From:	**Bauman, Brian S.**
To:	**Dean, Benny A Jr CIV USARMY CENWP (USA)**
Cc:	**Bauman, Brian S.**
Subject:	FW: [DoD SAFE] NWP-218-486 Burnside Bridge Permit Application Update
Date:	Tuesday, September 12, 2023 7:29:28 AM
Attachments:	**JPA Text_working.docx** **DoD SAFE Confirmation of Completed Drop-off 2ECoPzckZvAxFFiv.msg**

Good Morning Mr Dean

I have uploaded the following EQRB Updated JPA files to the drop-off linked below

Attachment A – Figures
Attachment B – Navigation Study
Attachment C – Impact Calculations
Attachment D – Wetlands and Waters Technical Report
Attachment E – SWMP
Revised JPA
A Cover letter - explain the reason for the changes and the subject of the changes made throughout the JPA

The attached file was not uploaded to the drop-off site, but is being provide to help make your review a bit easier. The attached file is the original JPA text copied to word file. All changes made to the JAP text have been captured in track changes.

Please let me know if you would like to discuss any of the information provided or you need any additional information.

Thank you

Brian Bauman
D 503.727.3908 **M** 503.289.1722

hdrinc.com/follow-us

From: NoReplyTo@mail.mil <NoReplyTo@mail.mil>
Sent: Friday, September 8, 2023 9:05 AM
To: Bauman, Brian S. <brian.bauman@hdrinc.com>
Subject: [DoD SAFE] NWP-218-486 Burnside Bridge Permit Application Update

Brian Bauman,

This is a request from DEAN.BENNY.ALLEN.JR of USARMY.

Please click on the link below and drop off the file or files I have requested.

The link is only valid for 14 days from the time of this email and can only fulfill the request once. The link is expired after the drop-off has been completed.

More information is in the note below.

https://safe.apps.mil/req.php?req=863dJvqmn45y

— Note —
Hi Brian,

Here is the upload request for the revised/updated JPA for Burnside Bridge. Let me know if you have any issues dropping files off.

Have a wonderful morning!

~Benny

--
DEAN.BENNY.ALLEN.JR
benny.a.dean@usace.army.mil
USARMY

Joint Permit Application

This is a joint application, and must be sent to all agencies (Corps, DSL, and DEQ). Alternative forms of permit applications may be acceptable; contact the Corps and DSL for more information.

Date Stamp

U.S. Army Corps of Engineers Portland District	Oregon Department of State Lands	Oregon Department of Environmental Quality
Action ID Number	Number	

(1) TYPE OF PERMIT(S) IF KNOWN (check all that apply)

Corps: ☒Individual ☐Nationwide No.: _____ ☐Regional General Permit _____ ☐Other (specify): _____

DSL: ☒Individual ☐GP Trans ☐GP Min Wet ☐GP Maint Dredge ☐GP Ocean Energy ☐No Permit Waiver

(2) APPLICANT AND LANDOWNER CONTACT INFORMATION

	Applicant	Property Owner (if different)	Authorized Agent (if applicable) ☒ Consultant ☐ Contractor
Name (Required)	Megan Neill		Brian Bauman
Business Name	Multnomah County		HDR
Mailing Address 1	1403 SE Water Ave		1050 SW 6th Avenue
Mailing Address 2			Suite 1800
City, State, Zip	Portland, OR 97214		Portland, OR 97204
Business Phone	503-988-0437		503-289-1722
Cell Phone	503-360-6222		
Fax			
Email	Megan.neill@multco.us		Brian.bauman@hdrinc.com

(3) PROJECT INFORMATION

A. Provide the project location.

Project Name	Latitude & Longitude* (in DD.DDDD format)
Earthquake Ready Burnside Bridge	45.5230, -122.6676

Project Address / Location	City (nearest)	County
Burnside Bridge	Portland	Multnomah

Township	Range	Section	Quarter / Quarter	Tax Lot
01N	01E	34		1N1E34DB01300, 1N1E34DB01400, 1N1E34DB01500, 1N1E34DC00100, 1N1E34DC00800, 1N1E34DC03600, 1N1E34DD00600, 1N1E34DD00601, 1N1E34DBRIV, 1N1E34DCRIV, 1N1E34DBSTR, 1N1E34DD04900

Brief Directions to the Site:
From I-5 northbound, take exit 299B toward City Center, continue straight for one mile then turn right onto S Naito Pkwy. After 0.8 miles, arrive at the Burnside Bridge.

