

SR 520, I-5 to Medina: Bridge Replacement and HOV Project NEPA/SEPA Environmental Reevaluation: Portage Bay Bridge to I-5 Design Refinements

**23 CFR §771.129
Washington State Department of Transportation/Federal Highway Administration**

REGION/MODE	SR	PROJECT PROGRAM#	FEDERAL AID #	PROJECT#
ESO Megaprograms	520	852001P		U52001P

PROJECT TITLE, ENVIRONMENTAL DOCUMENT TYPE & DATE APPROVED:

- 1) SR 520, I-5 to Medina: Bridge Replacement and HOV Project Final Environmental Impact Statement (EIS), approved by FHWA and WSDOT on May 26, 2011.
- 2) SR 520, I-5 to Medina: Bridge Replacement and HOV Project Record of Decision (ROD), approved by FHWA and WSDOT on August 4, 2011.
- 3) SR 520, I-5 to Medina: Bridge Replacement and HOV Project SEPA Addendum (Public Place Designation), approved by WSDOT on October 3, 2011.
- 4) SR 520, I-5 to Medina: Bridge Replacement and HOV Project SEPA Addendum (Floating Bridge and Landings), approved by WSDOT on November 18, 2011.
- 5) SR 520, I-5 to Medina: Bridge Replacement and HOV Project NEPA/SEPA Environmental Reevaluation (Kenmore Yard), approved by FHWA and WSDOT on December 8, 2011.
- 6) SR 520, I-5 to Medina: Bridge Replacement and HOV Project NEPA Environmental Reevaluation (Floating Bridge and Landings), approved by FHWA and WSDOT on January 25, 2012.
- 7) SR 520, I-5 to Medina: Bridge Replacement and HOV Project NEPA/SEPA Environmental Reevaluation (Kenmore Yard Update), approved by FHWA and WSDOT on July 16, 2012.
- 8) SR 520, I-5 to Medina: Bridge Replacement and HOV Project NEPA/SEPA Environmental Reevaluation (Floating Bridge and Landings Proposed Final Design Features), approved by FHWA and WSDOT on October 22, 2012.
- 9) SR 520, I-5 to Medina: Bridge Replacement and HOV Project NEPA/SEPA Environmental Reevaluation (Temporary Westside Over-water Staging Area), approved by FHWA and WSDOT on February 1, 2013.
- 10) SR 520, I-5 to Medina: Bridge Replacement and HOV Project NEPA/SEPA Environmental Reevaluation (West Connection Bridge), approved by FHWA and WSDOT on February 1, 2013.
- 11) SR 520, I-5 to Medina: Bridge Replacement and HOV Project NEPA/SEPA Environmental Reevaluation (Floating Bridge Demolition), approved by FHWA and WSDOT on April 20, 2016.
- 12) SR 520, I-5 to Medina: Bridge Replacement and HOV Project NEPA/SEPA Environmental Reevaluation: West Approach Bridge South and Montlake Lid Design Refinements, approved by FHWA and WSDOT on October 31, 2016.
- 13) SR 520, I-5 to Medina: Bridge Replacement and HOV Project NEPA/SEPA Environmental Reevaluation: Montlake Market Closure and Demolition, approved by FHWA and WSDOT on July 18, 2018.
- 14) SR 520, I-5 to Medina: Bridge Replacement and HOV Project NEPA/SEPA Environmental Reevaluation: Wireless Communications Facility Removal and Relocation, approved by FHWA and WSDOT on August, 28, 2018.
- 15) SR 520, I-5 to Medina: Bridge Replacement and HOV Project NEPA/SEPA Environmental Reevaluation: I-5 Design Refinements, approved by FHWA and WSDOT on October 21, 2019.

REASON FOR REEVALUATION:

In this reevaluation, FHWA and WSDOT are evaluating how new information, and proposed refinements to the design of Portage Bay Bridge, Roanoke Lid, and other components in the Portage Bay to I-5 area would affect the natural and built environment and whether those effects differ from the effects described in the Final EIS, Record of Decision (ROD), and subsequent environmental reevaluations and memoranda.

DESCRIPTION OF CHANGED CONDITIONS: (See Attachment 1 for more detailed description).

WSDOT and FHWA are evaluating the potential impacts associated with design changes to Portage Bay Bridge, Roanoke Lid, and other components in the Portage Bay to I-5 area, including changes to the Regional Shared Use Path (RSUP) and local active transportation connections.

HAVE ANY NEW OR REVISED LAWS OR REGULATIONS BEEN ISSUED SINCE APPROVAL OF THE LAST ENVIRONMENTAL DOCUMENT THAT AFFECT THIS PROJECT? YES () NO (x) (If yes explain, use additional sheets if necessary)

In July 2020, the Council on Environmental Quality (CEQ) issued an update to the implementing regulations of the National Environmental Policy Act (NEPA) (40 CFR 1500-1508). However, the changes in the implementing regulations do not affect this Project as the implementing regulations do not apply to projects for which Notice of Intents were published before the changes went into effect.

Requirements for projects in the Seattle area to conduct Carbon Monoxide (CO) hot spot analysis ended in 2016 because the region is now in conformity with the Clean Air Act for CO.

WILL THE CHANGED CONDITIONS AFFECT THE FOLLOWING DIFFERENTLY THAN DESCRIBED IN THE ORIGINAL ENVIRONMENTAL DOCUMENT? (If yes, attach a detailed summary addressing the impacts and mitigation)

	YES	NO		YES	NO
1) THREATENED or ENDANGERED SPECIES	()	(x)	5) HAZARDOUS WASTE SITES	()	(x)
2) PRIME and UNIQUE FARMLAND	()	(x)	6) HISTORIC or ARCHAEOLOGICAL SITES	()	(x)
3) WETLANDS	()	(x)	7) 4 (f) LANDS	(x)	()
4) FLOODPLAINS	()	(x)	8) 6 (f) LANDS	()	(x)

Section 4(f) Lands: The 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 the Section 4(f) Evaluation included in Exhibit 2, 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 project 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.

