



SR 520 BRIDGE REPLACEMENT AND HOV PROGRAM



SR 520 Bridge Replacement and HOV Program, SR 520 I-5 to Montlake – I/C and Bridge Replacement, Revised Section 4(f) Evaluation

Prepared for

Washington State Department of Transportation
WSDOT ESO Megaprograms
999 Third Avenue, Suite 2300
Seattle, WA 98104
206-805-2895

Lead Author

Lawrence Spurgeon

Consultant Team

WSP USA
999 Third Avenue, Suite 3200
Seattle, WA 98104

February 17, 2021

I concur with the conclusions of this evaluation Signatures are on file with WSDOT

Region / Mode Official

FHWA Official

**SR 520 Bridge Replacement and HOV Program, SR 520 I-5 to Montlake – I/C and Bridge
Replacement,
Section 4(f) Evaluation**

Date

Date

Contents

Contents	i
Background	1
Project Changes	3
Portage Bay Bridge	3
Portage Bay Bridge through I-5 Interchange.....	4
Summary of City of Seattle, Stakeholder, and Community Involvement	6
Section 4(f)-Protected Properties	9
Park and Recreational Resources	10
Historic Properties.....	12
Evaluation of Use	14
Bagley Viewpoint.....	14
Montlake Playfield	14
Bill Dawson Trail	17
Interlaken Park	18
Roanoke Park	20
NOAA Fisheries Science Center.....	21
Montlake Historic District.....	21
Roanoke Park Historic District.....	24
Avoidance Alternatives	27
Finding of Least Overall Harm	28
Ability to Mitigate Adverse Impacts	28
Relative Severity of the Remaining Harm	28
Relative Significance of Each Section 4(f) Property.....	29
Views of the Officials with Jurisdiction.....	29
Degree to Which Each Alternative Meets the Purpose and Need	29
Magnitude of Any Adverse Impacts to Resources not Protected by Section 4(f).....	30
Substantial Differences in Costs.....	30
Consideration of All Possible Planning to Minimize Harm.....	30
Conclusion Regarding Least Overall Harm	30
Coordination	31
Finding	34
References	35

Appendices

Appendix A Correspondence..... A-1
Appendix B Public Comments and Responses.....B-1

Figures

Figure 1. Public Parks in the Portage Bay Bridge and Roanoke Lid Vicinity.....11
Figure 2. Roanoke Park Historic District13
Figure 3. Project Changes Relative to Montlake Playfield.....16
Figure 4. Project Changes Relative to Interlaken and Roanoke Parks19
Figure 5. Project Changes Relative to Montlake Historic District22
Figure 6. Project Changes Relative to Roanoke Park Historic District25

Tables

Table 1. Summary of Section 4(f) Properties9
Table 2. Summary of Section 4(f) Revised Evaluation14
Table 3. Summary of Section 4(f) Land Used from Montlake Playfield15
Table 4. Summary Coordination with City of Seattle Department of Parks and Recreation, an Official with Jurisdiction over Section 4(f) Properties32
Table 5. Summary Coordination with the State of Washington SHPO, an Official with Jurisdiction over Section 4(f) Properties.....33

Acronyms and Abbreviations

APE	Area of Potential Effects
CFR	Code of Federal Regulations
CPTED	Crime Prevention Through Environmental Design
DAHP	Washington State Department of Historic Preservation
EIS	environmental impact statement
FHWA	U.S. DOT Federal Highway Administration
Final EIS	2011 <i>SR 520 Bridge Replacement and HOV Project Final EIS and Section 4(f) and 6(f) Evaluation</i>
HOV	high-occupancy vehicle
I-5	Interstate 5
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
NRHP, or NR	National Register of Historic Places
Parks	City of Seattle Department of Parks and Recreation
ROD	Record of Decision
RSUP	Regional Shared-Use Path
SCDP	Seattle Community Design Process
Section 106	Section 106 of the <i>National Historic Preservation Act</i>
Section 4(f)	Section 4(f) of the <i>Department of Transportation Act of 1966</i> , as now codified at 23 U.S.C. § 138 and 49 U.S.C. § 303
SHPO	State Historic Preservation Officer (DAHP Director in Washington)
U.S. DOT	United States Department of Transportation
WSDOT	Washington State Department of Transportation

Background

The SR 520 Bridge Replacement and HOV Program is rebuilding one of the Puget Sound region's busiest highway corridors to improve traffic safety, enhance regional mobility, and provide the public new and better options for active transportation (nonmotorized) travel. The program is being delivered through a series of individual construction phases. In 2011, the Federal Highway Administration (FHWA) and the Washington State Department of Transportation (WSDOT) completed a Final Environmental Impact Statement (EIS) and Section 4(f) and 6(f) Evaluation and a Record of Decision (ROD) for the SR 520 Bridge Replacement and HOV Program, I-5 to Medina: Bridge Replacement and HOV Project (WSDOT 2011a, FHWA 2011). This Section 4(f) Evaluation refers to the 2011 Final EIS and Section 4(f) and 6(f) Evaluation as the Final EIS.

The effects of the I-5 to Medina: SR 520 Bridge Replacement and HOV Project on Section 4(f)-protected resources were documented in Chapter 9 of the Final EIS, and the ROD includes FHWA's determination that:

- There is no feasible and prudent alternative that completely avoids all Section 4(f) properties;
- The Selected Alternative causes the least harm to Section 4(f) properties and causes the least overall harm; and
- The Selected Alternative includes all possible planning to minimize harm.

In July 2012, FHWA issued a revised Section 4(f) Policy Paper that replaced the 2005 version under which the Section 4(f) analysis in the Final EIS (WSDOT 2011) was completed (FHWA 2012). The guidance covered 2008 revisions to the Section 4(f) regulations to address *de minimis* impact analysis, and to expand the guidance on least overall harm, among other topics. The Final EIS was completed in accordance with the 2008 revision of the regulations, but without the benefit of the expanded 2012 guidance. The information contained in Chapter 5.91 of the Final EIS is still applicable for evaluation of the SR 520 I-5 to Montlake – I/C and Bridge Replacement (Portage Bay Bridge and Roanoke Lid phase), and any analysis included in this revised Section 4(f) evaluation that relies on the expanded guidance specifically cites the 2012 guidance.

This revised evaluation compares the Section 4(f)-protected resources that would be affected by the Portage Bay Bridge and Roanoke Lid construction phase, to the findings of the Final EIS. Where there would be no change in the effect on the resource, the findings of the Final EIS are unchanged and FHWA's prior determinations remain in place. Updated Section 106 documentation (National Park Service [NPS] 2015, WSDOT 2019a, 2019b, 2020a, 2020b) was also reviewed to identify any changes to historic properties. If either the status of the Section 4(f) protection of the resource or the design of the Portage Bay Bridge and Roanoke Lid phase changed relative to the resource since the Final EIS, then the effects of the Portage Bay Bridge and Roanoke Lid phase relative to what had been evaluated in the Final EIS were evaluated consistent with 23 Code of Federal Regulations (CFR) 774 and the guidelines contained in Section 457 of the WSDOT Environmental Manual and FHWA Section 4(f) Policy Paper (FHWA 2012).

One area where the 2012 USDOT Section 4(f) Policy Paper provides additional guidance is on *de minimis* impact finding for parks. The additional guidance follows:

An impact to a public park, recreation area, or wildlife and waterfowl refuge may be determined to be de minimis if the transportation use of the Section 4(f) property, including

incorporation of any measure(s) to minimize harm (such as any avoidance, minimization, mitigation, or enhancement measures), does not adversely affect the activities, features, or attributes that qualify the resource for protection under Section 4(f). Language included in the SAFETEA-LU Conference Report provides additional insight on the meaning of de minimis impact:

The purpose of the language is to clarify that the portions of the resource important to protect, such as playground equipment at a public park, should be distinguished from areas such as parking facilities. While a minor but adverse effect on the use of playground equipment should not be considered a de minimis impact under Section 4(f), encroachment on the parking lot may be deemed de minimis, as long as the public's ability to access and use the site is not reduced. (Conference Report of the Committee of Conference on H.R. 3, Report 109-203, page 1057).

This simple example helps to distinguish the activities, features, or attributes of a Section 4(f) property that are important to protect from those which can be used without resulting in adverse effects. Playground equipment in a public park may be central to the recreational value of the park that Section 4(f) is designed to protect. The conference report makes it clear that when impacts are proposed to playground equipment or other essential features, a de minimis impact finding will at a minimum require a commitment to replace the equipment with similar or better equipment at a time and in a location that results in no adverse effect to the recreational activity. A parking lot encroachment or other similar type of land use, on the other hand, could result in a de minimis impact with minimal mitigation, as long as there are no adverse effects on public access and the official(s) with jurisdiction agree.

The impacts of a transportation project on a park, recreation area, or wildlife and waterfowl refuge that qualifies for Section 4(f) protection may be determined to be de minimis if:

- 1) The transportation use of the Section 4(f) property, together with any impact avoidance, minimization, and mitigation or enhancement measures incorporated into the project, does not adversely affect the activities, features, or attributes that qualify the resource for protection under Section 4(f);*
- 2) The public has been afforded an opportunity to review and comment on the effects of the project on the protected activities, features, or attributes of the Section 4(f) property; and*
- 3) The official(s) with jurisdiction over the property, after being informed of the public comments and FHWA's intent to make the de minimis impact finding, concur in writing that the project will not adversely affect the activities, features, or attributes that qualify the property for protection under Section 4(f). (See 23 CFR 774.5(b)(2), 23 CFR 774.17).*

Project Changes

Since completion of the Final EIS and ROD (FHWA 2011), WSDOT has advanced the I-5 to Medina: SR 520 Bridge Replacement and HOV Project, including completion of several phases of construction; coordination with the City of Seattle, local residents, and stakeholder; and acquisition of right-of-way from the National Oceanic and Atmospheric Administration (NOAA). During this time, the design of the Portage Bay Bridge, Roanoke Lid, and other components in the Portage Bay to I-5 area have been refined through the Seattle Community Design Process, Westside Design Refinements, Montlake Phase Conceptual Design Refinements, Community Stakeholder workshops, and coordination with the Seattle Design Commission in 2019. The following subsections describe the design changes since issue of the Final EIS.