B. What types of waterbodies or wetlands are present in your project area? (Check all that apply.)

☒ River / Stream ☐ Non-Tidal Wetland ☐ Lake / Reservoir / Pond

☐ Estuary or Tidal Wetland ☐ Other ☐ Pacific Ocean

Waterbody or Wetland Name**	River Mile	6th Field HUC Name	6th Field HUC (12 digits)
Willamette River	12.7	Balch Creek-Willamette River	170900120202

* In decimal format (e.g., 44.9399, -123.0283).

** If there is no official name for the wetland or waterbody, create a unique name (such as "Wetland 1" or "Tributary A").

C. Indicate the project category. (Check all that apply.)		
☐ Commercial Development	☐ Industrial Development	☐ Residential Development
☐ Institutional Development	☐ Agricultural	☐ Recreational
☒ Transportation	☐ Restoration	☒ Bridge
☐ Dredging	☐ Utility lines	☐ Survey or Sampling
☒ In- or Over-Water Structure	☐ Maintenance	☐ Other:

(4) PROJECT DESCRIPTION

A. Summarize the overall project including work in areas both in and outside of waters or wetlands.

The Earthquake Ready Burnside Project (Project) will involve replacing the Burnside Bridge in downtown Portland, Oregon (Location Map - Attachment A, Figure 1) with a crossing that will be stable in the event of a Cascadia Subduction Zone earthquake. A seismically resilient Burnside Bridge will support the region's ability to provide rapid and reliable emergency response, rescue, and evacuation after a major earthquake, as well as enable post-earthquake economic recovery. The Project will provide a long-term, low-maintenance crossing that is safe for all users.

Of the four build alternatives considered in the Draft Environmental Impact Statement (DEIS), which was published in the Federal Register in February 2021, Multnomah County determined the Long-span Replacement ("DEIS Long-span Alternative") to be the Preferred Alternative for construction. Since the selection of the Preferred Alternative, design changes have been incorporated to lower the cost of the Project, and a Supplemental DEIS was published in April 2022 to describe the design changes. The Preferred Alternative, now known as the Refined Long-span Alternative, is similar to the DEIS Long-span Alternative in several ways. The Refined Long-span Alternative will replace the existing structure with a movable bridge span over the primary navigation channel, conventional slab-on-girder fixed bridge spans for the west approach, and a long-span fixed bridge span for the east approach. The Refined Long-span Alternative will be situated in the same alignment as the existing bridge and will maintain or exceed the vertical clearances over the river and the sidewalk access at the approaches. No temporary detour bridge will be constructed during construction. The primary difference between the DEIS Long-span Alternative and the Refined Long-span Alternative is the width of the bridge. The Refined Long-span Alternative would be narrower, having four motor vehicle lanes rather than five as shown in the DEIS, and narrower bike lanes and sidewalks. The Supplemental DEIS included a further evaluation on bridge types, narrowing down the Refined Long-span Alternative to include a girder bridge type on the west span, and a bascule type movable bridge.

The completed bridge will be approximately 2,292 feet long and will consist of three segments: west approach spans, a movable span, and east approach spans. The Refined Long-span Alternative will eliminate the need for two in water piers and most soil improvement work that would otherwise be required with all other alternatives considered in the DEIS. The west approach will include an approximately 292-foot clear span extending from the support closest to the harbor seawall to the west movable span in the river, plus an additional four conventional spans extending west to the roadway approach. The east approach includes a clear span that will extend from the east movable span in the river to just east of the Union Pacific Railroad approximately 600 to 720 feet depending on the chosen bridge type (600 feet if cable stayed; 720 feet if tied arch).

The main river piers (existing Piers 2 and 3; proposed Bents 6 and 7), which will support the movable span, will be positioned in the same locations or immediately landward of the existing piers and thereby provide the minimum 205 feet of horizontal clearance required by river users identified in the EQRB Preliminary Navigation Study (Attachment B; Proposed River Spans Plan - Attachment A, Sheet 3). The movable span will consist of a bascule rotating bridge type that will provide unlimited vertical clearance when fully opened.

The existing main river piers are anticipated to be removed by using a wire saw to cut the pier caps five feet below the existing surrounding grade, which may extend to elevation -55 feet (NAVD88). The new main river piers will be

constructed landward of the existing piers, although there will be some overlap with the existing foundations. Perched footings will be constructed within cofferdams, with the drilled shafts that support the perched footings extending down to approximate elevation -140 feet (NAVD88; Bridge Plan and Elevation – Attachment A, Figure 4A; Bent Elevation and Section – Figure 4B). It is proposed that the movable spans be supported on a group of large diameter shafts encased in a large footing cap. Constructing the perched footing cap within the water column reduces construction impacts within waters when compared to a traditional in-ground footing cap.