WILL THESE CHANGES RESULT IN ANY CONTROVERSY? YES () NO (x) (If yes explain)

WILL THESE CHANGES CAUSE ADVERSE IMPACTS IN THE FOLLOWING AREAS: (If yes, address comments below.)

	YES	NO		YES	NO
1) AIR QUALITY	()	(x)	7) WATER QUALITY	()	(x)
2) NOISE	()	(x)	8) VISUAL QUALITY	()	(x)
3) LAND USE	()	(x)	9) NATURAL RESOURCES and ENERGY	()	(x)
4) TRAFFIC or TRANSPORTATION	()	(x)	10) PUBLIC SERVICES and UTILITIES	()	(x)
5) DISPLACEMENT (business or residence)	()	(x)	11) VEGETATION and WILDLIFE	()	(x)
6) ECONOMIC GROWTH and DEVELOPMENT	()	(x)	12) RECREATION	()	(x)
			13) SOCIAL IMPACTS	()	(x)

COMMENTS:

The proposed design refinements will not result in new significant environmental impacts as defined by the National Environmental Policy Act (NEPA). This action does not substantially change the overall impacts that were discussed in the previously prepared project documents listed at the top of this form. None of the previously identified environmental commitments would change as a result of the design refinements identified.

CONCLUSIONS and/ or RECOMMENDATIONS:

Changes as noted above would not result in new significant environmental impacts that were not evaluated in the Final EIS. The SR 520, I-5 to Medina: Bridge Replacement and HOV Project remains compliant with current federal, state, local, and departmental regulations and directives with regard to National Environmental Policy Act (NEPA) and State Environmental Policy Act (SEPA) processes. This reevaluation document, along with supporting information, demonstrates that there would be no new significant environmental impacts resulting from these changes since the Final EIS was approved in May 2011 and the ROD was approved in August 2011.

I concur with the conclusions and recommendations above

Region / Mode Official

FHWA Official

Signatures on file with WSDOT

Date

Date

Attachment 1

Description of Changed Conditions and Effects

Environmental Reevaluation/Consultation Form for
SR 520, I-5 to Medina: Bridge Replacement and HOV Project
Final Environmental Impact Statement, approved May 26, 2011;
Record of Decision, approved August 4, 2011;
SEPA Addendum: Public Place Designation, approved October 3, 2011;
SEPA Addendum: Floating Bridge and Landings, approved November 18, 2011;
NEPA/SEPA Environmental Reevaluation: Kenmore Yard, approved December 8, 2011;
NEPA Environmental Reevaluation: Floating Bridge and Landings, approved January 25, 2012;
NEPA/SEPA Environmental Reevaluation: Temporary Westside Over-water Staging Area,
approved February 1, 2013; NEPA/SEPA Environmental Reevaluation: West Connection
Bridge, approved February 1, 2013; NEPA/SEPA Environmental Reevaluation: Floating Bridge
Demolition, approved April 20, 2016; NEPA/SEPA Environmental Reevaluation: West Approach
Bridge South and Montlake Lid Design Refinements, approved October 31, 2016; NEPA/SEPA
Environmental Reevaluation: Montlake Market Closure and Demolition, approved July 18,
2018; NEPA/SEPA Environmental Reevaluation: Wireless Communications Facility Removal
and Relocation, approved August, 28, 2018; NEPA/SEPA Environmental Reevaluation: I-5
Design Refinements, approved October 21, 2019.

The purpose of this reevaluation is to document National Environmental Policy Act (NEPA), State Environmental Policy Act (SEPA), Endangered Species Act (ESA), and Section 106 and 4(f) compliance for the SR 520, I-5 to Medina: Bridge Replacement and HOV Project (project) associated with Portage Bay Bridge, Roanoke Lid, and other components in the Portage Bay to I-5 area to evaluate if any changed conditions would cause environmental impacts that are significant and not evaluated in the Final EIS (23 CFR 771.129; 23 CFR §771.130(b)(1)). This reevaluation describes how the proposed design refinements would affect the natural and built environment and whether those effects differ from the effects described in the Final EIS, ROD, and subsequent environmental reevaluations and memoranda.

Description of Changed Conditions and Design 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. Exhibit 1 presents an overview of the project area.

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.

Public and Agency Outreach and Engagement

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. Outreach and information was provided to the SR 520 Bridge Replacement and HOV Program e-mail list of approximately 5,000 interested individuals and parties. 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.
- Active transportation 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 re-evaluation.

Public Input informing this Re-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 content included in this re-evaluation. WSDOT received 60 comments during the online open house. A copy of the comments received is included as an attachment (Exhibit 5).

Future Consultation

Through the Westside Design Refinements process, WSDOT investigated connectivity options to replace the functionality of the East Roanoke Street stairs connection, but has not identified a feasible design solution that adequately addresses accessibility issues for individuals with disabilities. WSDOT will continue to work with the City of Seattle, local residents, and the accessibility community on sidewalk and pedestrian access improvements to reduce the effect of stair removal on community connections. While previous consultation has been broad and inclusive of many user groups, to date there has not been specific input from the accessibility community. WSDOT has coordinated with the City of Seattle to present feasible options for stair replacement and sidewalk enhancements to the Pedestrian Access Advisory Committee in early 2021. Should WSDOT identify a feasible design, it would be incorporated into the Portage Bay Bridge and Roanoke Lid phase subject to additional environmental evaluation and documentation relative to the Project's NEPA decision.

Analysis of Changed Conditions and Effects

FHWA and WSDOT have evaluated the proposed design changes, changes to the affected environment, and potential changes to the environmental effects as previously described in the Final EIS. FHWA and WSDOT have concluded that no new significant environmental impacts, beyond those described in the Final EIS and ROD, would result from the changed conditions. Changes pertaining to specific resources that have the potential to be affected are described below.