Portage Bay Bridge

- The bridge configuration has changed from a single wide bridge with median to two parallel bridge structures.
- A new Americans with Disabilities Act (ADA)-compliant 14-foot-wide regional shared-use path (RSUP) will be integrated on the south side of the south bridge structure. The Final EIS did not include a RSUP west of the Montlake Interchange area.
- The Final EIS did not define the bridge type. The bridge design was established through the Seattle Community Design Process (SCDP) as a haunched box girder design with variable width gap of approximately 6 to 19 feet added between the north and south structures; pre-stressed girders will be used in the final two easternmost bays.
- An 8-foot-wide planting median has been removed from the bridge structure to accommodate the added gap between the north and south bridge structures.
- Each bridge would include an equipment platform cantilevered in the space between the two bridges near mid-span. Each platform would be between 6 and 8 feet wide and 35 to 40 feet long.
- The bridge alignment has been shifted to the north at the west end by approximately 35 feet to allow the westbound lanes of the new bridge to be constructed while maintaining traffic in both directions on the existing SR 520 Portage Bay Bridge. The newly constructed westbound sections of the bridge would be wide enough to accommodate moving both direction of SR 520 traffic onto the new construction while the existing bridge is removed and the new eastbound lanes of the bridge are constructed. This alignment and staging change would eliminate most of the previously planned temporary widening of the existing bridge structure and reduce the amount of temporary access trestle. This shift simplifies constructability and construction phasing by minimizing falsework and temporary work bridges. This simplified process would reduce the number of construction stages, the length of the construction period, and shorten the period of construction impacts. Also, the more northerly alignment provides space to the south to add the regional shared use path within planned right of way.
- The bridge profile has been changed from varying between 0.5 and 5 percent grade to a constant 2.6 percent grade for constructability, improved stormwater drainage, and RSUP access and comfort.
- The accommodation of RSUP connection on the east shore of the bay has added additional in-water piers; however, the total number of in-water piers and columns has been reduced from 50 to 42.

- In addition to the 14-foot-wide RSUP on the south side of the bridge, active transportation connections have been added at Delmar Drive East and near the Montlake Playfield. The connection near Montlake Playfield will permanently occupy airspace of Montlake Playfield as well as contain a number of in-water and on land piers. These connections will be ADA compliant.
- An additional 600 feet of storage for the eastbound Montlake off-ramp has been added to reduce traffic spillover backup from the off-ramp to the eastbound mainline.
- Modular wetlands that treat to enhanced water quality standards will be used in lieu of constructed wetlands in the vicinity of the Montlake loop ramp to handle stormwater runoff from the Portage Bay Bridge to the same level of pollutant removal, but within a smaller area.
- The runoff treatment facility for WSDOT on the west side of Portage Bay located west of Boyer Avenue East has been eliminated from the Project. All WSDOT runoff is proposed to be routed and treated prior to discharge in the facility located in the Montlake loop ramp vicinity as described in the prior bullet.
- A basic runoff treatment facility is proposed to treat the improvements for the reconfiguration and resurfacing of the existing NOAA parking lot that would now be completed as part of the Portage Bay Bridge replacement.
- In addition to elevated work trestles, the use of crane mats to access shallow shoreline areas with soft soils may be employed to avoid the potential for grounding barges.
- Removal of existing concrete column piles two feet below the lake bed. As required by permit conditions, the columns would be removed at least two feet below the lake bed. Native material would be excavated around the base of each column, side-cast approximately 50 feet away, and then relocated to its original position once the columns are removed.

Portage Bay Bridge through I-5 Interchange

East Roanoke Street

- A T-intersection, the current configuration, will be maintained at 10th Avenue East and East Roanoke Street for traffic calming and bicycle/pedestrian safety, rather than the sweeping intersection included in the Final EIS.
- A new east-west crosswalk on the south side of 10th Avenue East and East Roanoke Street intersection and a new north-south crosswalk on the west side of the 10th Avenue East and East Roanoke Street intersection have been added to accommodate bicycle and pedestrian users.

Roanoke Lid (10th and Delmar Lid)

- The east lid portal will be stepped to decrease the amount of wall exposure to nearby homes.
- The existing southbound bus shelter/stop on the west side of 10th Avenue East at East Roanoke Street will be retained at approximately the same location rather than being moved to the south.
- The parking area for the enhanced Bagley Viewpoint has been relocated to three parallel parking spaces on the east side of Delmar Drive East rather than providing replacement head-in parking for some or all of the existing 10 spots as identified in the Final EIS. One of the spots will be designed in compliance with ADA Standards for accessible parking spaces.

- The subsurface easement area has been increased to accommodate retaining wall anchors in response to additional geotechnical information about potentially unstable slopes. WSDOT will purchase these easements from property owners, as they may constrain future development on the properties.
- A lid fire life safety mechanical and support facility was not previously identified. It will be located northwest of the lid, adjacent to Fire Station 22.
- Jet fans have been added under the Roanoke lid to provide emergency ventilation and allow for safe evacuation in the event of a vehicle or cargo fire under the lid.
- The planned fire suppression system under the Roanoke lid has been modified from a water-only system to have fire-fighting foam capabilities.
- The conceptual configuration of the lid that was included in the Final EIS has been detailed through the Seattle Community Design Process (SCDP) and subsequent community consultation, including:
 - Placement of medium-to-large trees within lid areas where structural capacity allows for finish grading to achieve appropriate tree soil depths.
 - Tree placement and plantings will be designed to maintain visibility into open space areas for natural surveillance.
 - Provide a series of outlooks including at both sides of 10th Avenue south of the lid, at the end of Federal Avenue and at the eastern edge of the lid replacing the Bagley Viewpoint.

Refinements to RSUP and local active transportation connections

- A sidewalk will be added along the planned RSUP from the Montlake Boulevard RSUP tunnel west and south under the Portage Bay Bridge structures providing additional path width and separation for bicycle and pedestrian users.
- Several new ADA-compliant RSUP connections associated with extending the RSUP across the Portage Bay Bridge, including:
 - A direct RSUP connection near the east end of the Portage Bay Bridge connecting towards the Montlake Boulevard RSUP tunnel prioritizing regional users.
 - The structural connection from the west end of the Portage Bay Bridge RSUP to Delmar Drive East will be landward of Portage Bay to ease constructability and minimize environmental impacts. The RSUP connection will loop to a trailhead near the intersection of Interlaken Boulevard and Delmar Drive East and connect to the city active transportation network and reduce the size and visual impact of the retaining wall and structures near the lid portal.
 - An improved local connection at Delmar Drive East, including a crosswalk across Delmar Drive East at East Interlaken Boulevard.
 - Both a stair and ADA-compliant ramp connection from the replaced Bagley Viewpoint outlook down to the RSUP connection to the bridge. Having multiple options for egress will meet Crime Prevention Through Environmental Design (CPTED) guidelines.
- The north shift in bridge alignment will require removal of the existing City of Seattle East Roanoke Street stairs connection between 11th Avenue East and Boyer Avenue East.
- In partnership with the City of Seattle, newly proposed local street sidewalk improvements to provide an alternative route connection (in place of the existing stairs) between East Roanoke Street and Boyer Avenue East.

- A tabled intersection with rapid flashing beacons will be added at the intersection of 11th Avenue East and Delmar Drive East.
- Generally consistent with the Final EIS conceptual design, the local path on the Roanoke Lid will be ADA-compliant and configured in an oval shape with side connections to the Federal Avenue East greenway, the intersection of Delmar Drive East and 11th Avenue East, the intersection of 10th Avenue East and East Roanoke Street, and westward to Harvard Avenue East.
- An ADA-compliant connection will be added from the sidewalk on the west side of 10th Avenue East to the local path after it crosses under 10th Avenue East.
- An ADA-compliant connection will be added from the sidewalk on the east side of 10th Avenue East down to the lid area path.
- A new connection from the Roanoke Lid through WSDOT right-of-way to the City of Seattle’s local multi-modal network trailhead at the intersection of Broadway Avenue East, Harvard Avenue East, and East Miller Street.

Summary of City of Seattle, Stakeholder, and Community Involvement

Seattle Community Design Process

Following Federal approval of the Final EIS Preferred Alternative in 2011, WSDOT launched the Seattle Community Design Process (SCDP), a robust and collaborative effort with the City of Seattle, design professionals, and the broader public to refine the corridor vision and conceptual design for the unfunded portions of the SR 520 project in Seattle. WSDOT convened the SCDP in 2011 to meet its commitment to work collaboratively with the City of Seattle and Seattle neighborhood stakeholders to refine the SR 520 corridor between I-5 and the West Approach Bridge. This commitment emerged from the 2010 multi-agency workgroup process (ESSB 6392) and the 2011 Seattle/SR 520 project Memorandum of Understanding.

The SCDP was an iterative process that:

- Informed the public about the SR 520 corridor in Seattle.
- Listened to community and stakeholder feedback regarding the project design.
- Explored design refinements and collected additional public feedback.
- Integrated best practices for urban and sustainable design into the project based on feedback received.
- Continued to collect input from agency partners and community stakeholders as the process moved forward.

The SCDP included seven public workshops, 25 community organization and stakeholder briefings, and generated thousands of public comments. In addition, approximately 350 people attended a September open house where more than 150 individual written comment cards were received.

Through this effort, WSDOT and the City of Seattle:

- Identified many well-supported design preferences that were endorsed by the Seattle City Council.
- Identified areas requiring further design work before a Final Concept Design could be confirmed. The City of Seattle formalized its guidance in Resolution 31427 in 2013, and WSDOT incorporated endorsed design elements in the SR 520 Preliminary Concept Design. Areas requiring further design exploration to reach a recommendation – the Portage Bay

Bridge, the Montlake lid area, and active transportation connectivity – were the focus of additional design work described in this report.

WSDOT heard several key themes from the public during the SCDP, which served as a foundation for additional subsequent design work. To incorporate the community and stakeholder input from the SCDP, the design team began their work by reviewing the SCDP “Public Comment Summary” to ensure that recommendations reflected community preferences heard to date. Key themes related to the Portage Bay Bridge and Roanoke Lid phase of the project included:

- support for two parallel box girder bridges,
- continuation of the RSUP across Portage Bay,
- subtle bridge lighting,
- minimal above-deck bridge elements,
- treatment of under-bridge areas,
- neighborhood buffers,
- pedestrian connections between Delmar Drive East and Boyer Avenue East, and
- Montlake Playfield trail improvements.

While the SCDP was an iterative public process, the continuing design work has focused on decision-making related to remaining conceptual design issues. Therefore, public feedback has been received in existing forums at Seattle City Council and Seattle Design Commission briefings. WSDOT and the City of Seattle have also briefed community organizations throughout the process and hosted a series of open houses in the Montlake and north Capitol Hill communities to present refined design concepts and hear public feedback as each project phase has progressed.