The Refined Long-span Alternative will protect-in-place the existing staircase connection between the Eastbank Esplanade and the Burnside Bridge throughout construction, and the stairs will be reconnected to the new bridge when the bridge construction is complete. Construction of the new bridge landward of the main river spans will occur in the uplands on both sides of the river, as well as from temporary work bridges within the river. Demolition of the existing bridge will occur in the existing location. The Project will require the full demolition of one building and removal of a warehouse in close proximity to the bridge. Other buildings will be partially affected by the construction. In addition, there will be staging areas and construction access routes within the Project area and potentially in other areas along the river within a few miles of the Project area.

B. Describe work within waters and wetlands.

The Project area includes one jurisdictional water: the Willamette River. No wetlands are present. Work including temporary and permanent removal and fill below the ordinary high water (OHW) of the river is proposed. The OHW of the Willamette River within the Project area is at elevation 20.1 feet (NAVD 88) (Wetlands and Waters Technical Report - Attachment D).

Construction Access and Staging: Access to work areas in the river will mainly be provided by barges and temporary work bridges (Access Plan and Staging Layout – Attachment A, Figure 5). Construction is anticipated to occur over approximately a 4.5-year period. The navigation channel will remain open during the vast majority of this time.

Work bridges are temporary structures supported by steel piles driven into the riverbed that enable worker access and operation of heavy machinery for both demolition and construction (Temporary Work Bridge Typical Cross Section – Attachment A, Figure 6). Approximately 400 in water piles will be installed to support the temporary work bridges using barge-mounted equipment (e.g., cranes) and equipment operating from temporary work bridges constructed earlier in the Project. Piles will be installed using a vibratory hydraulic hammer until the pile reaches design refusal or depth and then will be driven or “proofed” with an impact hammer. At the end of construction, work bridges will be disassembled and the piles removed via vibratory hydraulic hammers. If piles cannot be extracted, then they will be cut off at approximately three feet below the mudline.

Upland areas on both sides of the river will be used for on-site construction staging. Due to limited storage space onsite, it is anticipated that the contractor will require at least one offsite storage yard. Several options for offsite storage have been identified in the DEIS, all of which are developed areas along the river within a few miles of the Project site. The selected offsite storage yard will need to have a existing dock or at least have riverfront access to enable loading and unloading of work barges.

Dredging/Rip Rap Removal: Dredging could be needed to a maximum depth of approximately -55 feet (NAVD 88) plus an additional 5 feet of depth (over-excavation) to remove rip rap, boulders and buried wood from areas near the existing main river piers and where conflicting with work bridge pile installation (Structure – Attachment A, Figure 7). This removal will facilitate installation of pipe pile to support work bridges and the drilled shafts for the bridge.

Dredged material will be hoisted out of the water and on to a material barge or a container on the work bridge. During night-time lane closures on I-5, a large excavator could be stationed along the Morrison Ramp and used to remove rip rap near the east bank of the river. Riprap removed will be safely disposed at an upland location.

Perched Cofferdams Installation and Removal: Perched foundations are anticipated to utilize perched cofferdams, sheet pile walls, and a concrete bottom floor. The perched cofferdam would be lowered into place in the water column to

create a dry space to continue the remainder of the construction (Perched Caisson Concept – Attachment A, Figure 8). Perched cofferdam installation could occur through two different methods:

Method 1: The perched cofferdam would be either fully constructed offsite and floated into place or would be constructed onsite with the cast-in-place concrete floor constructed on falsework. Holes are provided within the bottom floor at each shaft location. The perched cofferdam is then lowered via hydraulic jacks around the previously constructed group of shafts. The space between the bottom floor holes and drilled shaft casings are then sealed via an underwater grouting and/or welding operation. The perched cofferdam is then dewatered, and the remainder of construction would occur within the dry isolated area. After the construction of the perched footing and substructure within the waterway, the perched cofferdam sheet walls would be cut off and removed.