Water Resources

In the event of an emergency fire under the Roanoke Lid, the sprinkler system would release water and foam to douse the fire. Section S2.B of the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System permit allows discharge from emergency firefighting activities, which would include this release. Approximately 3,500 gallons per minute of water are anticipated from the sprinkler system. Though it would depend on the intensity and duration of a fire, a conservative two to three hour operation period would result in up to 700,000 gallons of water discharged from the system. A foam that conforms to RCW 70.75A would be used. During an emergency event, all water and foam would be discharged to surface waters.

During testing, only water would be released through the sprinklers onto the roadway. Volumes would be on the order of 3,500 gallons per minute until indicated by the fire department to shut off flow. Testing flows would be released via one of the two options described above. Two options are under consideration to divert the water from the lid to the western shoreline of Portage Bay during testing.

- In Option A, the diversion structure would route flows to the City combined sewer system. An orifice in the diversion structure restricts flow to the desired discharge rate.
- In Option B, the diversion structure routes flows to the modular wetlands that make up Facility N. Similar to Option A, an orifice in the diversion structure restricts flow to the desired

discharge rate. Dechlorination of sprinkler-system water would be required prior to release to surface waters.

Removal of the column piles two feet below the lake bed would not result in new or significant adverse environmental effects on water quality outside of those described in Section 6.10 of the Final EIS. The primary concern during demolition activities would be the generation of turbidity; however, as described in the Final EIS, implementation of BMPs would minimize effects of any turbidity resulting from construction activities.

No additional impacts to water resources would occur from the proposed design refinements. The proposed modular wetland treatment system would meet the performance requirements for enhanced treatment that were identified in the Final EIS. The impacts described in Section 5.10 and 6.10 of the Final EIS would not change.

Ecosystems

WSDOT analyzed the potential effects of the proposed design refinements on fish and aquatic habitat, including potential changes in turbidity and underwater construction noise generation. In addition, the analysis considered the potential effects on habitat from changes in the amount of over-water cover and the number of in-water structures.

Overall, the analysis demonstrates that the proposed design refinements remain within the total amount and extent of take authorized under the ESA for the I-5 to Medina project for Puget Sound Chinook, Puget Sound steelhead, and Coastal-Puget Sound bull trout. The design refinements associated with Portage Bay Bridge would reduce the amount of overwater and wetland cover previously authorized by 1 acre and the bridge height over water has been raised an average of 16 feet. The number of in-water columns associated with Portage Bay Bridge has been reduced by 8 columns and the span lengths have increased. The overall area associated with the in-water columns would decrease from 15,295 square feet to 2,178 square feet. Take resulting from some effect mechanisms increased while others decreased. Due to the later construction period, the timing and duration of the authorized take associated with construction activities over the course of Portage Bay Bridge construction has changed and effects would occur in later years than originally identified in the Final EIS. Collectively, the proposed design refinements do not represent new mechanisms of effect not previously considered during ESA consultation. Reinitiation of ESA consultation was not required, and WSDOT/FHWA provided an administrative update to the NMFS and UFWWS for the proposed design refinements in January 2020.

A beaver lodge present within the alignment of the south work trestle will need to be removed. Based on a review of historical aerial photographs, this lodge has been present within the limits of construction since at least 2002. Therefore, the displacement of the beaver lodge under the proposed design refinements is not different than the impact from the Preferred Alternative analyzed in the Final EIS. Beavers are not protected at the local, state, or federal level, and WSDOT will work with the Washington Department of Fish and Wildlife to trap and relocate beaver(s) prior to dismantling of the lodge, as needed.

The design and alignment revisions have resulted in a shift in the relative amount of aquatic versus wetland impacts. Permanent wetland impacts have increased by 0.71 acre and permanent aquatic impacts have decreased by 1.08 acres. Temporary wetland impacts have decreased by 0.18 acre and temporary aquatic impacts have increased by 1.59 acre-years. WSDOT has implemented sufficient compensatory mitigation to offset the wetland and aquatic impacts. The proposed changes will be documented in pending permit modification applications by updating the compensatory mitigation plans with the City of Seattle, Washington Department of Fish and Wildlife (WDFW), Washington Department of Ecology (Ecology) and the Army Corps of Engineers (Corps).

A WSDOT biologist has reviewed and concurred with this analysis.

Transportation

The proposed design refinements to Portage Bay Bridge would not change the transportation impacts described in the Final EIS. The functionality of the bridge would remain unchanged. The creation of an additional 600 feet of storage for the eastbound Montlake off-ramp will result in beneficial effects to traffic on eastbound SR 520. The amount of time that traffic from the off-ramp would backup on to SR 520 would be reduced, providing a safety benefit. At 10th Ave East and East Roanoke Street, maintaining the T-intersection and the addition of new crosswalks would improve bicycle and pedestrian safety and have traffic calming effects. The parking area for the enhanced Bagley Viewpoint would be relocated. Removal of the existing City of Seattle East Roanoke Street stairs is discussed under *Social Elements* because of their primarily social use. Finally, enhancements to the RSUP, additional ADA-compliant connections, and local transportation connections would provide new active transportation connections, improve the overall transportation system, and would not result in additional adverse impacts. The impacts described in Sections 5.1 and 6.1 of the Final EIS would not change.

Land Use

Shifting the bridge alignment to the north at the west end of Portage Bay Bridge by approximately 35 feet would change the impacts to the Queen City Yacht Club that were identified in the Final EIS. The Queen City Yacht Club is a privately-operated marina with moorage in Portage Bay. Under the Preferred Alternative in the Final EIS, it was anticipated that approximately 10 floating moorage slips would need to be relocated during construction. Under the proposed design refinements, approximately 8 floating moorage slips would need to be relocated during construction. Discussions with the City of Seattle and Queen Yacht Club to mitigate this impact are ongoing, but the current consideration is to relocate the floating moorage slips prior to construction so that they would not experience diminished capacity. It is likely that the impacted floating moorage slips would be relocated to the end of the existing pier. Following construction, the moorage slips would be moved back to their approximate original location and no permanent impacts would be expected.

