All of these properties are protected by Section 4(f). Of these, the following 12 historic properties would experience a Section 4(f) use from the project, depending on the alternative or option implemented:
  - Fire Station #22
  - NOAA Northwest Fisheries Science Center
  - Montlake Historic District
  - 2220 East Louisa Street residence
  - Montlake Cut
  - Canoe House
  - Pavilion Pedestrian Bridge
  - South Pedestrian Bridge
  - North Pedestrian Bridge
  - Washington Park Arboretum
  - Foster Island
  - Evergreen Point Bridge
- There is no feasible and prudent alternative that would avoid the use of all Section 4(f) properties.
- Accomplishing the purpose and need of the SR 520, I-5 to Medina project requires a new floating bridge. This necessitates removal of the existing Evergreen Point Bridge for engineering reasons, which is a Section 4(f) use of a historic property. The existing facility is adjacent to historic properties and park/recreation resources on the north and south sides of the SR 520 corridor. Therefore, it is not possible to fulfill the purpose and need while avoiding all Section 4(f) properties because any change in the corridor would impact one or more of these properties.

Because there is no feasible and prudent avoidance alternative, the Preferred Alternative and the three SDEIS options were analyzed to determine the relative net harm of each, so the one that causes the least overall harm could be identified. This Section 4(f) evaluation identifies the

Preferred Alternative as the one that causes the least harm to Section 4(f) properties.

9.2 Affected Environment

This section describes each Section 4(f) property that would be potentially used by Preferred Alternative or any of the three options previously considered in the SDEIS. These properties were identified in coordination with the officials with jurisdiction in each particular area. WSDOT identified the potentially affected public parks, recreation areas, and historic properties based on the Recreation Discipline Report Addendum and Errata, the 2009 Recreation Discipline Report, and the Final Cultural Resources Assessment and Discipline Report, all of which are provided in Attachment 7 to this Final EIS. No designated wildlife or waterfowl refuges were identified in the study area. Consequently, this Final Section 4(f) Evaluation discusses only public parks, recreation areas, and historic properties.

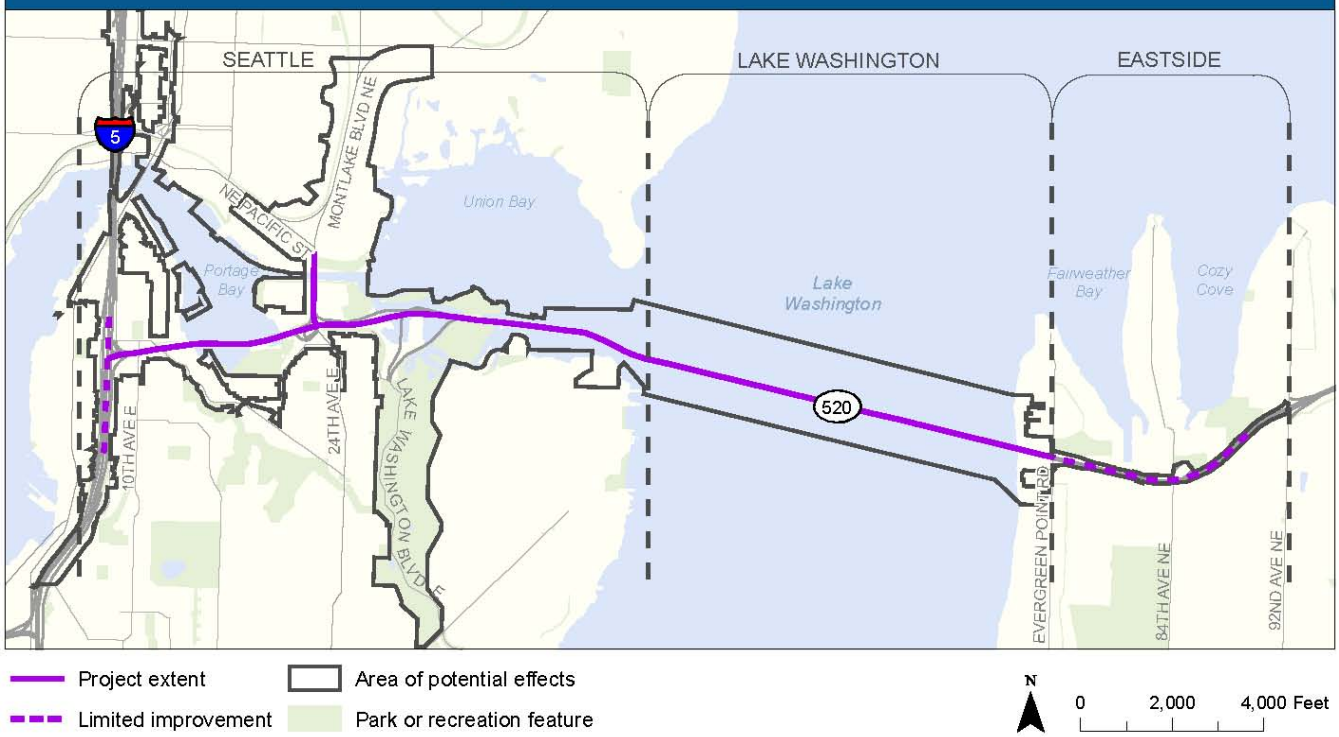
WSDOT surveyed cultural resources in the APE that predate 1972. The year 1972 was conservatively selected to cover all properties that would be 40 or more years old when the Record of Decision for the SR 520, I-5 to Medina project is issued, and could be 50 or more years old by the time the project is built. WSDOT established the APE in consultation with interested tribes, the SHPO, and other consulting parties. See Chapter 4 of this Final EIS and the Final Cultural Resources Assessment and Discipline Report (Attachment 7) for more information about the APE boundaries and the process of establishing the APE. Exhibit 9-2 shows the boundaries of the APE in relation to the geographic study area for the project.

Since the Draft Section 4(f) Evaluation was completed, WSDOT has agreed, at the request of the City of Seattle as the official with jurisdiction, to treat submerged parklands as Section 4(f) properties in the Montlake Playfield and the Washington Park Arboretum. Therefore, this evaluation includes the acreage of these submerged lands in the totals for use of Section 4(f) property. Acreage for these submerged lands has been added to the SDEIS Options A, K, and L where appropriate for these properties.

Section 4(f) applies to archaeological sites that are in or eligible for listing in the NRHP and that warrant preservation in place. Section 4(f) does not apply if FHWA, through consultation with the SHPO and the tribes, determines that the archaeological resource is important due primarily to what can be learned by data recovery (even if it is agreed not to recover the resource) and has minimal value for preservation in place (24 CFR 774.13). There are no known NRHP-eligible archaeological properties in the project footprint.

See the discussion of archaeological surveys and results in the Final Cultural Resources Assessment and Discipline Report (see Attachment 7 to this

Exhibit 9-2. **Area of Potential Effects in the Study Area**



Final EIS). There are no identified archaeological sites that warrant preservation in place, so there are no sites that are Section 4(f) resources. There is a plan for unanticipated discoveries for the project and a historic properties treatment plan.