Westside Design Refinements

At the conclusion of the SCDP in December 2012, final decisions had not been made regarding several key design features. Feedback was supported in some areas while split in others, and therefore further design work was identified by WSDOT and city of Seattle leaders to clarify strong solutions.

During the 2014 Legislative Session, the Washington State Legislature passed Engrossed Substitute Senate Bill (ESSB) 6001, which directed WSDOT to continue working with the Seattle Department of Transportation in the joint planning for, design of, outreach about, and operation of the remaining SR 520 west side elements, including:

- The Montlake lid
- Bicycle and pedestrian connectivity
- The effective network of transit connections
- The Portage Bay Bridge

Throughout the summer of 2014, WSDOT fulfilled this directive by working closely with the city of Seattle, a team of design professionals, and the Seattle Design Commission to develop design recommendations for these remaining unfunded elements. The work built directly upon previous project design refinements and aligns with all project permits, regulatory approvals, and stakeholder commitments. In 2015, WSDOT conducted a public review and comment period on the Westside Design Refinements.

Subsequent Community Involvement

Between June and November of 2019, WSDOT met with community members and stakeholders on a monthly basis to refine the Portage Bay Bridge and Roanoke Lid phase’s conceptual design. The focus of this stakeholder process was to gather feedback and hear community preferences on:

- The look and feel of the Roanoke Lid and how people would use the space.
- Nonmotorized connections throughout the project area.
- User experience in areas under the Portage Bay Bridge around Boyer Avenue East and the Bill Dawson Trail.

This outreach effort consisted of two project open houses, three community stakeholder workshops, which focused on specific design topics, and an online open house, which hosted meeting materials and summaries and ran throughout the outreach process. Meeting participants included neighborhood groups, City of Seattle departments, and representatives of organizations such as Cascade Bicycle Club, Friends of Seattle Olmsted Parks and many others.

During this process, WSDOT also met with the Seattle Design Commission, in five subcommittee workshops and three full briefings. At each meeting, WSDOT updated commissioners on the feedback received at the public meetings and workshops. Design updates resulting from the workshops, in turn were shared with public meeting participants, creating a back-and-forth exchange between the community and the Seattle Design Commission.

WSDOT developed a public comment summary, which outlined the outreach process and provided responses to key public comment themes. The feedback included in the summary informed the refinement of the final conceptual design, which is reflected in this evaluation.

Public Review and Comment on the Draft Section 4(f) Evaluation

In September 2020, WSDOT hosted a virtual public meeting and two-week online open house focused on providing SR 520 Program updates and gathering public feedback on the upcoming Portage Bay Bridge and Roanoke Lid phase, including the draft Section 4(f) Evaluation. WSDOT received 60 comments during the online open house, of which 11 identified as being related to the Section 4(f) Evaluation. This final Section 4(f) Evaluation includes revisions to the description of current conditions at the Montlake Playfield to reflect information provided by the public and the City of Seattle Department of Parks and Recreation (Parks). A copy of the comments received was provided to Parks and is included with WSDOT’s responses in Appendix B.

Section 4(f)-Protected Properties

Section 9.2 of the Final EIS identified two parklands (Bagley Viewpoint and Montlake Playfield), a recreational trail (the Bill Dawson Trail), two individual historic properties (Fire Station #22 and NOAA Northwest Fisheries Science Center), and one historic district (the Montlake Historic District) as Section 4(f)-protected properties that would be affected by the Portage Bay Bridge and Roanoke Lid phase of the SR 520 Bridge Replacement and HOV Project. In addition to these properties, two additional parklands (Interlaken Park and Roanoke Park) and one additional historic district (the Roanoke Park Historic District) are located in the area that would be affected by the project changes considered in this Section 4(f) evaluation (Table 1).

Table 1. Summary of Section 4(f) Properties

Property	Type	Protected activities, features, or attributes	Change in Section 4(f) status since Final EIS
Bagley Viewpoint	Public Park	Significant viewpoint	None
Montlake Playfield	Public Park	Community center, playfields, children's play area, tennis courts, and shoreline access	None
Bill Dawson Trail	Recreational Trail	Biking, walking, and jogging	None
Interlaken Park	Public Park	Biking, hiking, and jogging	Property was not included in Final EIS Section 4(f) evaluation
Roanoke Park	Public Park	Picnicking, playground, and memorial site	Property was not included in Final EIS Section 4(f) evaluation
Fire Station #22	Historic Property	None, property no longer exists	Property no longer exists
NOAA Fisheries Science Center	Historic Property	Eligible under Criterion A for direct association with important scientific research. Eligible under Criterion C. The 1931 building is significant for its distinctive architectural design that incorporates marine motifs to visually demonstrate its association with marine research.	None
Montlake Historic District	Historic District	Represents a significant, cohesive collection of residential architecture typical of early 20th century Seattle.	None
Roanoke Park Historic District	Historic District	Eligible under Criterion A for direct association with events that made a significant contribute to the broad patterns of history and Criterion C for its collection of early 20th century residential architecture.	Property was not included in Final EIS Section 4(f) evaluation

Park and Recreational Resources

Bagley Viewpoint, the Montlake Playfield, and the Bill Dawson Trail continue to exist in the area affected by the Portage Bay Bridge and Roanoke Lid phase as documented in the Final EIS. The description of these resources included in the Final EIS continues to be applicable.

Interlaken Park

Interlaken Park (Figure 1) is a 51.7-acre public park described by the City of Seattle Department of Parks and Recreation (Parks) as follows:

Interlaken Park is a densely wooded area on the north end of Capitol Hill. The paths and trails throughout the park are frequented by bikers, hikers and joggers.

In the 1890's, Interlaken Boulevard was the principal bike and buggy path linking Capitol Hill with the boulevards on Lake Washington. The conversion around that time of the high bicycle wheel to the low bicycle wheel made bicycles much easier to ride and very popular. Assistant City Engineer George F. Cotterill, conscious of the hazards of biking on city streets lined with planks, toured the city to look for good bikeways. His bike trails formed the basis of the city's boulevard system, and in 1903, the Olmsted Brothers approved Interlaken as a boulevard route. It soon became popular with walkers and auto drivers, who appreciated the views of mountains and lakes. In 1913, five acres of the Interlaken area were set aside as Boren Park to honor Louisa Boren Denny, the last surviving member of the party of pioneers that landed at Alki in 1851 (Seattle 2020a).

Per the city's description, biking, hiking, and jogging are identified as important activities in the park and constitute activities, features, or attributes that qualify the property for protection under Section 4(f). This is supported by the identified Greenway Project for Interlaken Park in the Parks and Open Space Plan for "Park District implementation of enhancements for non-motorized access to parks and open spaces in collaboration with SDOT" (Seattle 2017).

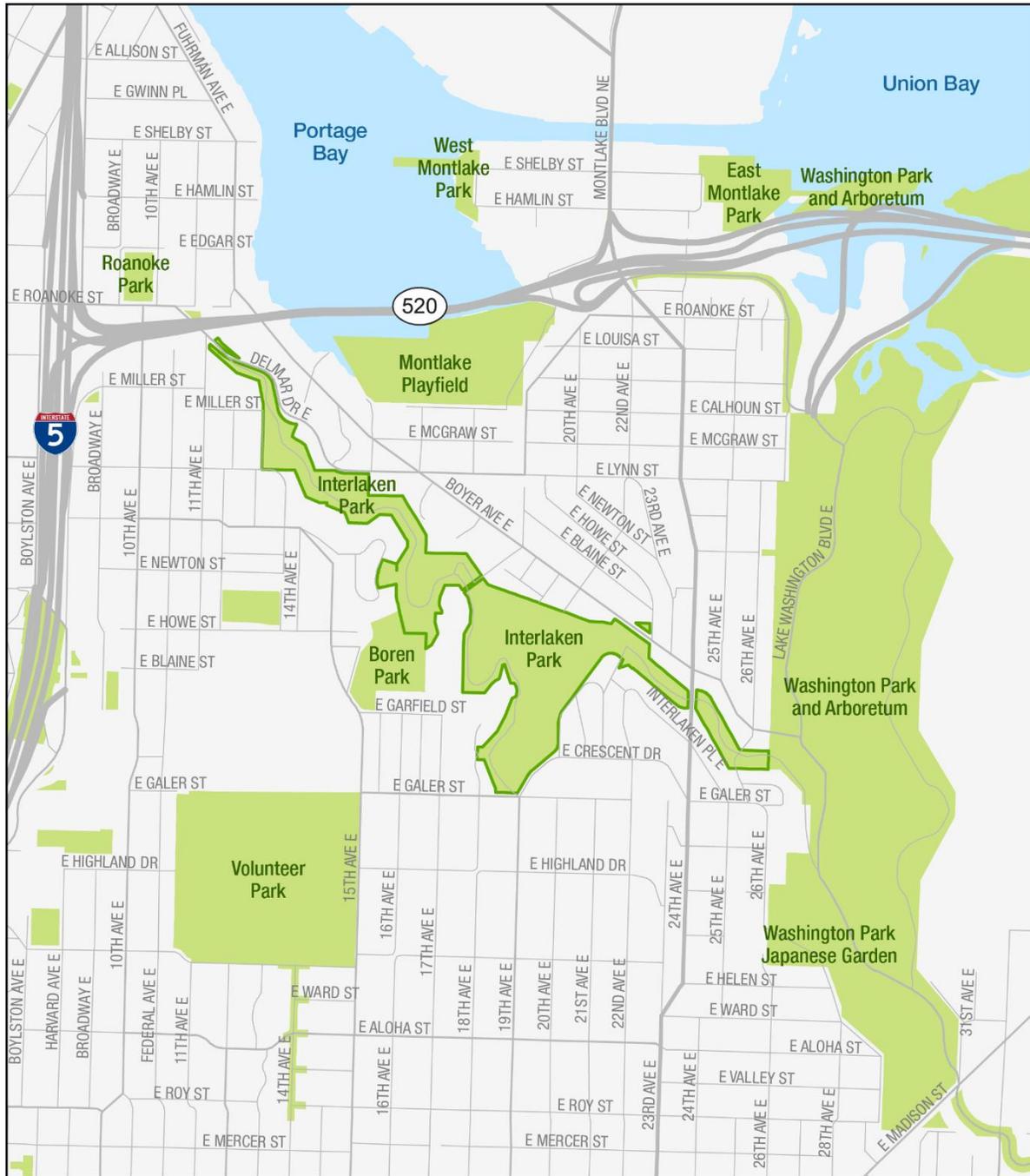
Roanoke Park

Roanoke Park (Figure 1) is a 2.2-acre public park described by the City of Seattle Department of Parks and Recreation as follows:

Roanoke Park is a grassy, pleasant space located on north Capitol Hill where 10th Avenue E ends at E Roanoke. Located in a residential area, it has fruit trees that burst into color in the spring; it's an ideal place to enjoy a picnic while your kids frolic in the play area. (Seattle 2020a).