The proposed design refinements would also change the impacts to moorage at the Portage Bayshore Condominiums. Under the Preferred Alternative in the Final EIS, it was anticipated that 10 moorage slips would be relocated during construction. Under the proposed design refinements, 12 moorage slips would be impacted. Of the 12 moorage slips, 8 would be out of commission for the entirety of construction. The remaining four would be out of commission for a two to three-week period while they are relocated. Following construction, the moorage slips would be restored and no permanent impacts would be expected. The four which will be out of commission for 2-3 weeks will be impacted twice. The first time around the beginning of construction when a portion of the existing dock is removed and a shorter temporary dock is installed and again toward the end of construction when the temporary dock is removed and the permanent dock is restored to match the existing condition.

Subsurface easements will be required below approximately 24 properties to accommodate retaining wall anchors in response to additional geotechnical information about potentially unstable slopes. The increase in the number and area of subsurface easements would not result in a change in land use at the surface. However, future development of the property may be limited as future construction depth below the surface would be constrained by the subsurface easement. Property owners would be compensated at fair market value per the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, for acquisition of subsurface rights. The proposed design refinements would be compatible with current uses and would not result in any new impacts. The impacts described in Sections 5.2 and 6.2 of the Final EIS would not change.

Section 4(f) Resources

As presented in the Section 4(f) evaluation included in Exhibit 2, FHWA and WSDOT compared Section 4(f)-protected resources that would be affected by the proposed design refinements to the

findings of the Final EIS. 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 proposed design refinements. Subsequent to completion of the Final EIS, the City of Seattle replaced Fire Station #22 with a modern building; thus, it is no longer a historic property and is no longer protected under Section 4(f).

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 resource. The findings included in the Final EIS continue to apply.

Montlake Playfield. The Final EIS identified an area of 3.2 acres for construction easements for the duration of the project, 2.9 acres of which would be submerged land. Subsequent property boundary information corrected the area to 4.5 acres for construction easements for the duration of the project, 2.9 acres of which would be submerged land. The proposed design refinements would require 5.0 acres for construction easements, 3.5 acres of which would be submerged land. The area of permanent acquisition identified in the Final EIS for the Preferred Alternative was 1.2 acres, including 1.0 acre of submerged lands. Subsequent property boundary information corrected the area to 1.5 acres, including 1 acre of submerged land. The proposed design refinements would require 2.3 acres of permanent acquisition, of which 1.8 acres would be submerged lands. Thus, the area of permanent acquisition of upland area from the park would be the same with the proposed design refinements as for the Final EIS Preferred Alternative (0.5 acre).

While additional submerged land would be permanently incorporated into the project, 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 increase to 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. During construction, recreational water access for hand-carried craft will be maintained from the Montlake Playfield. WSDOT will provide water access across the work zone 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.

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 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. Bicycle and pedestrian improvements for RSUP connections proposed under the design refinements would affect approximately 0.2 acre of the 51.7 acre Interlaken Park. 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).

FHWA and WSDOT made a *de minimis* impact finding for the effects from the proposed design refinements on Interlaken Park. The public was afforded the opportunity to review and comment on the effects and Seattle Parks and Recreation (Parks) has concurred that the project will not adversely affect the activities, feature, or attributes that qualify the park for protection under Section 4(f). Since the impact was determined to be *de minimis*, the proposed design refinements were approved without the need to develop and evaluate alternatives that avoid using Interlaken Park and the requirements for all possible planning to minimize harm is subsumed (23 CFR 774.17[5]).

Roanoke Park. Roanoke Park 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, which may require an approximately 20 by 20-foot area (<0.1 acre) for excavation and connection that would extend within 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. However, under U.S. DOT regulations (23 CFR 774.13), this temporary occupancy of a property does not constitute use of a Section 4(f) resource because:

- 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. Any permanent surface features, such as an access hatch, would be located outside of the park boundary.

- WSDOT has coordinated with the City of Seattle regarding the need to connect the relocated waterline within the park property and Parks that the conditions of the temporary occupancy exception are met.

The proposed design refinements would result in an increase in subsurface easement area to accommodate retaining wall anchors in response to geotechnical information about potentially unstable slopes. However, this activity would not result in permanent disturbance within the boundaries of the park. Per Question 28A of the FHWA’s Section 4(f) Policy Paper, Section 4(f) would not apply to these subsurface activities because the activities would not affect use of the park. 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.

NOAA Fisheries Science Center. The Final EIS 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. While the proposed design refinements 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. Washington SHPO concurred with this determination on August 11, 2020.

Roanoke Park Historic District. The expanded limits of construction within the Roanoke Park Historic District are limited to a *de minimis* impact during water line relocation and a permanent increased subsurface easement area to accommodate the utility and retaining wall anchors. Aside from a utility vault access lid, which would be flush to the ground, there would be no permanent surface disturbance within the boundaries of the historic district. The Washington SHPO concurred that the project would have No Adverse Effect on the district on August 11, 2020. Based on the analysis presented in Exhibit 2 and the No Adverse Effect determination on the district under Section 106, FHWA made a *de minimis* impact finding for the effects of the proposed design refinements on the Roanoke Park Historic District.

Findings. 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 include 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.

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 the Section 4(f) Evaluation included in Exhibit 2, 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 project 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.

Section 6(f) Resources

No Section 6(f) Resources would be affected by the design refinements considered in this reevaluation. The impacts described in Chapter 10 of the Final EIS would not change.