For archaeological sites discovered during construction where preservation in place is warranted, the Section 4(f) process will be expedited. An October 19, 1980, Memorandum of Understanding with the Heritage Conservation and Recreation Service (now part of the National Park Service) provides emergency procedures for unanticipated cultural resources discovered during construction. The Memorandum of Understanding is available in Volume 2 of the FHWA *Environmental Guidebook* (FHWA 2010). The process for considering post-review discoveries under the Section 106 process is addressed in 36 CFR 800.13. Procedures for archaeological sites discovered during construction are also addressed in the Programmatic Agreement for this project (see Attachment 9 to this Final EIS).

The information in this chapter has come from the Recreation Discipline Report Addendum and Errata, the 2009 Recreation Discipline Report, and the Final Cultural Resources Assessment and Discipline Report (Attachment 7), as well as the Section 6(f) Environmental Evaluation (Attachment 15). See also Cultural Resources (Sections 5.6 and 6.6), Recreation (Sections 5.4 and 6.4), and Section 6(f) (Chapter 10) of this Final

EIS for an overview of each property and the effects of the Preferred Alternative and the three SDEIS options. Of the 367 historic properties in the APE, only properties with a potential Section 4(f) use under the Preferred Alternative or the SDEIS options are discussed in this chapter.

What are the Section 4(f) uses in the Seattle study area?

Exhibit 9-3 is an overview of the study area depicting the properties that would experience a use as defined by 23 CFR 774.17. All properties with a Section 4(f) use under the Preferred Alternative and the SDEIS options are shown on this exhibit.

Park and Recreation Resources

Bagley Viewpoint

Bagley Viewpoint is located at 2548 Delmar Drive East. Seattle Parks and Recreation owns this small (0.1-acre) park. The viewpoint was originally part of Interlaken Park in the early 1900s. However, with the construction of SR 520 in 1963, the viewpoint was effectively cut off from the remainder of Interlaken Park and is now considered a separate park (City of Seattle 1999).

Bagley Viewpoint is considered significant by the City of Seattle. A City of Seattle ordinance protects Bagley Viewpoint as a "SEPA viewpoint," meaning that special protections are in place for protection of the view. Alterations to the viewpoint are subject to the guidelines set forth in *Seattle Views: An Inventory of 86 Public View Sites Protected under SEPA* (City of Seattle 2002). The property is also addressed in the draft *Vegetation Management for Seattle Parks Viewpoints* report (City of Seattle 2005a), which proposes procedures for restoring intended views, controlling erosion and removing weeds.

Seattle Parks and Recreation maintains the vegetation and amenities at this viewpoint. Because Bagley Viewpoint is a publicly owned park considered significant by the City of Seattle; this property is a Section 4(f) resource.

Interlaken Park

Interlaken Park is a densely wooded City of Seattle park, located at 2451 Delmar Drive East on the north end of Capitol Hill. The park is located on a hillside and through a valley, which is located between SR 520 and the Washington Park Arboretum. The park is primarily vegetated in a natural state, with trail and bike access maintained within the park. An on-street designated bike path is located on Delmar Drive East, which runs adjacent to the northern portion of Interlaken Park. East Interlaken Boulevard, which runs through the park, is also a recognized bicycle facility. Interlaken Park is actively managed by the City of Seattle and is considered a significant park resource.

Exhibit 9-3. **Overview Map of Properties with a Section 4(f) Use under the Preferred Alternative and Options A, K, and L in the Seattle Area**

The Seattle Department of Transportation (SDOT) provides funding for maintenance of the on-street bike pathway. Seattle Parks and Recreation maintains the park's vegetation, trails, and amenities. Interlaken Park is publicly owned and is considered significant by the City of Seattle. Therefore, it is subject to the provisions of Section 4(f).

Montlake Playfield

Located at 1618 East Calhoun Street on the shore of Portage Bay, Montlake Playfield is a 26-acre City of Seattle regional park. The playfield, associated recreation fields, and the community center were dedicated in 1935. The community center, which hosts many neighborhood meetings and events, is also a historic property eligible for listing in the NRHP. Seattle Parks and Recreation general funds have been used to construct, improve, and maintain the community center and playfields.

In the 1960s, substantial amounts of fill material were deposited onsite. For example, spoils from construction of SR 520 were deposited on the main park site and at the shoreline to allow for continued expansion of the facilities. However, in 1968, the dumping of fill material stopped when Seattle Parks and Recreation decided to preserve the shoreline environment. The City of Seattle has been restoring the western shoreline to make the area more accessible.

The draft *Vegetation Management for Seattle Parks Viewpoints* (City of Seattle 2005b) identifies restoration of intended views at Montlake Playfield as a "high priority" because invasive species and overgrown vegetation obscure the views to a high degree. Montlake Playfield is a publicly owned, documented recreation resource of significance for the City of Seattle. Therefore, this property is a Section 4(f) resource.

The parcel for the 26-acre Montlake Playfield extends north of the current SR 520 alignment. A total of 10.5 acres of the playfield is submerged in Portage Bay, but are included in the evaluation of Montlake Playfield as a Section 4(f) resource. A portion of the submerged land would be acquired from the City of Seattle for the Preferred Alternative and the SDEIS options.

Current WSDOT right-of-way maps show the SR 520 right-of-way extending into the active playfield area, including the north part of the running track. Recent research indicates that rather than being owned by WSDOT, this right-of-way is instead an easement granted to WSDOT by the City of Seattle. The limits of construction for the project lie north of this right-of-way line, between the right-of-way and SR 520 (see Exhibit 9-7 in Section 9.4).

East Montlake Park

East Montlake Park is located on the shore of Union Bay adjacent to the Shelby-Hamlin portion of the Montlake neighborhood; it is also located within the Montlake Historic District boundaries.

East Montlake Park was initially created from land deeded to the City of Seattle for park purposes in the 1909 plat of the Montlake neighborhood. The 8.8-acre park is jointly owned by Seattle Parks and Recreation (western section of the park), and the Department of Natural Resources (eastern section of the park). Despite the split in ownership of the land, the entire area is recognized by the City of Seattle and the public as East Montlake Park. Today, East Montlake Park provides trail connections to the Washington Park Arboretum and contains trailheads for both the Arboretum Waterfront Trail and the Ship Canal Waterside Trail. This waterfront park has a launch point for canoes and kayaks; a viewing platform with views of the ship canal, Lake Washington, and the Cascade Mountains; a grassy passive use area; and a paved parking lot. There is no master park plan for East Montlake Park. The City of Seattle constructed East Montlake Park and maintains it. A 1966 LWCF grant was co-sponsored by the City of Seattle and the UW to develop the original Arboretum Waterfront Trail through East Montlake Park (refer to Chapter 10, Section 6(f) Summary, about the relevance of LWCF use). East Montlake Park is publicly owned, and is a documented recreation resource of significance. Therefore, this property is a Section 4(f) resource.