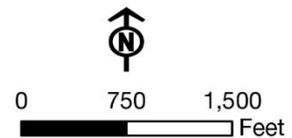
Per the city's description, picnicking and a playground are identified as important activities and features in the park and constitute activities, features, or attributes that qualify the property for protection under Section 4(f). In 1929 the park was designated by the Park Board as the designated location for memorials within the City of Seattle per a resolution that read "Roanoke Park, and the public squares at street intersections, be set aside as memorial sites and that memorials shall not be erected in other parks in the City of Seattle"; however, no memorials were erected in the park until 2003, when a plaque honoring the Heritage Elm was erected (NPS 2009). As such, the only memorial site in the park that constitutes a feature or attribute that qualifies the property for protection under Section 4(f) is the Heritage Elm and its associated plaque.

Figure 1. Public Parks in the Portage Bay Bridge and Roanoke Lid Vicinity



-  Interlaken Park Boundary
-  City of Seattle Parks

Source: Seattle Parks and Recreation, 2020



Historic Properties

Since the Final EIS and ROD, WSDOT has conducted coordination and completed additional surveys to identify and document historic properties per Section 106 of the National Historic Preservation Act. The ROD included a Section 106 finding of Adverse Effect for the I-5 to Medina: SR 520 Bridge Replacement and HOV Project. FHWA and WSDOT have continued Section 106 consultation with the State Historic Preservation Officer (SHPO) and amended the Programmatic Agreement between SHPO, FHWA, NOAA, the US Army Corps of Engineers, and the Advisory Council on Historic Preservation in 2015 and 2019. The Department of Archaeology and Historic Preservation (DAHP) director is the SHPO for the State of Washington.

In 2019 and 2020, WSDOT expanded the Section 106 Area of Potential Effects (APE) and limits of construction in the vicinity of the Portage Bay Bridge and Roanoke Lid phase to reflect design changes, including pedestrian and bicycle enhancements, subsurface utility connections, and additional subsurface structural anchoring indicated by further investigation of poor soils and unstable slope conditions in the project area (WSDOT 2019a and 2020a). Per Programmatic Agreement Stipulation VII.A.2, WSDOT consulted with the SHPO and the project's Section 106 consulting parties about these changes, and the SHPO concurred on March 11, 2019 and June 12, 2020 (Appendix A).

The NOAA Northwest Fisheries Science Center and the Montlake Historic District continue to exist in the area affected by the Portage Bay Bridge and Roanoke Lid phase as documented in the Final EIS.

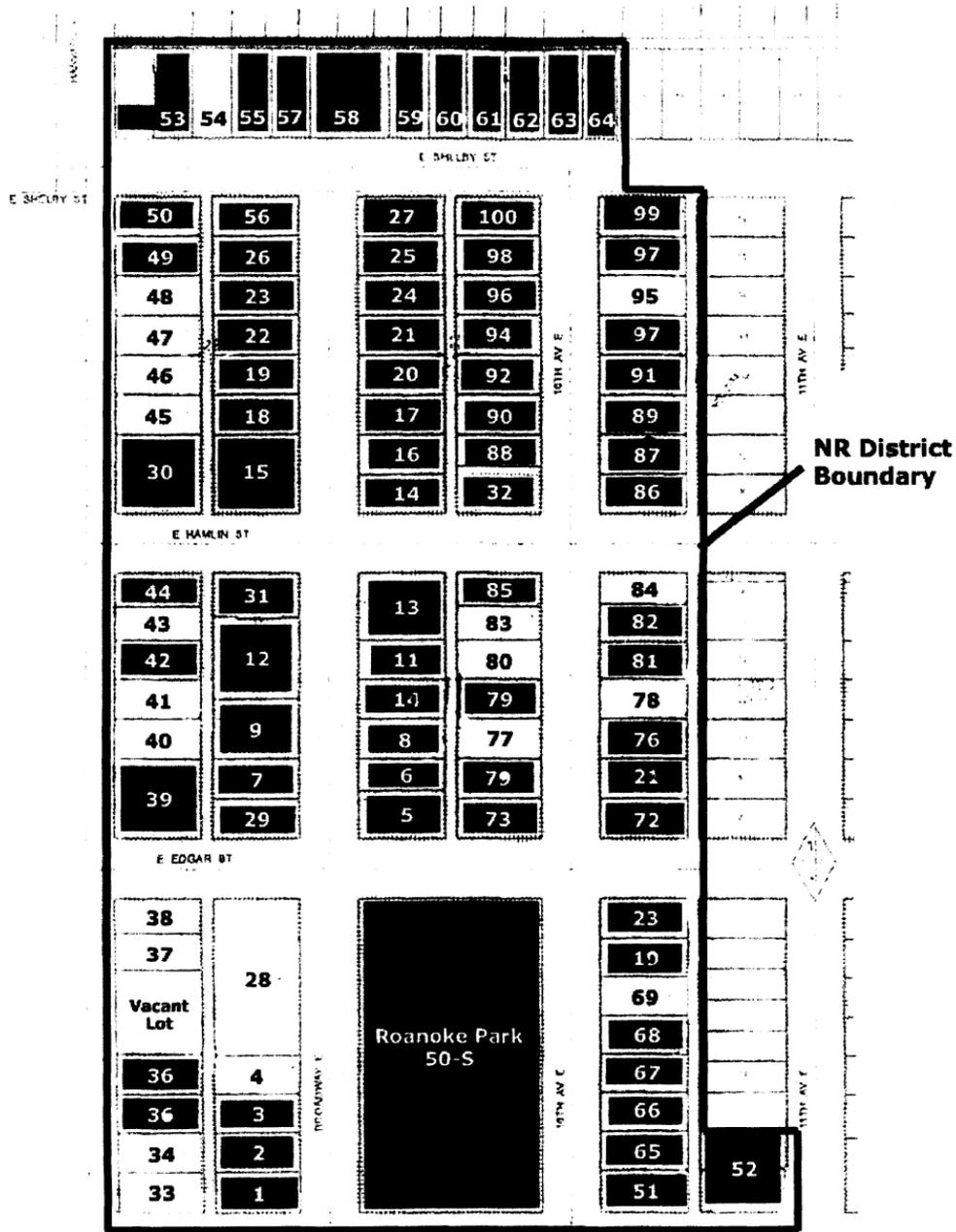
Fire Station #22

Subsequent to completion of the Final EIS and ROD, the City of Seattle replaced Fire Station #22 with a modern building. The current fire station, which was constructed on the site previously occupied by the historic property, was opened in 2018 and completely replaced the 1964 building. Fire Station #22 is no longer a historic property and is no longer protected under Section 4(f).

Roanoke Park Historic District

The Roanoke Park Historic District is located north of SR 520, bounded by East Shelby Street, East Roanoke Street, Harvard Avenue East, and 10th Avenue East (Figure 2). At the time of the Final EIS and ROD, the historic district was within the APE for the project, but outside of the anticipated limits of construction. The district includes Roanoke Park, 78 contributing buildings, and 55 other contributing structures. with a period of significance from 1899 to 1939. Aside from one church, all contributing buildings are residential. The district is listed on the National Register of Historic Places under Criteria A and C.

Figure 2. Roanoke Park Historic District



**Roanoke Park Historic District
Contributing Vs. Non - Contributing Map - Primary Structures**

- Contributing
- Non-Contributing

SOURCE: NPS 2009

Evaluation of Use

Table 2 summarizes the current Section 4(f) evaluation relative to the Final EIS Section 4(f) findings.

Table 2. Summary of Section 4(f) Revised Evaluation

Property	Final EIS Section 4(f) Finding	Refined Design Portage Bay Bridge and Roanoke Lid Section 4(f) Finding	Change compared to Final EIS
Bagley Viewpoint	Use	Use	No change
Montlake Playfield	Use	Use	Additional bicycle and pedestrian connections, changed alignment, resulting in use of additional area
Bill Dawson Trail	Trail continuity exception [23 CFR 774.13(f)(3)]	Trail continuity exception [23 CFR 774.13(f)(3)]	Design implements measures to minimize harm that were identified in the Final EIS
Interlaken Park	None	<i>de minimis</i> impact	Newly evaluated as a park
Roanoke Park	None	Temporary occupancy exception [23 CFR 774.13(d)]	Temporary construction within the park and placement of retaining wall anchors below the park.
Fire Station #22	Use	None	Property no longer exists
NOAA Fisheries Science Center	Use	Use	No change
Montlake Historic District	Use	Use	Additional bicycle and pedestrian connections within Montlake Playfield, no other changes within district.
Roanoke Park Historic District	None	<i>de minimis</i> impact	Temporary construction within the district boundary and placement of retaining wall anchors below the district.

Bagley Viewpoint

Relative to the analysis included in the Final EIS, there would be no change in the project use or commitment of measures to avoid, minimize, and mitigate harm to the district. The findings included in the Final EIS continue to apply.

Montlake Playfield

The Final EIS evaluated a shift in alignment of SR 520 to the south, toward the Montlake Playfield and away from the NOAA Northwest Fisheries Science Center on the north side of the corridor. This shift entailed a permanent incorporation of Montlake Playfield property, some of which is submerged land. The Final EIS identified a total of 1.2 acres of land for acquisition, 1.0 acre of which would be

submerged land on the north side of SR 520. The remaining 0.2 acre of acquisition was a sliver of land adjacent to SR 520 right-of-way in the northeast corner of the property. An area of 3.2 acres was identified for construction easements for the duration of the project, 2.9 acres of which would be submerged land.

The acquisition areas provided in the Final EIS were based on property boundaries recorded with the King County Assessor’s office. WSDOT has subsequently completed right-of-way research that indicates an additional area of land, shown in Figure 3 as the *Revised Montlake Playfield Boundary*, is also owned by Parks, with a restrictive easement on it prohibiting filling in Portage Bay. The values in Table 3 are revised to reflect the correct property boundary.