Recreation

Shifting the bridge alignment to the north at the west end of Portage Bay Bridge by approximately 35 feet would result in impact to the Queen City Yacht Club. As discussed under Land Use, 8 moorage slips would be relocated during construction. This impact would be mitigated by relocating the moorage slips prior to construction so that the yacht club would not experience diminished operational capacity. The proposed design refinements would also impact moorage at the Portage Bayshore Condominiums. 12 moorage slips would be impacted. Of the 12 moorage slips, 8 would be out of commission for the entirety of construction. The remaining four would be out of commission for a two to three-week period while they are relocated. Following construction, the moorage slips would be restored and no permanent impacts would be expected.

The proposed design refinements would provide beneficial effects from the inclusion of the RSUP onto the south side of the Portage Bay Bridge structure, from better trail connections, and improved conditions of the RSUP.

Visual Resources

A number of changes to the design of Portage Bay Bridge would result in changes to the appearance of the bridge. See exhibit 1 for a visual simulation of the revised design. Rather than a single wide bridge with a median, the bridge would be two parallel bridge structures; the alignment of the bridge would be shifted approximately 35 feet to the north at the west end; the grade of the bridge would be changed from varying between 0.5 and 5 percent to a constant 2.6 percent grade; and the number of in-water piers and columns has been reduced from 50 to 42. The design changes were made through public consultation to reduce the visual impact of the bridge (see discussion in the Seattle Community Design Process section of this reevaluation). These changes would slightly change the appearance of the bridge itself; however, the overall appearance of the bridge in the existing environment would remain unchanged.

On the Roanoke Lid, stepping down the east lid portal would decrease the amount of wall exposure and improve the aesthetics for nearby homes. Through the refinements that resulted from the SCDP, the configuration of plantings on the lid has been adjusted to maintain visibility into open spaces, which would be a beneficial aesthetic effect. In addition, a series of overlooks have been incorporated on both sides of 10th Ave South, which would provide a new location to view the surrounding area. The impacts described in Sections 5.5 and 6.5 of the Final EIS would not change.

Cultural Resources

Coordination with the SDC, the public, and Section 106 concurring parties that led to the proposed design refinements is consistent with meeting stipulations within the Programmatic Agreement (PA) implementing Section 106 of the National Historic Preservation Act (NHPA) for the undertaking.

The proposed design refinements required consultation on the Area of Potential Effects (APE) and associated limits of construction (LOC) changes with the WA Department of Archaeology and Historic Preservation (DAHP) and other consulting parties under the PA. The APE and LOC were amended to account for expanding the retaining wall sub-surface tie-back areas, pedestrian/bicycle trail connections, sidewalk improvements, over-water work areas, and surface streets restoration. In the expanded APE and LOC, thirty-one properties were surveyed, of which seven were new without any previous survey conducted; fourteen needed to be re-surveyed per the latest WA DAHP standards; and ten were previously determined not eligible for listing on the National Register of Historic Places (NRHP) and therefore did not need to be re-surveyed. The results of these surveys are presented in Exhibit 3.

Of the seven new properties, one was determined to be National Register of Historic Places (NRHP)-eligible and a contributor to the Roanoke Park Historic District; one was determined not to be individually NRHP-eligible, but would be a contributor to the Roanoke Park Historic District; and the remaining five were determined to be not NRHP-eligible or contributors to an existing or potential historic district.

Of the fourteen re-surveyed properties, twelve were determined to remain NRHP-eligible; one was determined to be no longer individually NRHP-eligible due to a loss of integrity; and one was determined to remain a contributor to the Montlake Historic District, but would not be individually NRHP-eligible. One additional property remains to be surveyed for historic eligibility; however, for purposes of this analysis, it is assumed to be NRHP-eligible.

The project activities leading to the expanded footprints are similar to those previously analyzed during development of the PA and would not substantially alter aspects of integrity that convey historical significance for the properties that have been assessed as eligible for the NRHP.

At the east end of Portage Bay, the location of revised trail connections at the Montlake Playfield are different than what was previously shown in this location; however, changes to setting are consistent with previously considered effects from the Portage Bay Project as a whole and support continued use of the existing recreational facilities at this location. While there are some changes in effects to setting and feeling from this new alignment, it would not be worse than what has previously been considered and would not result in a new adverse effect to the District or its contributing elements.

At the west end of Portage Bay, sidewalk refinements, subsurface utilities, and easements for deeply buried retaining wall tie backs would not directly affect integrity of historic properties, and temporary effects to setting would be addressed using existing minimization measures included within the PA, such as visual screening and vibration monitoring. One subsurface utility, a waterline vault near Roanoke Park, would have a minor permanent change to setting for the District, but given the location adjacent to other utilities, other recent changes to the park property, and the size of the vault in relation to the District as a whole, this would not be adverse.

Thus, FHWA and WSDOT have determined that these revisions will not have a new adverse effect.

The expansion of the LOC did not require additional archaeological investigation. The new locations overlap or are directly adjacent to areas previously tested as part of the SR 520 program; therefore, previously agreed to approaches be applied. No additional archaeological review or monitoring was recommended west of Portage Bay, however archaeological monitoring was recommended for work at the Montlake Playfield at the east end of Portage Bay.

WSDOT, on behalf of FHWA, consulted with the State Historic Preservation Office (SHPO), consulting tribes, and consulting parties about the expanded APE and LOC. Concurrence on the APE was received from SHPO on June 12, 2020. WSDOT notified the same parties of the results of identification efforts and determined that the proposed changes would not result in additional adverse effects to historic properties. Concurrence was received from SHPO on August 11, 2020.

A WSDOT cultural resources specialist has reviewed and concurred with this analysis.