McCurdy Park

McCurdy Park is located between the north side of SR 520 and the southern boundary of East Montlake Park, and is 1.4 acres. It is primarily composed of green space and specimen plantings that surround the MOHAI building area. Like East Montlake Park, it is immediately adjacent to the Shelby-Hamlin portion of the Montlake neighborhood and within the Montlake Historic District boundaries. In the 1920s, the federal government leased a portion of the old canal right-of-way (originally reserved for the Lake Washington Ship Canal) for 99 years to the City for park use, and McCurdy Park occupies part of this land. Currently, the draft *Vegetation Management for Seattle Parks Viewpoints* (City of Seattle 2005b) rates the restoration of intended views at McCurdy Park as a "high priority" because of the high degree of obstruction that has occurred at the park from invasive species and overgrown vegetation. The City of Seattle has designated McCurdy Park as a SEPA viewpoint because of its views of Marsh and Foster islands and its limited views of Lake Washington.

The Museum of History and Industry (MOHAI) occupies part of McCurdy Park and crosses the property line between McCurdy and East Montlake Parks. The MOHAI building was built by the Seattle Historical Society (now the Seattle-King County Historical Society), completed in 1952. The site, which was originally owned by the U.S. Army Corps of Engineers

(USACE), was donated to King County and is now owned by the City of Seattle. The MOHAI building is located primarily within the boundaries of McCurdy Park, which is a Section 4(f) property, but the building itself is not. The MOHAI facility is not an integral part of McCurdy Park, and it fulfills an educational rather than a recreational purpose (Williams 2010). The Section 4(f) Policy Paper (FHWA 2005b) states "Publicly owned museums ... will not normally be considered parks, recreational areas, or wildlife and waterfowl refuges and are, therefore, not subject to Section 4(f) unless they are significant historic properties." The MOHAI building is not a significant historic property and is not eligible for the NRHP (see the Final Cultural Resources Assessment and Discipline Report in Attachment 7 to this Final EIS). Therefore, the MOHAI building is not a Section 4(f) property.

McCurdy Park is publicly owned and is a documented recreation resource of significance. Therefore, it is subject to the provisions of Section 4(f).

Ship Canal Waterside Trail

The Ship Canal Waterside Trail is located east and west of Montlake Boulevard along the south side of the Montlake Cut. The 1,200-foot-long trail connects the Arboretum Waterfront Trail in East Montlake Park with West Montlake Park on Portage Bay. Designed by the USACE and the Seattle Garden Club, the trail was constructed in 1970 and designated as a National Recreation Trail a year later (City of Seattle 1974).

The City of Seattle maintains the Ship Canal Waterside Trail, which the USACE constructed using the Land and Water Conservation Fund (LWCF) grants (refer to Chapter 10, Section 6(f) Summary, about the relevance of LWCF use). There is no known user count or survey for this resource, and there is no master plan for the trail. The Ship Canal Waterside Trail is a publicly owned, documented recreation resource of significance for the City of Seattle. Therefore, this property is a Section 4(f) resource.

University of Washington Open Space

The UW Open Space is an area located between the Husky Stadium parking lot and the Montlake Cut. The open space includes a passive use grassy area about 3 acres in size and active recreation facilities, including a climbing wall and the Waterfront Activities Center. The Canoe House is not within the boundaries of the UW Open Space, but is located immediately adjacent to it and serves a related recreational function. The Canoe House, located at the entrance to the Montlake Cut from Union Bay, is listed in the NRHP and is discussed further below. Watercraft have launching points at the Canoe House, as well as docks at the Waterfront Activities Center where other water-related recreation facilities are available.

The UW Open Space is publicly owned and its property and facilities are open to the public—the green space is open and accessible, the climbing

rock is used by the general public, and the Waterfront Activities Center rents canoes and rowboats to the general public. Although it contains specific active recreational facilities, it is officially designated as open space in the *University of Washington Master Plan Seattle Campus* (University of Washington 2003). The plan details goals for management of bicycle and pedestrian circulation, open space management, and waterfront activities.

The UW Open Space is a publicly owned, documented recreation resource of significance. Therefore, this property is a Section 4(f) resource.

East Campus Bicycle Route

Running adjacent to the UW Open Space is the East Campus bicycle route; there is no overlap between the UW Open Space and the East Campus Bicycle Route. It is located in the southeast campus along Lake Washington and the Montlake Cut, between the Waterfront Activities Center and Montlake Boulevard. The trail is a total of 2,932 feet, of which 1,869 feet is off-street and 1,063 feet is on-street at Walla Walla Road NE. A vegetated slope provides a buffer between the trail and the Montlake Cut (see the Recreation Discipline Report Addendum and Errata and the 2009 Recreation Discipline Report in Attachment 7 of this Final EIS). The trail can be accessed from Walla Walla Road NE, from Montlake Boulevard NE (just north of the bascule bridge), and from the UW Open Space. The trail is depicted as an important bicycle connection in the Seattle Bicycle Master Plan; however, it is not explicitly called out by name. (City of Seattle 2007a).

The East Campus Bicycle Route is a publicly owned, documented recreation resource of significance. Therefore, this property is a Section 4(f) resource.

Washington Park Arboretum and Arboretum Waterfront Trail

Within the Washington Park Arboretum, there are three distinct areas analyzed for Section 4(f)—the main portion of the Washington Park Arboretum containing the majority of the biological collection; Foster and Marsh islands in the northern section of the park; and part of the Arboretum Waterfront Trail (the trail is also partially located in East Montlake Park). In addition to protection as park properties, the Arboretum and Foster Island are also protected under Section 4(f) as historic properties. For more information, see the *Historic Properties* subsection.

Washington Park Arboretum began as Washington Park in the early 1900s on private parkland acquired by the City. The Washington Park Arboretum was established in 1934 by an agreement approved by both the UW (Board of Regents) and the City of Seattle (City Council/Mayor). In this agreement, the City of Seattle gave the University permission to design, construct, plant, and manage an Arboretum and Botanical Garden in Washington Park.

The original construction of SR 520 in the 1960s substantially altered the northern portion of the park. The Highway Commission (now WSDOT) acquired over 40 acres of park property for right-of-way and did extensive dredging around Foster and Marsh islands.

Foster and Marsh islands occupy the southern shore of Union Bay. They are wetland and waterway landscape features in the Washington Park Arboretum located north of the main features of the park (City of Seattle et al. 2001). The waterways surrounding these islands consist of wetlands and open-water channels that contain native and non-native vegetation unique to this portion of the park. The park provides four designated non-motorized watercraft landings in the waterways with access to the trail system.

The Arboretum Waterfront Trail is a 0.5-mile trail that meanders on a series of floating piers and structures through the wetlands and that connects Marsh and Foster islands to the main features of Washington Park Arboretum. Raised observation platforms provide views of the various wetlands around the islands and of Union Bay and Husky Stadium. The western trailhead is located in East Montlake Park and connects to the Ship Canal Waterside Trail near the east end of the Montlake Cut. The Arboretum Waterfront Trail was constructed in 1967 using LWCF funds. A 1985 grant funded the redevelopment of the boardwalk and trail system on Foster Island and over water (refer to Chapter 10, Section 6(f) Summary, about the relevance of this funding).