Figure 3 shows the effects of project design changes overlaid on Exhibit 9-7 from the Final EIS to illustrate the change in effects to Montlake Playfield. As shown in Table 3, the area of permanent acquisition of upland area from the park would be the same as for the Final EIS Preferred Alternative; however, acquisition of submerged lands for highway right-of-way would increase, as would the submerged areas needed during construction. Figure 3 also illustrates that the temporary impacts within the limits of construction would be further from the shoreline through most of Montlake Playfield compared to the Final EIS Preferred Alternative.

Table 3. Summary of Section 4(f) Land Used from Montlake Playfield

Activity	Final EIS Design Section 4(f) Use (acres)	Refined Design Portage Bay Bridge and Roanoke Lid Section 4(f) Use (acres)
Permanent acquisition of upland area	0.5*	0.5
Permanent acquisition of submerged lands	1.0	1.8
Area for new RSUP connection, remaining in park ownership	0	0.2
Temporary construction easement of upland area	1.6*	1.5
Temporary construction easement of submerged lands	2.9	3.5

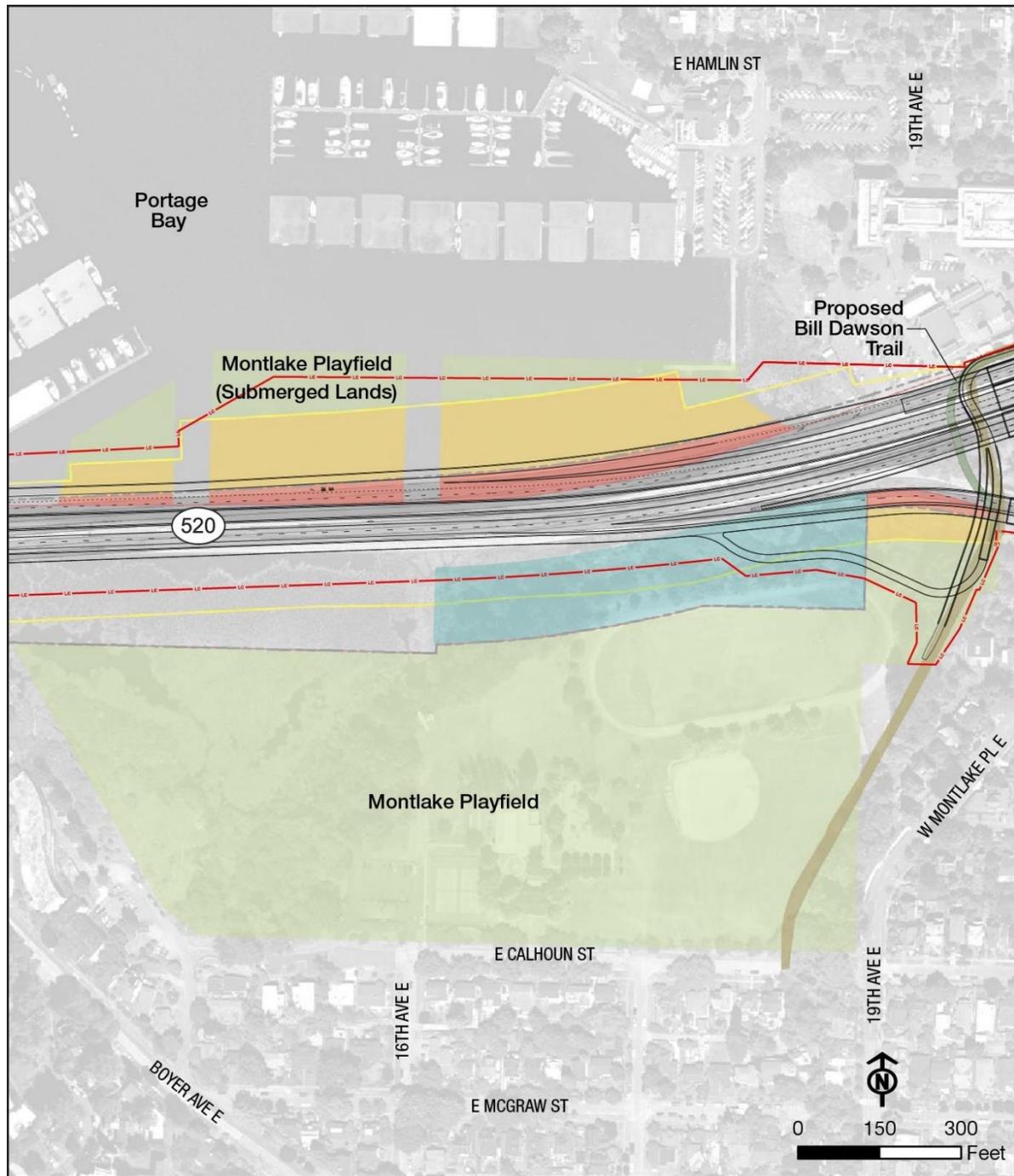
* THE VALUES PROVIDED FOR THE FINAL EIS DESIGN DIFFER FROM THE FINAL EIS TO ACCOUNT FOR CORRECTION TO THE MONTLAKE PLAYFIELD BOUNDARY.

The Final EIS discussed the activities, features, and attributes of Montlake Playfield, including the following discussion of the submerged lands.

The submerged land that would be acquired is on the north side of the existing SR 520 and was never used as a part of the playfield. While it is technically within the boundaries of the park, it has always been submerged and was never developed as a park. The Montlake Playfield does not have a dedicated aquatic element as part of the park function. People do use the water in the northern part of the park, but it has no facilities dedicated to water craft and water activities (WSDOT 2011a).

Subsequent to completion of the Final EIS, Parks partnered with the Montlake Community Park Steering Committee of local residents to develop the *Montlake Community Park Waterfront Master Plan* (Parks 2006). The Master Plan identified a community vision “to enhance the public shoreline

Figure 3. Project Changes Relative to Montlake Playfield



2011 EIS Project Components

- | | | |
|----------------------------|------------------------|----------------------------------|
| Permanent use | Proposed right-of-way | Proposed bicycle/pedestrian path |
| Construction easement | Existing right-of-way | Existing trail/bicycle path |
| Park or recreation feature | Limits of construction | |
| Pavement | Travel lane | |

New Project Components

- | |
|-------------------------------------|
| New limits of construction |
| New project features |
| Revised Montlake Playfield boundary |

SOURCE: WSDOT 2011A, 2020

from Everett Street to the Bill Dawson Trail under SR 520 for wildlife, natural systems and pedestrians to make this a better neighborhood park and natural open space”. Parks, supported by community volunteers, has begun implementation of the Master Plan vision, through invasive weed removal and native plantings and has installed a hand-carry boat launch in Montlake Playfield. The Master Plan added shoreline access to the activities, features, and attributes identified in the Final EIS that qualify Montlake Playfield for protection under Section 4(f).

While additional aquatic land would be permanently incorporated into the project, the activities that occur there are not identified activities, features, or attributes that qualify Montlake Playfield for protection under Section 4(f). As was the case with the Final EIS design, once construction is complete, water users will be able to access the under-bridge areas that are currently Montlake Playfield submerged lands.

The temporary construction easement for upland areas will allow construction of the RSUP connections to Montlake Playfield and the Bill Dawson Trail. The Final EIS commitment to provide a detour plan for the Bill Dawson Trail and its connection to Montlake Playfield will continue to be applicable and a bicycle and pedestrian detour will be provided around the construction area while the RSUP connections and the Bill Dawson Trail improvements are being constructed.

The temporary construction easement area for the submerged lands will be larger to accommodate the north shift in the bridge alignment, the widening of the bridge to include the RSUP, and to provide sufficient access and staging area for bridge construction. Recreational water access for hand-carried craft is available from Montlake Playfield. During construction, WSDOT will provide water access at one or more locations with at least 10 feet of vertical clearance to cross under the Portage Bay Bridge and temporary construction trestles. This will allow for small boat access to and from Montlake Playfield.

The Final EIS identified Section 4(f) use of Montlake Playfield. The revised design would continue to use land from Montlake Playfield.

The Montlake Playfield is also a contributing element to the Montlake Historic District, which is evaluated separately as a historic property below.

Bill Dawson Trail

The Final EIS identified relocation of the Bill Dawson Trail within WSDOT right-of-way and within the Montlake Playfield on City of Seattle parkland. The Final EIS documented that 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, the Bill Dawson Trail is excepted from Section 4(f).

The design changes included in this Section 4(f) Evaluation implement the identified requirement to maintain continuity and provides for additional access and connection to the trail from the newly proposed RSUP. The design changes continue to meet the requirements of 23 CFR 774.13(f)(3) to except the trail from Section 4(f).

Interlaken Park

The connection to the western end RSUP in the Delmar Drive area would require improvements to the existing sidewalk and bike lane on Delmar Drive East and crosswalk at Delmar Drive East and East Interlaken Boulevard to provide a local connection to the RSUP while meeting accessibility guidelines (Figure 4). A portion of this connection would be outside of the city street right-of-way for Delmar Drive. The bicycle and pedestrian improvements would affect approximately 8,200 square feet (0.2 acre) from the 51.7 acre Interlaken Park and would provide a direct accessible connection from the RSUP, where it ends at Delmar Drive East, to the park entry point at East Interlaken Boulevard and Delmar Drive East. East Interlaken Boulevard, a City of Seattle street, lies on park land and does not have an identified roadway right-of-way. The roadway area shown in Figure 4 on park land is the existing city roadway, which would not be altered, except to tie-in the bicycle and pedestrian improvements.

The proposed improvements within Interlaken Park consist only of bicycle and pedestrian connection and safety improvements to provide improved access to the park for active transportation (nonmotorized) users. The improvements are consistent with the Section 4(f) Policy Paper guidance on *de minimis* impacts to parks in that the improvements will provide enhanced bicycle and pedestrian access to the park, for which biking, hiking, and jogging are identified as important activities in the park that constitute the activities, features, or attributes that qualify the property for protection under Section 4(f). It is also consistent with the Parks and Open Space Plan for “Park District implementation of enhancements for non-motorized access to parks and open spaces...”. The project improvements within the park boundary would constitute an enhancement and would not adversely affect the activities, features, or attributes that qualify the resource for protection under Section 4(f).