Noise and Vibration

As outlined in Exhibit 4, WSDOT evaluated the potential noise levels that would be generated by traffic during operations of SR 520 under the proposed design refinements. No changes to construction noise levels are anticipated and are not discussed further. Design changes to the Portage Bay Bridge, Roanoke Lid, and other components in the Portage Bay to I-5 Area would result in a decrease in the number of residences that would approach or exceed the NAC compared to the Final EIS Preferred Alternative. No new receptors would approach or exceed the NAC relative to the Final EIS Preferred Alternative results.

Portage Bay/Roanoke. Changes in noise levels would range from a 5-dBA decrease to a 2-dBA increase compared to the Final EIS Preferred Alternative results. These noise level changes result from changes to the roadway design. No new receptors would approach or exceed the NAC relative to the Final EIS Preferred Alternative results, nor would any receptor experience a substantial noise increase impact of 10 dBA or higher. One receptor (HR-5), representing three residences, would approach or exceed the NAC for the Final EIS Preferred Alternative; but would have a 5 dBA decrease under the proposed design refinements. Receptor HR-5 is near the east portal of the Roanoke Lid and affected by the change in the portal configuration. This receptor would not experience noise levels that would approach or exceed the NAC under the proposed design refinements. There would be no increase in the number or severity of noise impacts in this area as a result of the design changes; therefore, there would be no change in the previous evaluation of noise mitigation.

The fire and life safety mechanical and support facility and under-lid fans added to the Roanoke Lid would be designed to not exceed the City's maximum permissible sound levels (SMC 25.08.410). Normal operation of the system would not exceed 55 dBA at the property line of the nearest residential use during normal operations. Fans or other systems that normally operate during nighttime hours (10:00 p.m. to 7:00 a.m. on weekdays and 10:00 p.m. to 9:00 a.m. on weekends and legal holidays) would be designed not to exceed 45 dBA at the property line of the nearest residential use.

Under emergency operation conditions, the fire and life safety mechanical and support facility and under-lid fans are exempt from the ordinance (SMC 25.08.530). The system, however, will be routinely tested in emergency mode operation and other periodic maintenance activities, which is subject ordinance noise limits for sounds created by maintenance equipment (25.08.425). Testing will occur during daytime hours. Between the hours of 7 a.m. and 10 p.m. on weekdays and between the hours of 9 a.m. and 10 p.m. on weekends and legal holidays, noise levels from the maintenance activities can exceed the daytime noise level limits by 15 dBA to 25 dBA depending on the types of equipment.

North Capitol Hill. Noise levels would decrease by 1 to 5-dBA or would remain the same compared to the Final EIS Preferred Alternative results. The decrease in noise levels result from changes to the roadway design, including the new 14-foot-wide RSUP on the south side of the south bridge structure, which would provide noise shielding to receptors below the bridge. No new receptors would approach or exceed the NAC relative to the Final EIS Preferred Alternative results, nor would any receptor experience a substantial noise increase impact of 10 dBA or higher. Two new receptors were added to

the TNM model, Site 1 and Site 2, representing one residence each. Noise measurements were taken at these sites and are documented in Appendix A. These receptors would not experience noise levels that would approach or exceed the NAC under the proposed design refinements. There would be no increase in the number or severity of noise impacts in this area as a result of the design changes; therefore, there would be no change in the previous evaluation of noise mitigation.

Montlake, North of SR 520. Changes in noise levels would decrease by 1 to 4-dBA or would remain the same compared to the Final EIS Preferred Alternative results. The decrease in noise levels result from changes to the roadway design. No new receptors would approach or exceed the NAC relative to the Final EIS Preferred Alternative results, nor would any receptor experience a substantial noise increase impact of 10 dBA or higher. All the receptors that would approach or exceed the NAC for the Final EIS Preferred Alternative (MN-8, MN17, MN-23, MN-34 and MN-35) would approach or exceed the NAC under the proposed design changes. There would be no increase in the number or severity of noise impacts in this area as a result of the design changes; therefore, there would be no change in the previous evaluation of noise mitigation.

Montlake, South of SR 520. Changes in noise levels would range from a 2-dBA decrease to a 1-dBA increase compared to the Final EIS Preferred Alternative results. These noise level changes result from changes to the roadway design. No new receptors would approach or exceed the NAC relative to the Final EIS Preferred Alternative results, nor would any receptor experience a substantial noise increase impact of 10 dBA or higher. One receptor (MS-20), representing three residences, would approach or exceed the NAC for the Final EIS Preferred Alternative; but would have a 2 dBA decrease under the proposed design refinements. This receptor would not experience noise levels that would approach or exceed the NAC under the proposed design refinements. One receptor (MS-19) that was predicted to approach or exceed the NAC for the Final EIS Preferred Alternative would experience a 1 dBA increase relative to the Final EIS; however, this change is less than significant. Because noise levels were predicted to approach or exceed NAC under the proposed design refinements, mitigation was reevaluated. Sixteen-foot noise walls were considered, which would reduce noise levels by up to 3 dBA, but were not sufficient to meet the WSDOT feasibility criteria or WSDOT reasonableness criteria. Therefore, higher noise walls were not considered a viable option under the proposed design refinements.

Air Quality

A local carbon monoxide (hot spot) analysis was completed in the Final EIS since the project was located in a maintenance area for Carbon Monoxide (CO), and project-level analysis was necessary to verify that no localized effects would cause or contribute to a violation of the National Ambient Air Quality Standards (NAAQS). Requirements for projects in the Seattle area to conduct CO hot spot analysis ended in 2016. Because traffic operations would be similar under the proposed design refinements and the Final EIS Preferred Alternative and traffic volumes would not change significantly, the Final Concept Design would also not be expected to result in exceedances of the NAAQS as was determined by the findings of the Final EIS Preferred Alternative.

A fire and life safety mechanical and support facility and under-lid fans were not previously anticipated. The support facility will be located northwest of the lid, adjacent to Fire Station 22 and jet fans would be installed under the Roanoke Lid for operation in the event of an under-lid emergency.