The Arboretum Botanical Garden Committee (ABGC) is the legally mandated advisory committee for the Arboretum, established by the Arboretum's enabling legislation in 1934. It is composed of nine members appointed by the UW, the City of Seattle, the Washington State Governor's office, and the Arboretum Foundation. Seattle Parks and Recreation maintains the park functions and the UW owns, maintains, and manages the plant collections and associated programs. The Arboretum Foundation manages fund raising, membership, and volunteer services. Although the City of Seattle owns most of the Washington Park Arboretum, the UW owns portions of the park, and the Washington Department of Natural Resources owns most of Marsh Island and the northern half of Foster Island.

The Washington Park Arboretum, which has a nationally and internationally recognized woody plant collection, is a significant educational resource as well as a recreation resource. Lake Washington Boulevard provides access to the Washington Park Arboretum. Parking is available from Lake Washington Boulevard and at the main visitor's center and trailheads. North of SR 520, users access Foster Island from Union Bay or from the Arboretum Waterfront Trail.

The Washington Park Arboretum is a publicly owned, documented recreation resource of significance for the City of Seattle. Therefore, this property is a Section 4(f) resource.

Bill Dawson Trail

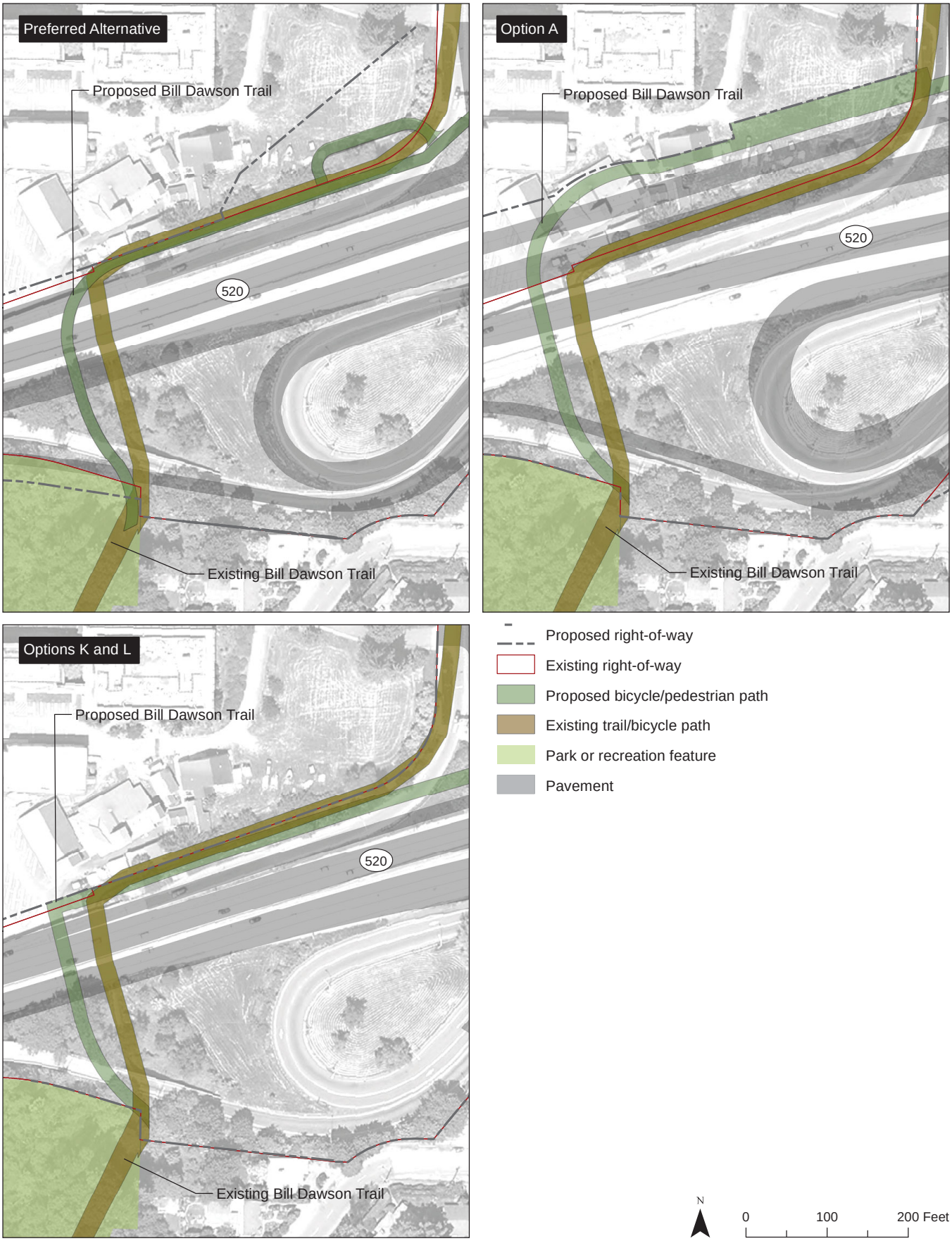
The Bill Dawson Trail (also known as the Montlake Bike Path) is a multi-use pathway that extends under SR 520 between the southeast corner of Montlake Playfield and the southern edge of the NOAA Northwest Fisheries Science Center. The trail does not have official dedicated property lines. The portion of the trail that is located in the Montlake Playfield is on City of Seattle property. Once the trail reaches the SR 520 on-ramp, it crosses into WSDOT right-of-way and continues in the WSDOT right-of-way until it terminates. SDOT and Seattle Parks and Recreation each maintain sections of the trail.

The Bill Dawson Trail is a documented recreation resource of significance for the City of Seattle. The land that the trail occupies is publicly owned, and the primary purpose of the trail is recreation.

The Preferred Alternative and Option A would remove the existing SR 520 structures within WSDOT right-of-way and replace them with wider structures, requiring the relocation of the Bill Dawson Trail that currently crosses under SR 520. As part of the project, WSDOT would acquire land from NOAA north of SR 520 and north of the existing trail, which would increase the width of the right-of-way. After construction, the location where the trail crosses beneath SR 520 would be moved approximately 42 feet west, heading north. Where the trail turns east would be relocated to the north, in the area of expanded WSDOT right-of-way (Exhibit 9-4). Because of the widened highway, the length of the trail under SR 520 would increase from 100 feet to 120 feet. This additional length beneath the highway would not impair the continued use of the trail, and the relocation of the alignment would maintain the continuity of the trail.