Based on this analysis, FHWA made a preliminary *de minimis* impact finding for the effects of the I-5 to Medina: SR 520 Bridge Replacement and HOV Project on Interlaken Park. For FHWA to make a *de minimis* impact finding, the public must be afforded an opportunity to review and comment on the effects and the official with jurisdiction must concur in writing that the project will not adversely affect the activities, features, or attributes that qualify the property for protection under Section 4(f). As documented in the Coordination section of this evaluation, WSDOT coordinated with Parks, and the department is in agreement that the sidewalk, bike lane, and crosswalk improvements would not adversely affect the park. WSDOT conducted a public open house related to project changes associated with the Portage Bay Bridge and Roanoke Lid phase and shared the draft Section 4(f) evaluation with the public for review and comment. WSDOT then shared the public comments related to this evaluation with Parks and on October 14, 2020 requested written concurrence that any impacts to Interlaken Park would be *de minimis*. Parks concurred on December 8, 2020. Based on this concurrence, FHWA made a *de minimis* impact finding for the effects of the I-5 to Medina: SR 520 Bridge Replacement and HOV Project on Interlaken Park. Because the impact to Interlaken Park would be *de minimis*, the alternative can be approved without the need to develop and evaluate alternatives that would avoid using the Section 4(f) property (FHWA 2012) and the requirements for all possible planning to minimize harm is subsumed [23 CFR 774.17(5)].

Figure 4. Project Changes Relative to Interlaken and Roanoke Parks



2011 EIS Project Components

- | | |
|----------------------------|------------------------|
| Permanent use | Proposed right-of-way |
| Park or recreation feature | Existing right-of-way |
| Pavement | Limits of construction |
| Lid or landscape feature | Travel lane |

New Project Components

- | |
|---------------------------------|
| New limits of construction |
| New project features |
| Temporary construction easement |

SOURCE: WSDOT 2011A, 2020

Roanoke Park

Roanoke Park (Figure 4) may be affected in two ways that were not previously evaluated. First, relocating a Seattle Public Utilities water line that currently crosses under the park and SR 520. Second, subsurface retaining wall anchors will extend below the surface of the park.

The portion of the water line that is under SR 520 will have to be relocated to accommodate the Roanoke lid. The connection point to the existing water line may have to be made within the boundary of Roanoke Park, where there is an existing underground waterline bend. The connection would require an approximately 20 foot by 20 foot area (<0.1 acre) for excavation and connection within the park boundary (Figure 4). An isolation valve would be installed within a concrete vault. Any permanent surface features, such as an access hatch would be located outside of the park boundary. Construction and restoration would occur during completion of the Portage Bay Bridge and Roanoke Lid phase and would be of a shorter duration than the construction phase. The park would be fully restored and accessible afterward.

Under U.S. DOT regulations (23 CFR Section 774.13), a temporary occupancy of a property does not constitute a use of a Section 4(f) resource when all the following conditions are satisfied:

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

There would be no change to land ownership, the entire property currently owned by the City of Seattle Department of Parks and Recreation would remain in Parks' ownership and the time of disturbance would be less than for the phase of construction as a whole. The scope of work is minor, in that it is limited to connecting a new water line running under SR 520 to an existing line in the park. There are no anticipated permanent adverse impacts, as the area would be fully restored and there would not be interference with protected activities, features, or attributes, as the work would be limited to a small area of the park. Playground and picnicking areas would not be disturbed. The land would be fully restored. Finally, WSDOT has coordinated with the City of Seattle regarding the need to connect the relocated waterline within the park property. After the public comment period, WSDOT requested written concurrence that Parks agrees that the conditions of the temporary occupancy exception are met. Based on Parks' concurrence (Appendix A), FHWA has determined that the waterline relocation meets the requirements of a temporary occupancy exception.

The expanded limits of construction that extend under Roanoke Park (Figure 4) are limited to the above-mentioned relocated waterline and increased subsurface easement area to accommodate retaining wall anchors in response to additional geotechnical information about potentially unstable

slopes. There would be no permanent surface disturbance within the boundaries of the park. Per Question 28A of the Section 4(f) Policy Paper (FHWA 2012):

Section 4(f) applies to tunneling only if the tunneling:

- Disturbs archaeological sites that are on or eligible for the National Register (NR) which warrant preservation in place;
- Causes disruption which would permanently harm the purposes for which the park, recreation, wildlife or waterfowl refuge was established;
- Substantially impairs the historic values of a historic site; or
- Otherwise does not meet the exception for temporary occupancy.

Only the second and fourth bullet, related to parks and temporary occupancy, are relevant to the analysis of Roanoke Park. The project would not permanently affect use of the park; it would not affect the playground or Heritage Elm or impair use of the park for picnicking. Also, as discussed above, the work within the park to connect the relocated subsurface waterline would meet the requirements for the exception for temporary occupancy. Therefore, Section 4(f) would not apply to the subsurface easements to accommodate retaining wall anchors or the relocated waterline.

Roanoke Park is also a contributing element to the Roanoke Park Historic District, which is evaluated separately as a historic property below.

NOAA Fisheries Science Center

The Final EIS and ROD identified acquisition of 0.5 acre from the NOAA Fisheries Science Center. NOAA transferred approximately 0.5 acre of property to WSDOT by deed dated February 22, 2019. There will be no additional use of the property. The findings included in the Final EIS continue to apply.

Montlake Historic District

The Final EIS and ROD identified acquisition of land from the Montlake Historic District. The identified acquisition included two contributing residences, the property from the NOAA Fisheries Science Center described above, Canal Reserve Land, part of the Montlake Boulevard median, part of East Montlake Park, and part of the Montlake Playfield, which is discussed above as a recreational property. Of these properties, the only change related to the Portage Bay Bridge and Roanoke Lid phase of the I-5 to Medina: SR 520 Bridge Replacement and HOV Project would be to Montlake Playfield (Figure 5). Montlake Playfield is not individually eligible for the NRHP. FHWA and WSDOT reviewed the effects of the design changes on the Montlake Historic District as a whole and determined that the changes would not adversely affect the setting, feeling, and association of the district relative to the analysis included in the Final EIS (WSDOT 2020b).

Per Question 2B of the Section 4(f) Policy Paper (FHWA 2012), “Within a NR listed or eligible historic district, FHWA’s long-standing policy is that Section 4(f) applies to those properties that are considered contributing to the eligibility of the historic district.” Question 7C of the Section 4(f) Policy Paper (FHWA 2012) provides the following guidance on evaluating Section 4(f) use in historic districts:

Figure 5. Project Changes Relative to Montlake Historic District



SOURCE: NPS 2015, WSDOT 2020b

When a project requires land from a non-historic or non-contributing property lying within a historic district and does not use other land within the historic district that is considered contributing to its historic significance, FHWA's longstanding policy is that there is no direct use of the historic district for purposes of Section 4(f)... When a project uses land from an individually eligible property within a historic district, or a property that is a contributing element to the historic district, Section 4(f) is applicable.

The Montlake Historic District was listed on the National Register of Historic Places on June 19, 2015. The nomination form details the contributing resources within the overall historic property of the district. The nomination form includes the following description of the Montlake Community Center and Playfield:

The original Montlake Community Center is a Tudor Revival-style building constructed along with the Montlake Playfield partially on fill in former marshlands on the shores of Portage Bay between 1933 and 1936. The area had been used by Dahlialand, a local garden store, to grow dahlia bulbs for commercial use. The building and playfield were built by WPA (Works Progress/Works Projects Administration) workers. The playfield was expanded in the early 1960s when material dredged for construction of the Evergreen Point Floating Bridge was dumped along its edge. The facilities were improved and enhanced in the mid-1970s, including reconfiguration to accommodate football and track, and the construction of a separate gymnasium/ community center facility. The gymnasium is non-contributing (NPS 2015).

Further description is provided specific to the Montlake Playfield:

The Montlake Playfield (historic contributing site) (largely described above, as part of the Montlake Community Club/Montlake Playfield overview) was established in 1932 at the request of the Montlake Community Club, which sought a recreational area for neighborhood children. Construction did not begin until 1934, when the state stepped in to assist the city with various public works projects, including the Montlake Playfield. The project was completed in 1935 under another agency, the Works Progress Administration. The Tudor Revival-style field house was dedicated on October 23, 1935 (NPS 2015).

While the design changes would introduce additional bicycle and pedestrian connections within the historic district, the change would be minor and at the edge of the historic district in an area of the Montlake Playfield that was reconfigured after the period of significance for the Montlake Historic District (1904-1959). Because the area containing the bicycle and pedestrian trail connections would stay within Parks ownership, it would not be a conversion of land to transportation use and would not increase the area of the Montlake Historic District that would be permanently incorporated into the project. The temporary occupancy of the Montlake Playfield contributing property during construction would increase from the 0.3 acre identified in the Final EIS to 0.6 acre to allow for the trail connections, would be temporary, and would not constitute an adverse effect to the integrity of the activities, features, and attributes that qualify the Montlake Historic District for protection under Section 4(f). The FHWA determined that the project changes would not cause a new adverse effect or increase the severity of the effect already determined to occur on the district. The determination was sent to the Washington SHPO for concurrence on August 5, 2020. The Washington SHPO concurred on August 11, 2020 (DAHP 2020b).

Roanoke Park Historic District

The expanded limits of construction within the Roanoke Park Historic District (Figure 6) are limited to *de minimis* impact during water line relocation and a permanent increased subsurface easement area to accommodate the utility and retaining wall anchors in response to additional geotechnical information about potentially unstable slopes. Aside from a utility vault access lid described below, there would be no permanent surface disturbance within the boundaries of the historic district. The evaluation of the Roanoke Park Historic District is similar to that for Roanoke Park because the project effects within the historic district are the same as within the park as evaluated as a recreational property. Roanoke Park is a contributing property to the Roanoke Park Historic District, but is not individually eligible for the NRHP. FHWA and WSDOT reviewed the effects of the design changes on the Roanoke Park Historic District as a whole and determined that the changes would not adversely affect the setting, feeling, and association of the district relative to the analysis included in the Final EIS and that there would be No Adverse Effect on the district (WSDOT 2020b). The determination was sent to the Washington SHPO for concurrence on August 5, 2020.

The portion of the water line that is under SR 520 will have to be relocated to accommodate the Roanoke lid. The connection point to the existing water line may have to be made within the boundary of the Roanoke Park Historic District, on the Roanoke Park contributing property, where there is an existing underground waterline bend. The connection would require excavation and connection within the district boundary. An isolation valve would be installed within a concrete vault with an access hatch extending to the ground surface at a location outside of the Roanoke Park contributing property, but within the district. The property would be fully restored.