The Final EIS included a qualitative discussion of the likely air quality effects of the proposed Montlake Lid and concluded that there would not be adverse air quality effects relative to the NAAQS. Because the Roanoke lid is shorter than the Montlake lid, it was not explicitly evaluated for air quality in the

Final EIS. Because it is shorter than the Montlake lid, the Roanoke Lid would have emissions that are lower than the evaluated Montlake Lid. Therefore, the proposed design refinements for the Roanoke Lid would also not result in exceedances of the NAAQS and the findings for air quality in the Final EIS would continue to apply.

The under-lid jet fans would operate during an emergency event and would not be needed or used during normal operations for under-lid air quality maintenance. The presence of fans would not change the operating scenario included in the Final EIS for roadway traffic emissions. During a fire or other emergency condition under the lid, the fans would be used to clear smoke and allow drivers and passengers to safely exit from under the lid. Pollutant concentrations may exceed the NAAQS at nearby receptors, but they are not expected to exceed acutely harmful concentrations during the time it would take to evacuate the adjacent areas. Any fire-related pollutant emissions would not change relative to the lid evaluated in the Final EIS, but they would be extracted more quickly from under the lid because of the jet fans. Routine testing in emergency mode operation and other periodic maintenance activities, are expected to be short in duration and it would not introduce any additional air pollution emissions relative to ordinary operations.

The Final EIS determination in Sections 5.8 and 6.8 that there would not be an adverse effect to air quality would continue to be valid.

Hazardous Materials

No impacts associated with hazardous materials are anticipated due to the proposed design refinements. Sub-surface soil samples tested from Portage Bay identified chemical concentrations that would not exceed sediment-cleanup levels for protection of freshwater benthic communities under WAC 173-204-563. The impacts described in Sections 5.13 and 6.13 of the Final EIS would not change.

Navigation

The proposed design refinements would not result in new impacts on navigation. Navigation through the construction area would continue to be restricted during construction. Recreational vessels may be restricted from passing under active Portage Bay Bridge construction for safety reasons. The impacts described in the Sections 5.14 and 6.14 of the Final EIS would not change.

Social Elements

The proposed design refinements would not change the conclusions regarding community cohesion, demographics, environmental justice communities, tribal fishing, or recreation from the Final EIS. Public parks and recreation facilities would remain open and available to all. The impacts described in Sections 5.3 and 6.3 of the Final EIS would not change.

The north shift in bridge alignment would remove the existing City of Seattle East Roanoke Street stairs connection between 11th Avenue East and Boyer Avenue East. A pedestrian count indicated that approximately 40 people use the stairs daily, primarily for social or recreational trips, such as dog walks or exercise. Without the stairs, pedestrians would have to walk one block, approximately 400 feet, to the north and follow East Edgar Street between 11th Avenue East and Boyer Avenue East. Without the stairs, the walking distance from the Queen City Yacht Club driveway, which is across Boyer Avenue East from the eastern outlet of the existing stairs, to the nearest METRO bus stop, which is at the intersection of East Roanoke Street and 10th Avenue East, would increase from approximately 1,100 feet in length to 1,500 feet by following East Edgar Street and cutting through Roanoke Park. Other active transportation users, including cyclists, wheelchair users, or individuals pushing a child's stroller would continue to use the same routes that they use today, as the existing stairs are not accessible to these users.

Under the Americans with Disabilities Act, replacement of the stairs would require compliance with Standards for Accessible Design, which is difficult in this location because of a combination of unstable geotechnical conditions and the approximately 100-foot difference in elevation over the approximately 400-foot distance between 11th Avenue East and Boyer Avenue East. Through the Westside Design Refinements process, WSDOT investigated connectivity options, but has not identified a feasible design solution. While removal of the stairs would change connectivity relative to what was shown in Figure 15 of the *SR 520, I-5 to Medina: Bridge Replacement and HOV Recreation Discipline Report Addendum and Errata* (WSDOT 2011), the effect would be less than significant because it would only affect approximately 40 users daily, only increase walking distance by a few hundred feet, with a corresponding travel time increase of about two minutes, and not affect active transportation users aside from pedestrians.

Conclusion

Based on the information included in this reevaluation, FHWA and WSDOT have concluded that no new significant environmental impacts, beyond those described in the Final EIS and ROD, would result from the changed conditions. The proposed design refinements would not result in additional significant environmental impacts beyond those described in the Final EIS, ROD, and subsequent Environmental Reevaluations and technical memoranda. The project remains compliant with current federal, state, local, and departmental regulations and directives with regard to NEPA/SEPA processes, Section 106 and 4(f), and ESA. FHWA and WSDOT have concluded, in accordance with 23 CFR §771.130(b)(1), that the changes would not necessitate a supplemental EIS.