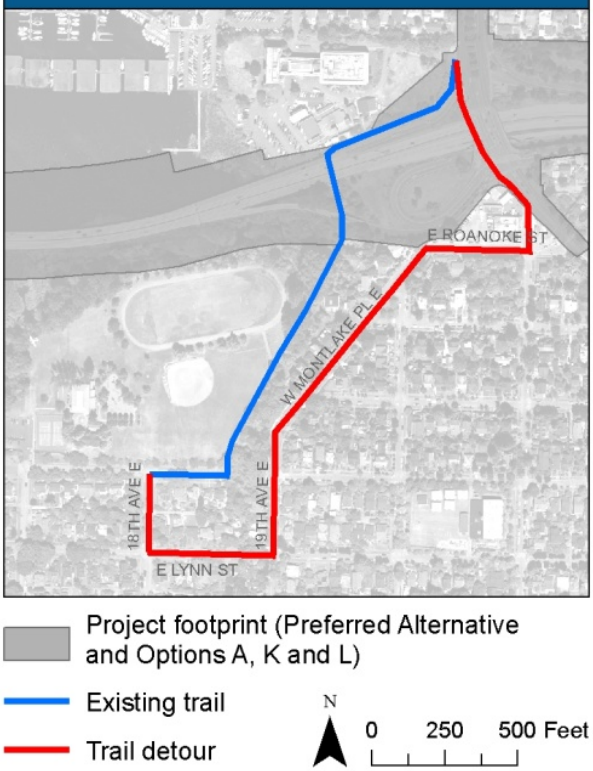
Similarly, Options K and L would also remove SR 520 structures within the WSDOT right-of-way and replace them with wider structures, requiring the relocation of the Bill Dawson Trail. After construction, where the trail crosses beneath SR 520 would be moved approximately 45 feet west, heading north. Where the trail turns east would be relocated slightly to the south, but would remain located within WSDOT right-of-way. Because of the widened highway, the length of the trail under the highway would increase from 100 to 115 feet. This additional length beneath SR 520 would not impair the continued use of the trail, and the relocation of the alignment would maintain the continuity of the trail.

Exhibit 9 4. Effects on the Bill Dawson Trail under the Preferred Alternative and Options A, K, and L



Similarly, Options K and L would also remove SR 520 structures within the WSDOT right-of-way and replace them with wider structures, requiring the relocation of the Bill Dawson Trail. After construction, where the trail crosses beneath SR 520 would be moved approximately 45 feet west, heading north. Where the trail turns east would be relocated slightly to the south, but would remain located within WSDOT right-of-way. Because of the widened highway, the length of the trail under the highway would increase from 100 to 115 feet. This additional length beneath SR 520 would not impair the continued use of the trail, and the relocation of the alignment would maintain the continuity of the trail.

Exhibit 9-5. **Bill Dawson Trail Detour**



During construction of the Preferred Alternative and the SDEIS options, the segment of the trail within WSDOT right-of-way would be closed for approximately 5 years and a pedestrian-safe detour would be provided (Exhibit 9-5). The detour would use on-street connections to maintain trail connectivity between Montlake Boulevard NE and Montlake Playfield. The detour would be 1,520 feet longer than the closed portion of the trail. Proceeding from west to east, the detour would run from the Montlake Playfield north along 18th Avenue East to East Lynn Street, then follow 19th Avenue East to West Montlake Place East. It would then run west along East Roanoke Street, around the Hop-In Market, and head south along Montlake Boulevard NE, where it would rejoin the existing trail.

In accordance with 23 CFR 774.13(f)(3), trails, paths, bikeways, and sidewalks that occupy a transportation facility right-of-way without limitation to any specific location within that right-of-way are excepted from Section 4(f), so long as the continuity of the trail, path, bikeway, or sidewalk is maintained. The affected portion of the Bill Dawson Trail is located within WSDOT right-of-way but is not mandated to any specific place within the right-of-way, and the continuity of the trail would be maintained during and after construction. Therefore, under the Preferred Alternative and the SDEIS options, the Bill Dawson Trail is excepted from Section 4(f).

Historic Properties

The properties described below are the 12 historic properties that would experience a Section 4(f) use from the Preferred Alternative and the SDEIS options. The impacts on each property under the Preferred Alternative and the SDEIS options, as appropriate, are explained in Section 9.4, Potential Effects of the Project.

Fire Station #22

Constructed in 1965 on a narrow strip of land between East Roanoke Street and SR 520, Fire Station #22 replaced a historic fire station at a nearby site after the construction of SR 520. When it is 50 years old (in 2015), the fire station will be eligible for the NRHP under Criterion A (for its association with the development of the Seattle Fire Department) and under Criterion C (for its distinctive Modern architectural style).

NOAA Northwest Fisheries Science Center

Located in the Montlake neighborhood at 2723 Montlake Boulevard NE, the NOAA Northwest Fisheries Science Center research complex contains multiple buildings and has restricted access. Three buildings are individually eligible under Criterion A for their direct association with important scientific research that is significant locally, regionally, and nationally. They are also eligible under Criterion C. In particular, the 1931 building is significant under Criterion C for its distinctive architectural design that incorporates marine motifs to visually demonstrate its association with marine research

The following five buildings on the site predate 1972:

- The original 1931 West Wing Building is eligible for listing in the NRHP, both individually and as a contributing element of the Montlake Historic District.
- The 1940 Hatchery Building is not individually eligible for the NRHP and is not a contributing element of the Montlake Historic District.
- The 1940 Butler Building is not individually eligible for the NRHP and is not a contributing element of the Montlake Historic District.
- A 1965 three-story building is individually eligible for the NRHP, but is not a contributing element of the Montlake Historic District.
- A 1966 building is individually eligible for the NRHP, but is not a contributing element of the Montlake Historic District.

West Wing Building

The original West Wing building was the first federal fisheries building constructed on the West Coast (Jim Peacock, Librarian, NOAA Northwest Fisheries Science Center, Seattle, WA. June 14, 2004. Personal communication). Facing Portage Bay, this building was designed in the Art Deco style and is ornamented with terra cotta details (such as seashells, coral, sea horses, and waves with fish) that reflect the marine nature of the facility. The West Wing building contains a number of different scientific laboratories and research facilities. The West Wing Building, constructed in 1931, is a contributing element to the Montlake Historic District and is individually eligible for listing in the NRHP.

1965 and 1966 Buildings

The 1965 building was constructed to provide laboratory space for scientific research conducted by NOAA. This building contains a large library and a 150-seat auditorium. The 1966 building was constructed to house offices and meeting space to accommodate the expanded staff and mission of the NOAA at this site. The two buildings are individually eligible for listing in the NRHP for their association with important research that is significant locally, regionally, and nationally, and for their distinctive architectural characteristics, representative of the Modern style. They do not contribute to the Montlake Historic District because they are outside of the period of significance for the district (1905 to 1952).

Montlake Historic District

The Montlake neighborhood has been determined eligible for listing in the NRHP as a historic district. The Montlake area is generally considered to be from the Washington Park Arboretum to Portage Bay, with the northern boundary at the Montlake Cut and the southern boundary often listed as Interlaken Park or Interlaken Boulevard (see Exhibit 9-3 for district boundaries). Taken as a whole, the area represents a significant, cohesive collection of residential architecture typical of early twentieth century Seattle, with a combination of distinctive builders' houses, high-style, architect-designed residences, and impressive non-residential structures. There is a very low level of intrusion. The period of significance is 1905 to 1952, from the platting of the neighborhood to the mid-century design shift reflected in the construction of MOHAI.

The Montlake neighborhood was first developed starting in 1909 with the main era of construction from the 1910s through the 1940s (Gould 2000).