Method 2: Precast flooring and sides would be utilized to create the perched cofferdam. The subfloor of the perched cofferdam would be made up of multiple precast slab pieces that would be incrementally installed over the drilled shafts. Like Method 1, the space between the shaft casings and holes would be sealed. Once all the precast sections were placed and post-tensioned together to form a singular unit, the box would be dewatered, and construction could commence in the dry isolated area. After the construction of the perched footing and substructure within the waterway, the perched cofferdam sheet walls would then be cut off and removed.

Demolition: Bridge demolition will entail removing the deck (superstructure), the substructure, and a portion of the piers. The floating walkway portion of the Eastbank Esplanade will be temporarily removed and moored in the river intermittently for a total of 18 months during the construction period (Access Plan and Staging Layout – Attachment A, Figure 5). The floating walkway will be replaced after each temporary removal.

Within the river, heavy equipment will work from barges and temporary work bridges. Demolition over water will utilize barges to capture pieces separated from the superstructure. Once demolition is completed, the barges will be unloaded and the material recycled or disposed at an upland location. Steel piles supporting the floating section of the Eastbank Esplanade may be left in place and used to support work bridges, or they may be extracted during demolition, saved for future construction, or disposed at an upland location where they may be either stored or recycled.

The main river piers will be removed to 5 feet below the existing surrounding riverbed grade, which varies and may extend to elevation -55 feet (NAVD 88; Structure and Material Removal – Attachment A, Figure 7) using wire saws and without conventional cofferdams. Portions of the concrete broken off the piers will be loaded on to barges, conveyed to an offsite, upland location, and recycled or disposed. Clean sand will be brought in to backfill the area created by removing portions of the main river piers. The column of Pier 1, which is positioned on the west edge of the river, will be demolished to approximately 10 feet (NAVD 88), an elevation at or below the top of the adjacent harbor wall. The remaining portion of Pier 1 will be left in place to protect the harbor wall foundations. The entirety of the pier wall and a portion of the footing comprising Pier 4, which is near the east edge of the river, will also be demolished; these components will be removed to 5 feet below the riverbed, which is approximately -21 feet (NAVD 88) at this location. The soils surrounding Pier 4 will also be removed five feet below existing mudline to facilitate the removal of the footing (Structure and Material Removal – Attachment A, Figure 7). After the portion of Pier 4 is removed, clean sand will backfill the area back to the original grade.

Reinforced Concrete Shafts and Foundations (Footings) Construction: Once the upper portions of the main river piers are removed to their proposed elevations, steel-reinforced concrete shafts will be constructed to support the footings for the new main river piers (In-Water Pier Structure – Attachment A, Figure 9). At each pier location, a group of eight 10-foot diameter holes will be drilled in the riverbed and approximately 10 feet into the underlying bedrock. It is anticipated that each of the shafts will be approximately 80-95 feet deep.

Each group of shafts will extend over a rectangular area no larger than 124 feet by 51 feet. Rebar cages will be inserted into the holes and concrete poured over them to create reinforced columns that will rise to approximately elevation 2 feet (NAVD 88). All work to install the drilled shafts will occur within temporary casings. Steel casings will be installed

through the water column from elevation 2 feet (NAVD88) to approximately 15 feet below ground. Up to four steel pipe pile will also be temporarily inserted during construction to stabilize each of the drilled shafts.

Shaft installation will occur via one of two standard methods, as described below. For either method, casings surrounding the shafts will extend into the river sediment to a depth necessary to contain the shaft construction. The shaft casings will provide containment during shaft excavation and concrete placement.

Method 1 (conventional augered shafts): Installation of each shaft will begin by inserting a casing into the riverbed as far as possible via vibratory hydraulic hammer and augering inside the casing to remove bed material as it is displaced. Because the shafts will be so deep, an oversized casing is installed first, and a second casing is installed inside the oversized casing, allowing the hole to be fully cased. An alternative to the second casing is to use drilling fluids/slurry. With this method, once the auger has removed material close to the bottom of the casing, drilling fluids (slurry) will be added to keep the hole stabilized below the casing. Drilling through slurry is a process of adding and mixing slurry to create a congealed mixture with the in-situ soil. As material is excavated from the hole, additional slurry is added as the drill/auger advances to the bottom of the hole.

Method 2 (oscillated shafts): For this method, the contractor will utilize a work bridge to support the oscillator, which will oscillate, vibrate, and drive the casings into the ground. As the casing is advanced farther into the ground, the contractor will excavate material within the casing using a crane with a clamshell bucket. As the casing is advanced further into the ground, additional sections of casing will be spliced on via welding or applying patented sections that use screw-in discs around the perimeter.