There would be no change to land ownership of any property within the Roanoke Park Historic District. The scope of work is minor, in that it is limited to connecting a new water line running under SR 520 to an existing line in the district. As described in the Section 106 review, the effect on setting, feeling, and association would be minor and not adverse, given the small area of change relative to the district as a whole (WSDOT 2020b). There are no anticipated permanent adverse impacts, as the area would be fully restored and there would not be interference with protected activities, features, or attributes of the district, as reflected in the No Adverse Effect determination on the district. Per 23 CFR 774.17, a *de minimis* impact to a historic property means that FHWA has determined, in accordance with 36 CFR Part 800, that no historic property is affected by the project or the project would have “no adverse effect” on the property in question.

The expanded limits of construction that extend under the Roanoke Park Historic District (Figure 6) are limited to the above-mentioned relocated waterline and increased subsurface easement area to accommodate retaining wall anchors in response to additional geotechnical information about potentially unstable slopes. Aside from the utility vault lid that would be flush to the ground, there would be no permanent surface disturbance within the boundaries of the historic district.

Figure 6. Project Changes Relative to Roanoke Park Historic District



SOURCE: NPS 2009, WSDOT 2020b

Per Question 28A of the Section 4(f) Policy Paper (FHWA 2012):

Section 4(f) applies to tunneling only if the tunneling:

- Disturbs archaeological sites that are on or eligible for the National Register (NR) which warrant preservation in place;
- Causes disruption which would permanently harm the purposes for which the park, recreation, wildlife or waterfowl refuge was established;
- Substantially impairs the historic values of a historic site; or
- Otherwise does not meet the exception for temporary occupancy.

Only the third bullet, related to historic sites, is relevant to the analysis of the retaining wall anchors within the Roanoke Park Historic District. Because the project would not adversely affect the district, it would not substantially impair the historic value of the district; therefore, Section 4(f) would not apply to the subsurface easements to accommodate retaining wall anchors.

On August 5, 2020, FHWA and WSDOT notified the Washington SHPO of their intent to make a *de minimis* impact finding based on the SHPO's concurrence under Section 106. On August 11, 2020, the Washington SHPO concurred with the No Adverse Effect determination to the Roanoke Park Historic District (DAHP 2020b). Based on this analysis and concurrence from the Washington SHPO, FHWA made a *de minimis* impact finding for the effects of the I-5 to Medina: SR 520 Bridge Replacement and HOV Project on the Roanoke Park Historic District.

Avoidance Alternatives

The 2011 Final EIS and Section 4(f) and 6(f) Evaluation investigated a range of avoidance alternatives and determined that there was not a feasible and prudent avoidance alternative to the use of Section 4(f) properties. The Final EIS evaluation for Section 4(f) remains valid for the project overall. The proposed refinements to the Portage Bay Bridge and Roanoke Lid phase would increase the area of non-*de minimis* use of two properties (Montlake Playfield and the Montlake Historic District) that were evaluated in the Final EIS. For properties with a *de minimis* impact, the alternative can be approved without the need to develop and evaluate alternatives that would avoid using the Section 4(f) property (FHWA 2012).

A “feasible and prudent” avoidance alternative is defined in 23 CFR 774 as an alternative that avoids using Section 4(f) property and does not cause other severe problems of a magnitude that substantially outweighs the importance of protecting Section 4(f) properties. An alternative is not feasible if it cannot be built as a matter of sound engineering judgment. An alternative is not prudent if:

- It compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;
- It results in unacceptable safety or operational problems;
- After reasonable mitigation, it still causes:
 - Severe social, economic, or environmental impacts
 - Severe disruption to established communities
 - Severe disproportionate impacts to minority or low-income populations or
 - Severe impacts to environmental resources protected under other Federal statutes
- It results in additional construction, maintenance, or operational costs of an extraordinary magnitude
- It causes other unique problems or unusual factors or
- It involves multiple factors in [the list above], that while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude

Section 9.5 of the Final EIS investigated feasible and prudent avoidance alternatives to the use of the Montlake Playfield and the Montlake Historic District. FHWA, in the ROD, determined that there is no feasible and prudent alternative to the use of these properties. None of the subsequent coordination, planning, and design advancement has identified a new alternative that would avoid the properties. FHWA’s determination remains applicable; therefore, FHWA and WSDOT must select the alternative with the least overall harm.

Finding of Least Overall Harm

In situations where FHWA concludes in the Section 4(f) evaluation that there is no feasible and prudent avoidance alternative and there are two or more alternatives that have a greater than *de minimis* use of a Section 4(f) property, a least overall harm analysis is necessary pursuant to 23 CFR 774.3(c). The 2011 Final EIS and Section 4(f) and 6(f) Evaluation identified the Preferred Alternative as the Least Overall Harm Alternative. As described in the Final EIS, there are no feasible and prudent alternatives that would completely avoid all Section 4(f)-protected property. In accordance with FHWA guidance (FHWA 2012), identifying which alternative would have least overall harm includes consideration of the following seven factors:

- The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property);
- The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection;
- The relative significance of each Section 4(f) property;
- The views of the officials with jurisdiction over each Section 4(f) property;
- The degree to which each alternative meets the purpose and need for the project;
- After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f); and
- Substantial differences in costs among the alternatives.

Not all factors are differentiators between all alternatives. Because the Preferred Alternative identified in the Final EIS was already identified as the Least Overall Harm Alternative, this analysis evaluates the project changes for potential change in harm relative to the Final EIS Preferred Alternative. The only Section 4(f)-protected properties with a greater than *de minimis* use where the revised design would differ from the Final EIS Preferred Alternative are the Montlake Playfield and Montlake Historic District.

Ability to Mitigate Adverse Impacts

The Final EIS identified measures to minimize harm to the Montlake Playfield, Bill Dawson Trail, and the Montlake Historic District. All of the identified measures would apply to the refined design as well as the Final EIS Preferred Alternative. One measure, to reconstruct the Bill Dawson Trail along a modified alignment within WSDOT right-of-way, would be implemented differently. The design changes maintain the accessible connections to the north and east that were identified in the Final EIS, but also provide for an additional connection to the west via the RSUP that is added in the refined design of the Portage Bay Bridge. Overall, the design changes provide an improvement to the Bill Dawson Trail relative to the Final EIS.

Relative Severity of the Remaining Harm

The consideration of remaining harm is limited to consideration of harm to the two properties, the Montlake Playfield and Montlake Historic District, with differing non-*de minimis* use, as supported by the following Section 4(f) guidance (FHWA 2012).

In situations where FHWA concludes in the individual Section 4(f) evaluation that there is no feasible and prudent avoidance alternative and there are two or more alternatives that use Section 4(f) property, a least overall harm analysis will be necessary pursuant to 23 CFR 774.3(c)... In such instances, while the de minimis impact will be considered in that analysis, the de minimis impact is unlikely to be a significant differentiating factor between alternatives because the net harm resulting from the de minimis impact is negligible.

The additional land required from Montlake Playfield would be used to provide improved bicycle and pedestrian connections to Montlake Playfield and the Bill Dawson Trail. These connections would be supportive of the activities, features, and attributes that qualify the park for protection under Section 4(f). The SHPO concurred that there would be no additional adverse effect to the Montlake Historic District as a result of the project changes; therefore, there would be no increase in harm to Section 4(f) properties as a result of the proposed project changes.

Relative Significance of Each Section 4(f) Property

The same properties would be affected by the project design changes as by the Final EIS Preferred Alternative. There is no difference in the significance of properties between them.

Views of the Officials with Jurisdiction

WSDOT had consulted with the officials with jurisdiction, the City of Seattle Department of Parks and Recreation for parklands and the State of Washington SHPO for historic properties, for the Section 4(f)-protected properties that would be affected by the Portage Bay Bridge and Roanoke Lid phase. As documented in the following Coordination section of this Section 4(f) Evaluation, Parks supports the additional active transportation connections that occur within Interlaken Park and the Montlake Playfield. The SHPO concurred that there would be no additional adverse effect to the Montlake Historic District as a result of the project changes; therefore, the SHPO agrees that the proposed project revisions would have no increased harm relative to the design included in the Final EIS.

Degree to Which Each Alternative Meets the Purpose and Need

Chapter 1 of the Final EIS documents the purpose of the project thus:

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.

It elaborates on the project elements that meet the purpose, including “A regional bicycle/pedestrian path across Lake Washington with connections to existing bicycle and pedestrian facilities.” The extension of the RSUP west of Montlake and across the Portage Bay Bridge is a substantial extension of the connections provided for bicycle, pedestrian, and other active transportation users across Lake Washington. This revision is an improvement in meeting the purpose of the project relative to the Final EIS.

Magnitude of Any Adverse Impacts to Resources not Protected by Section 4(f)

The revised design would have a slightly greater impact to wetland and aquatic habitat as a result of the additional bridge width to provide the RSUP. The revisions would also have social and community benefits by providing additional pedestrian and active transportation connections to the Montlake Playfield, the Montlake Community Center, and points beyond via the RSUP continuing on SR 520 from Capitol Hill across Portage Bay and Lake Washington. Overall, while there would be differences in impacts and benefits between the Final EIS Preferred Alternative and the revised design, the differences would be small and would include trade-offs between areas of wetland and aquatic habitat and social and community connections.

Substantial Differences in Costs

The revised design would have a greater cost than the Final EIS Preferred Alternative because of the addition of the RSUP and local active transportation connections to the project. The increased cost would provide additional project benefit and would not be a substantial difference in cost relative to the overall \$3.56 billion budget for the I-5 to Medina: SR 520 Bridge Replacement and HOV Project.

Consideration of All Possible Planning to Minimize Harm

The Final EIS documented measures to minimize harm, which remain valid at the overall the I-5 to Medina: SR 520 Bridge Replacement and HOV Project level and in relation to the Portage Bay Bridge and Roanoke Lid phase specifically. The project revisions addressed in this Section 4(f) Evaluation are a direct result of mitigation commitments included in the ROD (FHWA 2011) for continued coordination and collaboration on bike and pedestrian routes, urban design, and design of the Portage Bay Bridge. These ROD commitments were met through the Seattle Community Design Process that is summarized above. The process identified design refinements to improve active transportation recreational connections and reduce visual impacts of the replacement Portage Bay Bridge at nearby properties, including the Montlake Historic District. The project changes are the realization of the planning process reflected in the Final EIS and ROD commitments to minimize harm and revised design reflects all possible planning to minimize harm.