- Within the APE, 155 properties are eligible for the NRHP as contributing elements to the Montlake Historic District and 37 of these are also individually eligible for listing in or are listed in the NRHP. Montlake is an architecturally cohesive residential neighborhood, largely developed from 1909 until approximately 1945. Resources within this district include the following:
- The Seattle Yacht Club, established in 1892, which is individually listed in the NRHP as well as being a contributing element to the historic district
- The NOAA Northwest Fisheries Science Center property, which includes individually eligible and contributing properties
- A portion of historic Lake Washington Boulevard, an NRHP-eligible linear resource
- The Canal Reserve Land, an area that is the remaining undeveloped portion of land originally reserved for the Lake Washington Ship Canal that was instead located farther north at the current Montlake Cut

- The historic Tudor-style Montlake Community Center, in Montlake Playfield

Although construction of SR 520 in the early 1960s compromised the Montlake neighborhood, most of the neighborhood remains intact and the Montlake Historic District remains eligible for listing in the NRHP.

2220 East Louisa Street

The residence at 2220 East Louisa Street is located within the Montlake Historic District. It is a contributing element to the district and is also individually eligible for listing in the NRHP for its architectural significance. The house was built in 1930 in the Tudor Revival style. It embodies the distinctive characteristics of Tudor Revival style architecture and retains very good integrity.

Montlake Cut

The Montlake Cut is a half-mile-long segment of the Lake Washington Ship Canal that joins Lake Union to Lake Washington. The Montlake Cut is listed in the NRHP as part of the Hiram M. Chittenden Locks and Related Features of the Lake Washington Ship Canal, which is significant for its contribution to the development of the Puget Sound region and as an outstanding engineering accomplishment (Potter 1977). The Montlake Cut is oriented east and west and cuts through a narrow strip of land between Lake Union's Portage Bay and Lake Washington's Union Bay. It was named for the Montlake residential neighborhood on the south shore of the cut. The UW campus is on the north shore, and the historic Montlake Bridge crosses the canal near the center point, connecting the two areas. The channel width is 100 feet, although the right-of-way controlled by the USACE is roughly 325 feet wide. This is generally depicted on the exhibits in this chapter as 112.5 feet on either side of the cut. It is dredged to an authorized depth of 30 feet. The tops of the concrete revetments are used as waterside trails (Potter 1977).

Canoe House

The Canoe House, listed in the NRHP in 1975, is significant under Criterion C as a rare architectural type developed in the early years of aviation. It was erected in 1918 during World War I, when the U.S. Navy occupied part of the UW campus. It was built to shelter seaplanes as part of the Navy's temporary training camp. The hangar was unused until 1922, when it became the headquarters for campus crew racing activities. The property now is maintained by the UW. The area included in the 1975 NRHP nomination covers approximately 1.9 acres; the boundary on the south follows the natural shoreline of the north bank of the Montlake Cut. It was located at water grade on the north bank of the cut so the hangar doors could open directly onto the water (Potter 1975).

Pavilion Pedestrian Bridge

The Pavilion Pedestrian Bridge, which crosses over Montlake Boulevard NE and connects the Hec Edmundson Pavilion with the Burke-Gilman Trail and the main UW campus, is eligible for listing in the NRHP. The City of Seattle built this pedestrian bridge in 1938 for student use at the request of the UW. The bridge is constructed of poured concrete, with restrained Art Moderne lines and minimal surface detailing, typical of the Works Progress Administration (WPA)/Public Works Administration (PWA) designs of the 1930s. It is eligible for listing in the NRHP under Criterion C for its distinctive Art Moderne style.

North and South Pedestrian Bridges

The North and South Pedestrian Bridges, which are eligible for listing in the NRHP for their distinctive design and important engineering qualities, are identical concrete bridges that cross Montlake Boulevard NE, connecting the UW campus and the Burke-Gilman Trail to parking lots on the east side of Montlake Boulevard. An early example of post-tension, pre-stress concrete, they were built in 1958 and designed by noted structural engineer Jack Christiansen.

Washington Park Arboretum

The Washington Park Arboretum is protected under Section 4(f) as both a park and as a historic property. The Arboretum, located at 2300 Arboretum Drive East, is a public facility that was developed as part of the "Olmsted Plan for Seattle Parks, Boulevards, and Playgrounds" (University of Washington 1997). Stretching across approximately 230 acres, it contains one NRHP-listed resource, the Arboretum Aqueduct. The Washington Park Arboretum as a whole is eligible for listing in the NRHP. Foster Island, within the Arboretum, is eligible for listing in the NRHP as a TCP under Criterion A for its significance to area tribes. For more information on Foster Island, see the discussion in the following section and the Final Cultural Resources Assessment and Discipline Report (Attachment 7).

Created from 1900 to 1904, the Washington Park Arboretum (first known as Washington Park) was one of Seattle's first parks. The City of Seattle largely completed its acquisition of land for Washington Park with the 1917 purchase of Foster Island and the 1920–1921 purchase of all but one lot of the Bard-Foster Washington Park Addition (City of Seattle 2008). In 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. The first formal plan for the Arboretum was drawn up by the Olmsted Brothers in March 1936.

The area around Foster Island and along the shoreline was included in both the 1904 and 1936 Olmsted plans as an area of lagoons. The plan proposed the introduction of waterways labeled "lagoons" to be developed through

dredging of the marshland. 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 1938–1939, dredging out 1¼ miles of lagoons. In 1939, 16 species of bamboo and 3,500 Japanese iris were planted; however, few of these plants survived the neglect during 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 Arboretum Waterfront Trail (BOLA and Kiest 2003). The construction of SR 520 and the Evergreen Point Bridge severely compromised the integrity of this area as a historic designed landscape.

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 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 this land during the winter of 1935-1936 (BOLA and Kiest 2003). In 1963, the State Department of Highways condemned approximately 47 acres of Arboretum property for SR 520, including most of the Canal Reserve Land. What remains of the Canal Reserve Land is located within the boundaries of the Montlake Historic District, north of SR 520, and is a contributing element to the district, but is not a part of the Arboretum.

After the plan of 1936, the next master plan adopted for the park was in 1978. In May 2001, the Seattle City Council approved a new long-range master plan for the Arboretum, *Renewing the Washington Park Arboretum* (City of Seattle et al. 2001). The plan was developed by Seattle Parks and Recreation, the UW, and the Arboretum Foundation to ensure that the Arboretum could effectively fulfill three primary purposes—conservation, recreation, and education. The plan (City of Seattle et al. 2001) has had to be altered to fit SR 520 and the Evergreen Point Bridge west approach. However, the Arboretum retains its basic design and feeling. As a historic designed landscape meant to educate and provide public beautification, it is an icon of the Seattle parks system. Although construction of SR 520 heavily affected the northern section of the Arboretum, which suffered a loss of integrity, the rest of the Arboretum remains intact. Taken as a whole, the Arboretum retains good integrity.

The Washington Park Arboretum is eligible for listing in the NRHP for its association with the Alaska-Yukon-Pacific Exposition (A-Y-P Exposition), the development of the UW, the work of the WPA, and the development of the parks system in Seattle. It is also eligible for the NRHP for its design

by the noted Olmsted Brothers and by the many talented designers and architects who contributed to its multiple designed features.