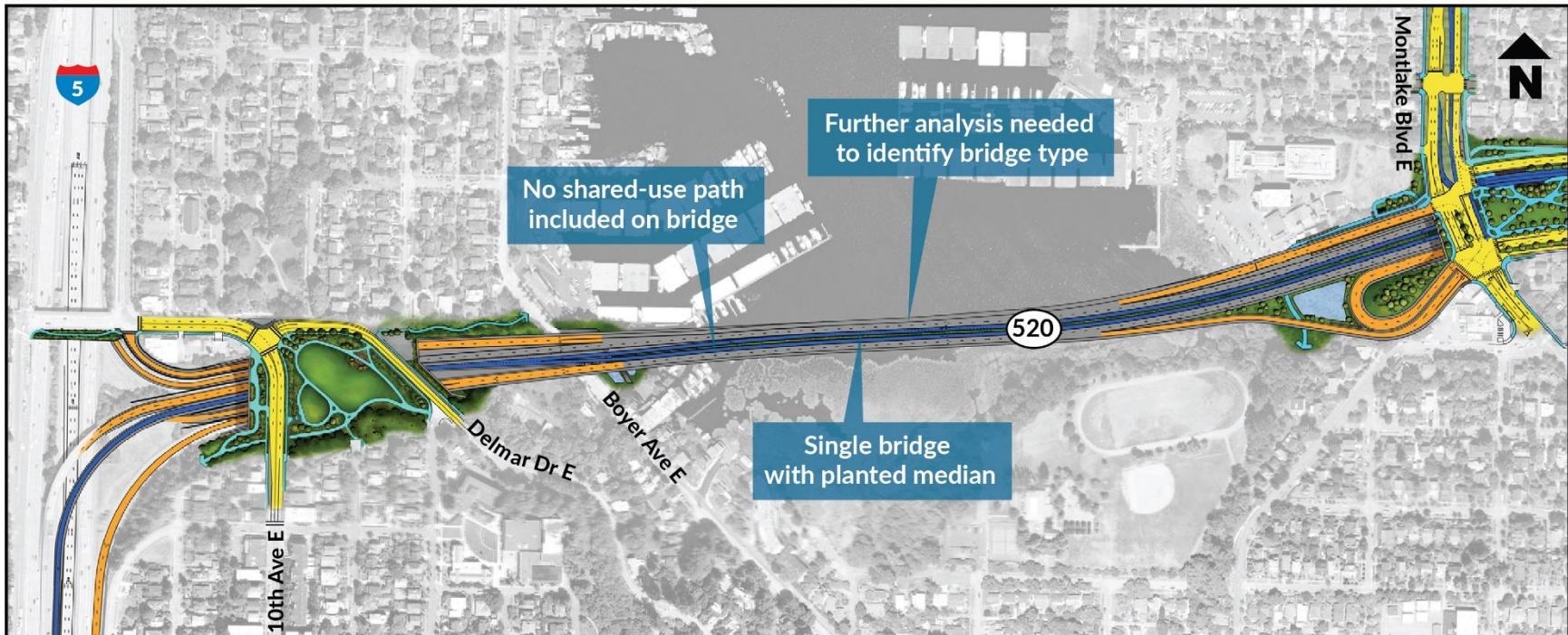
Exhibits

1. Project Features
2. Section 4(f) Evaluation
3. Section 106 Documentation
4. Noise Analysis
5. September 2020 Environmental Public Meeting and Online Open House Public Comment Summary

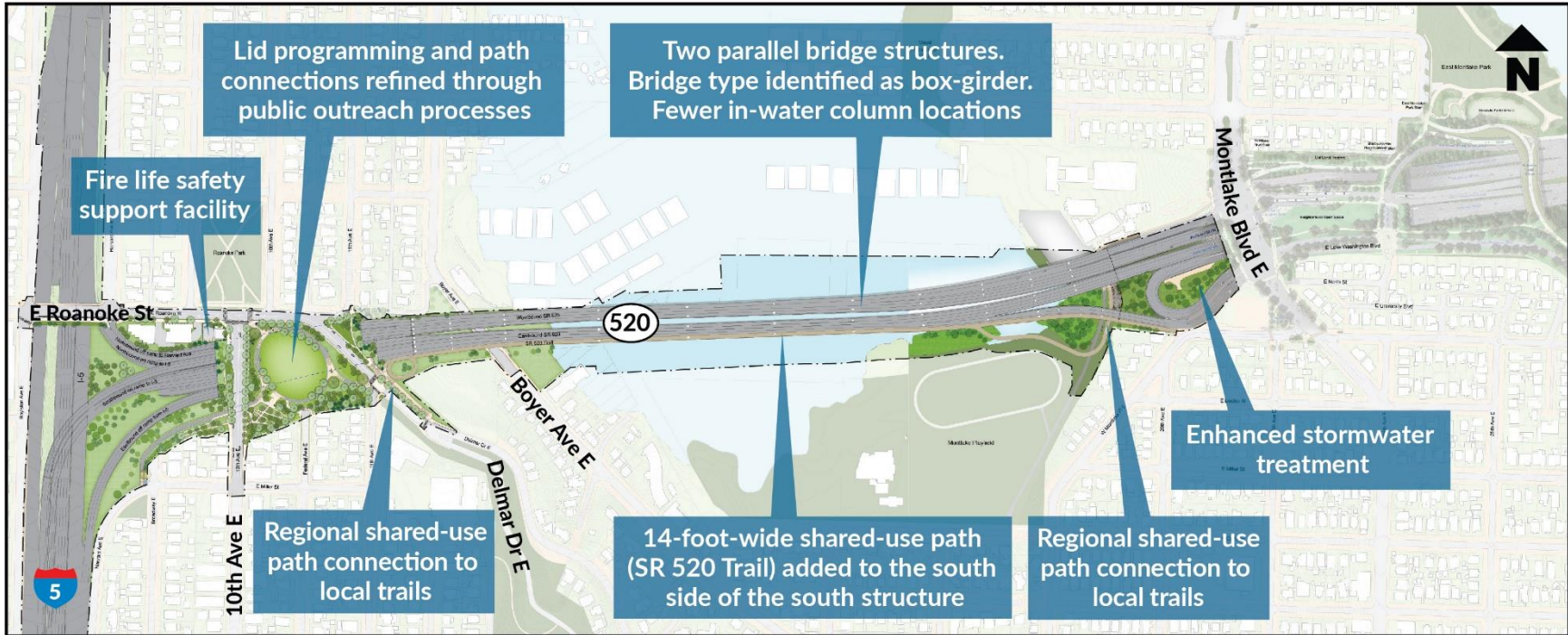
Exhibit 1

Project Features

2011 Preferred Alternative Baseline Design



2020 Refined Conceptual Design





Additional Exhibits available upon request

Exhibit 2

Section 4(f) Evaluation

Exhibit 3

Section 106 Documentation

Exhibit 4

Noise Analysis

Exhibit 5

**September 2020 Environmental Public Meeting and Online Open House Public
Comment Summary**