Conclusion Regarding Least Overall Harm

Overall, the difference in harm between the Final EIS Preferred Alternative and the revised design that incorporates the changes addressed in this evaluation would be small. The revised design would provide improved mitigation of effects on the Bill Dawson Trail. The alternatives would not differ in relative severity of remaining harm or significance of each property. The officials with jurisdiction are supportive of the revised design, and the revised design would be marginally more effective at meeting purpose and need. Differences in adverse impacts to resources not protected by Section 4(f) and the differences in costs would not be substantial. In summary, the revised design is the alternative with least overall harm.

Coordination

FHWA and WSDOT have engaged in consultation and coordination related to the Section 4(f)-protected properties considered in this evaluation. Public consultation that led to the design changes, including inclusion of the RSUP, is described in the Summary of City of Seattle, Stakeholder, and Community Involvement subsection above. Opportunity for public review and comment specific to the analysis and findings included in the draft Section 4(f) evaluation was provided through:

- Availability of the draft Section 4(f) Evaluation on the project website from August 14 through September 28.
- Public e-mail notification of the availability of the draft Section 4(f) Evaluation for review and comment to the SR 520 Bridge Replacement and HOV Program e-mail list of approximately 5,000 interested individuals and parties.
- Presentation of materials were posted at an online open house from September 14 through September 28, 2020 during the 45-day public review and comment period.
- A virtual public meeting held September 15, 2020 included a presentation and live question and answer session.

The officials with jurisdiction for the affected properties are the City of Seattle Department of Parks and Recreation for parklands and the State of Washington SHPO for historic properties. WSDOT has consulted with these officials, as summarized in Table 4 and Table 5.

On August 11, 2020, the SHPO concurred with the Section 106 determination covered in the August 5, 2020 letter.

FHWA and WSDOT addressed comments and questions on the draft Section 4(f) Evaluation and shared comments related to parklands with Parks before requesting written concurrence on de minimis impact and temporary occupancy exception findings on parklands. On December 8, 2020, Parks concurred with FHWA and WSDOT's findings that the conditions of the temporary occupancy exception are met for Roanoke Park and that the impact to Interlaken Park would be de minimis.

The Department of the Interior concurred with FHWA and WSDOT's findings on November 30, 2020 (Appendix A).

Appendix B contains comments received on the draft Section 4(f) Evaluation and WSDOT's responses to the comments that were related to the evaluation.

Table 4. Summary Coordination with City of Seattle Department of Parks and Recreation, an Official with Jurisdiction over Section 4(f) Properties

Form of Consultation	Date	Topics	Notes
City of Seattle Department of Parks and Recreation			
Coordination Meeting	April 30, 2019	Design of connection to the RSUP, including integration of the City of Seattle bike lane on Delmar Drive East	
Coordination Meeting	June 11, 2019	Design of the crosswalk at East Interlaken Boulevard and Delmar Drive East	
Coordination Meeting	June 25, 2019	Design of RSUP connection at Delmar Drive East and integration with access to Interlaken Park via a new crosswalk at East Interlaken Boulevard and Delmar Drive East	
		Discussion of connections made possible by the RSUP, such as connection from North Capitol Hill to the Montlake Community Center	
Coordination Meeting	August 20, 2019	Design of RSUP connection at Delmar Drive East and crosswalk at East Interlaken Boulevard and Delmar Drive East	
		Integration of the RSUP with the Bill Dawson Trail and access to the Montlake Playfield	
Seattle Design Commission Briefing	November 7, 2019	RSUP connections to the City's Bill Dawson Trail RSUP connections to Delmar Drive East Seattle Parks expressed support for Project design elements	Public testimony requested that the project provide improved connections to Montlake Playfield
Coordination Meeting	April 14, 2020	Integration of the RSUP with the Bill Dawson Trail and access to the Montlake Playfield	
Letter	September 24, 2020	Questions and clarification of information about properties addressed in the Draft Section 4(f) Evaluation	Included in Appendix A
Letter	October 14, 2020	SR 520 Bridge Replacement and HOV Program, SR 520 I-5 to Montlake – I/C and Bridge Replacement, Section 4(f) Coordination	Included in Appendix A
Letter	December 8, 2020	SR 520 Bridge Replacement and HOV Program, SR 520 I-5 to Montlake – I/C and Bridge Replacement, Section 4(f) Evaluation Concurrence	Included in Appendix A

Table 5. Summary Coordination with the State of Washington SHPO, an Official with Jurisdiction over Section 4(f) Properties

State of Washington Historic Preservation Officer			
Letter	February 28, 2019	Consultation on expansion of APE and limits of construction in the vicinity of the I-5/SR 520 interchange	Included in Appendix A
Letter	March 11, 2019	SHPO concurrence on APE expansion	Included in Appendix A
Letter	July 17, 2019	Consultation on effect of project changes in the vicinity of the I-5/SR 520 interchange	Included in Appendix A
Letter	July 31, 2019	SHPO concurrence on No Adverse Effect	Included in Appendix A
Letter	June 11, 2020	Consultation on expansion of APE and limits of construction to include areas affected by project changes	Included in Appendix A
Letter	June 12, 2020	SHPO concurrence on APE expansion	Included in Appendix A
Letter	August 5, 2020	Consultation on evaluation of effects on historic properties of project changes and additional revision of limits of construction	Included in Appendix A
Letter	August 11, 2020	SHPO concurrence on No Adverse Effect	Included in Appendix A

Finding

In the Final EIS and ROD, FHWA concluded the following:

- There is no feasible and prudent alternative to avoid identified Section 4(f) properties;
- The Selected Alternative causes the least harm to Section 4(f) properties and causes the least overall harm; and
- The Selected Alternative includes all possible planning to minimize harm.

These findings remain in place for the I-5 to Medina: SR 520 Bridge Replacement and HOV Project as a whole. Based on the analysis included in this Section 4(f) Evaluation and the documented concurrences of officials with jurisdiction, FHWA has determined that:

- There would be *de minimis* impacts on Interlaken Park and the Roanoke Park Historic District; and
- The construction-phase effects on Roanoke Park would meet the temporary occupancy exception included in 23 CFR 774.13(d).

The revised project design would continue to use land from the Montlake Playfield and the Montlake Historic District. As documented in the Final EIS, there is no feasible and prudent alternative to the use of these properties. FHWA has also determined that the revised project design would cause the least harm and that it includes all possible planning to minimize harm. There would be no change to other Section 4(f) findings included in the Final EIS and ROD.

References

DAHP 2019a. Correspondence between Dennis Wardlaw, DAHP and Cassandra Manetas, WSDOT. *SR 520 Corridor Trans-Lake Washington, Bridge Replacement and HOV Revised APE Concur*. March 11, 2019.

DAHP 2019b. Correspondence between Dennis Wardlaw, DAHP and Cassandra Manetas, WSDOT. *SR 520 Corridor Trans-Lake Washington, Bridge Replacement and HOV No Adverse Effect*. July 31, 2019.

DAHP 2020a. Correspondence between Dennis Wardlaw, DAHP and Cassandra Manetas, WSDOT. *SR 520 Section 106 Historic Built Re-evaluation for I-5 Haul Routes Revised APE Concur*. June 12, 2020.

DAHP 2020b. Correspondence between Dennis Wardlaw, DAHP and Cassandra Manetas, WSDOT. *SR 520, I-5 to Medina Bridge Replacement and HOV Project No Adverse Effect*. August 11, 2020.

FHWA 2011. *SR 520 Bridge Replacement and HOV Program, I-5 to Median: Bridge Replacement and HOV Project Record of Decision (ROD)*.

FHWA 2012. *Section 4(f) Policy Paper*. United States Department of Transportation. Federal Highway Administration Office of Planning, Environment, and Realty Project Development and Environmental Review. July 20, 2012.

NPS 2009. National Register of Historic Places Registration Form Roanoke Park Historic District. Entered into the NRHP on July 30, 2009.

NPS 2015. National Register of Historic Places Registration Form Montlake Historic District. Entered into the NRHP on June 19, 2015.

Seattle 2006. City of Seattle Department of Parks and Recreation and the Montlake Community Park Steering Committee. *Montlake Community Park Waterfront Master Plan*.

Seattle 2017. City of Seattle Department of Parks and Recreation. *2017 Parks and Open Space Plan*. Adopted August 7, 2017.

Seattle 2020a. City of Seattle Department of Parks and Recreation. Website entries for Interlaken Park and Roanoke Park. <https://www.seattle.gov/parks/find/parks/interlaken-park> and <https://www.seattle.gov/parks/find/parks/roanoke-park>. Accessed May 29, 2020.

Seattle 2020b. Correspondence between David Graves, Parks and Margaret Kucharski, WSDOT. *SR 520, I-5 to Medina Bridge Replacement and HOV Program, SR 520 I-5 to Montlake – I/C and Bridge Replacement, Draft Section 4(f) Evaluation*. September 24, 2020.

WSDOT 2011a. *SR 520 Bridge Replacement and HOV Program, I-5 to Medina: Bridge Replacement and HOV Project Final Environmental Impact Statement (EIS) and Section 4(f) and 6(f) Evaluation*.

WSDOT 2011b. *SR 520 Bridge Replacement and HOV Program, I-5 to Medina: Bridge Replacement and HOV Project Section 106 Technical Report*.

WSDOT 2019a. Correspondence between Cassandra Manetas, WSDOT, and Dr. Allyson Brooks, SHPO. *SR 520, I-5 to Medina Bridge Replacement and HOV Project: Updated Area of Potential Effects and Limits of Construction for SR 520/I-5 Express Lanes Connection Project and Reduction of Wetland Mitigation Sites*. February 28, 2019.

WSDOT 2019b. Correspondence between Cassandra Manetas, WSDOT, and Dr. Allyson Brooks, SHPO. *SR 520, I-5 to Medina Bridge Replacement Project and HOV Project: I-5 APE Expansion Determination of Effects*. July 17, 2019.

WSDOT 2020a. Correspondence between Cassandra Manetas, WSDOT, and Dr. Allyson Brooks, SHPO. *SR 520, I-5 to Medina Bridge Replacement and HOV Project: Updated Area of Potential Effects and Limits of Construction for SR 520/Portage Bay Bridge and Roanoke Lid Project*. June 11, 2020.

WSDOT 2020b. Correspondence between Cassandra Manetas, WSDOT, and Dr. Allyson Brooks, SHPO. *SR 520, I-5 to Medina Bridge Replacement Project and HOV Project: I-5 APE Expansion Determination of Effects*. August 5, 2020.

Appendix A Correspondence

Additional Appendices available upon request

Appendix B

Public Comments and Responses