The section of land west of Foster Island and south of SR 520 near the R.H. Thomson ramps is referred to as the "WSDOT peninsula." This peninsula area was part of the Arboretum from the mid-1930s to the early 1960s, at which time it was acquired by WSDOT for the construction of SR 520 and has been used as WSDOT transportation right-of-way for nearly 50 years. For purposes of Section 106, WSDOT acknowledged the peninsula as historically part of the NRHP-eligible Arboretum. However, the peninsula has lost considerable historic integrity due to the conversion to transportation right-of-way during the 1960s and the physical impacts from the bridge, such as the dredging during construction and the columns that support the existing bridge and the associated ramps. The peninsula is now surrounded by interstate roadways: SR 520 main line to the north and entrance and exit ramps on the east, west, and south, which dovetail onto Lake Washington Boulevard.

In July 1990, WSDOT and the City of Seattle signed a letter of understanding to authorize the use of state right-of-way in the area surrounding the "SR 520 Arboretum Interchange" (referred to here as the WSDOT peninsula) for park purposes. According to 23 CFR 774.11(h), "When a property formally reserved for a future transportation facility temporarily functions for park, recreation, or wildlife and waterfowl refuge purposes in the interim, the interim activity, regardless of duration, will not subject the property to Section 4(f)." The current rule expressly states that if the property is "formally reserved for a future transportation facility" and is used in the interim as a park, it is not covered by Section 4(f) regardless of the duration of the interim use. A provision of the 1990 agreement states: "should the State ever need to use the property, the Parks agrees to relinquish (at no cost to the State), its use within ninety (90) days of written notification." Therefore, the peninsula area will not be included in the Section 4(f) use discussions and property totals for the Washington Park Arboretum in the *Park and Recreation* sections of this evaluation.

Because of the Section 106 finding that the peninsula is part of the Washington Park Arboretum historic property, the peninsula is included in the discussions and property totals for the Washington Park Arboretum in the *Historic Properties* sections only.

Foster Island

Foster Island is within the boundaries of the Washington Park Arboretum, but is also significant on its own. The north part of the island is approximately 13 acres and the south part approximately 23 acres. Although the islands were formerly separate, they are now connected as a single island, and SR 520 occupies the space formerly submerged between the islands as well as part of the north margin of the south island.

Foster Island was historically and continues to be a sacred place to local tribes. Tribal practices reflect the continuing acknowledgement of the spiritual power of Foster Island (see the Final Cultural Resources Assessment and Discipline Report in Attachment 7 to this Final EIS). WSDOT and FHWA, in consultation with the tribes, have determined that Foster Island is a TCP eligible for listing in the NRHP. The SHPO concurred with this eligibility on October 6, 2010. Therefore, Foster Island is a Section 4(f) property.

Lake Washington Boulevard

Lake Washington Boulevard is a winding park boulevard that passes through the length of Washington Park Arboretum and then through the Montlake Historic District and north to the UW. The historic section of Lake Washington Boulevard in the APE is a 2-mile segment from East Madison Street to the Y intersection of Montlake Boulevard NE and NE Pacific Street, which was the entrance to the 1909 A-Y-P Exposition.

The 2-mile segment of Lake Washington Boulevard in the APE is eligible for listing in the NRHP under Criterion A for its association with the citywide Olmsted Brothers parks and parkways plan. It is significant as the first boulevard constructed as a part of the plan and was the standard by which the other boulevards were designed. The boulevard also is eligible for listing in the NRHP under Criterion C as a noted work of the master landscape architects, John Charles Olmsted and Frederick Law Olmsted, Jr. The period of significance for this segment of the linear resource is 1904, when construction began based on the Olmsted Brothers design, through 1909, when the final section of what was then University Boulevard was completed. Lake Washington Boulevard was an integral part of the Olmsted Brothers plan for the development of linked outdoor spaces throughout Seattle. Lake Washington Boulevard has been determined individually eligible for the NRHP as a historic linear property, and the SHPO has concurred.

Regarding NRHP-eligible transportation facilities such as Lake Washington Boulevard, regulations in 23 CFR 774.13(a) state that "the Administration has identified various exceptions to the requirement for Section 4(f) approval. These exceptions include, but are not limited to:

(a) Restoration, rehabilitation, or maintenance of transportation facilities that are on or eligible for the National Register when:

(1) The Administration concludes, as a result of the consultation under 36 CFR 800.5, that such work will not adversely affect the historic qualities of the facility that caused it to be on or eligible for the National Register, and

(2) The official(s) with jurisdiction over the Section 4(f) resource have not objected to the Administration conclusion in paragraph (a)(1) of this section."

Lake Washington Boulevard is a transportation facility and it has served that function since its construction. No segment of this historic linear resource would be demolished as a part of the SR 520, I-5 to Medina project. There would be improvements made to the resource, such as widening the footprint to accommodate the addition of a planted median in one section by relocation the north curb, and the addition of a turn lane at Montlake Boulevard. These actions would not diminish the historic qualities of the roadway that make it eligible for listing in the NRHP. The association with the Olmsted Brothers firm and the development of linked parks and parkways would not be diminished by the proposed changes near SR 520. The integrity of the historic linear resource would not be diminished by the proposed project actions. (See the Final Cultural Resources Assessment and Discipline Report in Attachment 7 to this Final EIS for more information on the project effects findings for Lake Washington Boulevard.)

The concurrence from SHPO on the effects analysis indicates no objection to the finding that the integrity of Lake Washington Boulevard would not be diminished.

Lake Washington Boulevard is a transportation facility undergoing transportation improvements as a part of this project. The integrity of the historic property would not be diminished as a result of those improvements and the official with jurisdiction has not objected to this finding. Therefore, Lake Washington Boulevard is excepted from Section 4(f) in accordance with 774.13(a).

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

Park and Recreation Resources

There are no Section 4(f) park or recreation resources in the Lake Washington study area.

Historic Properties

Evergreen Point Bridge

The Evergreen Point Bridge (pictured at right), the second span built across Lake Washington, has been determined eligible for listing in the NRHP. 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 [n.d.]).

At the time of its construction in 1963, 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 at the time (Hobbs and Holstine 2005).

The bridge, having had few substantial alterations over its lifetime, appears today much as it did when completed. It continues to fulfill its original function, although it now must handle more than twice its intended capacity. The Evergreen Point Bridge is the oldest remaining floating bridge across Lake Washington and exemplifies an engineering feat of outstanding proportions. Due to its exceptional importance, the bridge is eligible for the NRHP, even though it is not yet 50 years old. It is significant for its outstanding and innovative engineering design, and it meets the criteria for exceptional significance. It is also significant for its lasting effect on the development of the Seattle metropolitan area, especially on the communities of the Eastside.

Evergreen Point Bridge

What Section 4(f) properties are in the Eastside Transition study area?

Park and Recreation Resources

Points Loop Trail

Points Loop Trail is a 5.4-mile-long trail that links the communities of Medina, Hunts Point, Clyde Hill, and Yarrow Bay. It includes 1.6 miles of off-street trails, 2.4 miles of streets with sidewalks, and 1.4 miles of trail along residential streets. In the project area, the Points Loop Trail is located completely within the WSDOT right-of-way and parallels SR 520, passing along the south side of Fairweather Park, Hunts Point Park, and Wetherill Nature Preserve.

Fairweather Park

Fairweather Park is a public park in Medina consisting of 11 acres of forested open space. The terrain ranges from upland forest to wetland, and is bisected by a spring-fed stream. Tennis courts and a small grassy playfield are in the western area of the park.

Wetherill Nature Preserve

The 16-acre Wetherill Nature Preserve was donated to the towns of Hunts Point and Yarrow Point in 1988 with the requirement that the towns protect the land in perpetuity from development and preserve its native wildlife and plants. Today, many trees and shrubs in the park are labeled, and extensive plant and animal lists are provided at the entrance kiosk. A number of pedestrian-only trails wind through the preserve and provide waterfront views. The parkland is privately maintained through volunteer efforts and contributions. The Points Loop Trail is located immediately adjacent to the south side of the park within the WSDOT right-of-way and connects to pedestrian paths within the preserve.

Hunts Point Park and Yarrow Bay Wetlands

Hunts Point Park, also known as D.K. McDonald Park, encompasses roughly 2.5 acres in the south part of the Town of Hunts Point. Park amenities include tennis courts, a children's play area, an open sports area, and benches. The parkland was originally acquired from the Bellevue School District and named after long-time resident, D.K. McDonald, who purchased enough bonds to finance construction of the park. The park also contains the Town Hall.

The Yarrow Bay wetlands is a 73-acre wildlife conservancy area that can be explored either by non-motorized craft, such as canoes and kayaks, or by following one of two trails that border the park. The park is located at the south end of Kirkland. Although most of the Yarrow Bay wetlands can only be explored by boat, a land route is accessible from a small parking lot at 101st Way NE and NE Points Drive just north of SR 520. The parking lot leads to a trail with interpretive signs.

Historic Properties

There are no historic properties with a Section 4(f) use in the Eastside study area.

What Section 4(f) properties are in the Pontoon Production and Transport study area?

Pontoons for the SR 520, I-5 to Medina project could be constructed at the Concrete Technology Corporation Facility at the Port of Tacoma and the new casting basin facility in the Aberdeen Log Yard. Within the Port of Tacoma APE, there is one property listed in the NRHP and four NRHP-eligible properties. There are no identified historic properties at the Grays Harbor site. The Final Environmental Impact Statement of the SR 520 Pontoon Construction Project (WSDOT 2010b) confirmed that there would be no use of any Section 4(f) properties from construction or towing of pontoons to the temporary moorage sites. Based on this analysis, this Final Section 4(f) Evaluation also anticipates that no Section 4(f) properties would be used for construction and towing of pontoons for this project.

9.3 Coordination Plan

WSDOT determined that the SR 520, I-5 to Medina project would result in the use of Section 4(f) properties and, therefore, established coordination with agencies that have jurisdiction over the affected Section 4(f) properties. Coordination with these agencies helped ensure that the project included all practical planning to avoid or minimize harm to Section 4(f) properties. The entities involved in coordination included City of Seattle Parks and Recreation, ABGC, UW, SHPO, and the Seattle Historic Preservation Officer, The Advisory Council on Historic Preservation (ACHP) and

Section 106 consulting parties, along with interested tribes, were also involved through the Section 106 consultation process.

The Section 4(f) properties identified as part of the SR 520, I-5 to Medina project include historic properties, significant public parks, and recreational trails. No waterfowl or wildlife refuges were identified within the project area.

The coordination efforts to avoid and minimize harm to historic properties and park and recreation resources were largely executed on separate tracks, enabling WSDOT to engage in more focused discussions with the officials with jurisdiction. The coordination efforts were conducted early in the Draft EIS process, throughout the SDEIS process, during development of the Preferred Alternative, and through the Final EIS process. The minimization and mitigation measures for historic properties are stipulated in the Programmatic Agreement, which is anticipated to be fully executed through signature by all signatories by June 2011. The mitigation measures for Section 4(f) properties are discussed in detail in Section 9.5 of this chapter.

The public review process of the Final EIS, including the Final Section 4(f) Evaluation in this chapter, will be complete in the summer of 2011. WSDOT will continue consultation with the officials with jurisdiction regarding the Section 4(f) properties until the project's Record of Decision (ROD) is issued by FHWA. The measures to minimize harm will be formalized in the ROD.

The following section summarizes WSDOT's coordination efforts, the milestones achieved thus far in the process, and the anticipated schedule of outstanding steps in the process, where appropriate.

Park and Recreation Resources

Parks Technical Working Group

- Beginning in 2008, WSDOT convened a Parks Technical Working Group (TWG) to address potential project impacts and mitigation ideas for park and recreation resources. All participants have regulatory authority over affected park and recreation resources in the project area and include FHWA, National Parks Service, Seattle Parks and Recreation, Washington State Recreation and Conservation Office, and the UW.
- Over the course of several meetings, WSDOT shared information on potential effects on parks and recreational facilities and provided project updates during development of the Preferred Alternative. To facilitate the process of identifying affected resources and discussing potential mitigation, WSDOT and the Parks TWG members used a

matrix to track potential impacts on park and recreation resources under each design option and the Preferred Alternative.

- Collectively, the Parks TWG generated a key list of concerns and identified potential mitigation opportunities that could minimize harm to the parks properties, including Section 6(f) and Section 4(f) properties. WSDOT also met with Seattle Parks and Recreation and the UW to identify the processes and protocols that each entity would follow in the review and establishment of mitigation.
- Based upon the Parks TWG meetings, WSDOT prepared a set of guidelines for evaluating potential parks mitigation property. A primary focus of the Parks TWG was to develop a preliminary pool of potential mitigation sites, and these guidelines provided a starting point for WSDOT's search for replacement park property. (See Section 9.5 below for proposed mitigation.)
- For more information on the steps to minimize effects on public parks, and for the proposed and potential mitigation measures resulting from the Parks TWG multi-agency coordination, please see Section 9.5 below.

Arboretum and Botanical Garden Committee

- In its 2010 session, the Washington State Legislature passed, and Governor Gregoire signed, the Engrossed Substitute Senate Bill (ESSB) 6392. The bill directed WSDOT to consult with the governing board of the Washington Park Arboretum to develop a mitigation plan that would minimize effects on this significant public park. The governing board of the Arboretum is identified as the ABGC, which includes representatives from the Arboretum Foundation, the City of Seattle, the UW, and the Washington State Governor's Office.
- WSDOT consulted with the ABGC from May through December 2010 to develop a mitigation plan for anticipated effects from the Preferred Alternative on the Arboretum. The mitigation plan describes 12 projects and concepts that could potentially be pursued for Arboretum mitigation. The ABGC approved the mitigation plan at their December 8, 2010, meeting and the mitigation plan was submitted to the Governor and Washington State Legislature on December 22, 2010.

WSDOT is continuing to coordinate with the ABGC to develop a Memorandum of Understanding that describes the roles and responsibilities of each party involved in the mitigation projects. The Memorandum of Understanding is expected to be executed by all parties in March 2011. Following execution of the memorandum, WSDOT and the ABGC will develop scopes, cost estimates, and implementation plans for each mitigation project by late 2011. The development of project-specific implementation agreements is anticipated in late 2011.