For either method, once each shaft is drilled and casings installed, a rebar cage will be inserted into the shaft for reinforcement and concrete poured (pumped) into the shaft around the rebar. The top portion of the casing, from approximately 15 feet below the ground to the bottom of the footing cap, will permanently remain.

The bridge foundations, or footings, are large concrete structures that rest (or 'perch') upon the shafts and support the bridge superstructure. The conventional footings to be installed for the Project will be 124 feet long by 51 feet wide by 15 feet tall, rising from approximately 2 feet (NAVD 88) to 17 feet (NAVD 88) elevation (In-Water Pier Structure – Attachment A, Figure 9). The top of the footings will be at the same elevation as the top of the drilled shafts.

Pier Protection Installation: Pier protection will be provided by either installing debris fenders (aka, pier starlings) or circular dolphins on the upstream side of the main river piers (In-water Pier Structure – Attachment A, Figure 9). The fenders or dolphins, comprised of steel-reinforced concrete, will guide floating logs and other flotsam away from the piers to minimize navigation hazards associated with debris piling up behind piers. The fenders are not designed to minimize the probability of or reduce damage from vessel collision. The debris fenders are each comprised of five 3-foot diameter steel pipe piles and a steel-reinforced concrete facing. The dolphins would be similarly designed, but in a circular shape located away from the bridge piers.

Superstructure Construction: The east and west approaches will be constructed incrementally on land whereas the movable span will be pre-built offsite and barged in as one or a few pieces to expedite its installation. Either large hydraulic jacks will be mounted on a barge or strand jacks will be mounted to the pier to allow the span to be lifted into place. Once the barge has been floated into place and anchored, the hydraulic jacks will raise the bascule span until the trunnion holes align with the bearings. Other structural components might be added is multiple pieces are brought to the site prior to span erection. The deck will either be poured on the span or pre-cast pieces of the deck will be installed after the span is put in place.

An estimated 5-foot thick layer of rip rap will be removed around locations of temporary work bridge supports (Rip Rap Removal – Attachment A, Figure 10A-10B). This rip rap will be stored in an upland location and replaced at the close of construction to maintain bank stability.

To enable equipment access during construction, the floating walkway of the Eastbank Esplanade will be separated into sections and moved to an in-river storage area just north and west of its current location. Approximately 30 steel pipe

pile will be inserted into the riverbed and used to moor the Eastbank Esplanade sections intermittently for a total of 18 months during the entire construction period (approximately four years). The portion of the Eastbank Esplanade to be relocated will be replaced to its current location at the close of construction. The southernmost portion of the Eastbank Esplanade ramp is currently supported by drilled shafts and thereby does not need to be relocated. No portion of the Eastbank Esplanade will be permanently removed or modified.

C. Construction Methods. Describe how the removal and/or fill activities will be accomplished to minimize impacts to waters and wetlands.

Overall construction of the Project is described in Block 4B. The following are specific construction methods to minimize impacts to the Willamette River.

In-Water Work Window

- In-water work will occur during the approved in-water work window of the Willamette River: July 1 through October 31, except as noted below.
- An in-water work window extension has been requested to use a barge all year long. To shorten the overall construction timing and minimize constrictions of the navigation channel, a work barge may be used to access portions of the work on the Burnside Bridge above the OHW. Spuds will be used to anchor barges when they are needed to be stationary for more a few hours or longer.
- An in-water work window extension is also requested for drilled shafts; the extension, if granted, will begin November 1 and end December 31. Extending the end of the window, from November 1 to December 31, is required to complete installation of the drilled shafts within the 4.5-year long construction period.
- Drilled shaft construction occurring below the OHW of the Willamette River, but outside and above the actively flowing channel may occur at any time during the year.
- Temporary hollow steel piles will be installed during the Lower Willamette pile-driving window, which begins July 15 and concludes October 15.
- The contractor will monitor current and projected flow elevations during the extended in-water work window. If inundation of work bridges is anticipated, the contractor will secure the drilled shaft and remove mobile equipment and construction material from the work bridges and place them in a safe location.

Dredging/Rip Rap Removal/Rip Rap Replacement

- Except for rip rap removed from areas along the east bank of the river, rip rap and other riverbed material that is dredged will be disposed in an upland location or recycled.
- Rip rap removed from areas along the east bank of the river for construction of the work access bridge will be replaced at the close of construction using an excavator bucket to maintain riverbank stability. If necessary, turbidity curtains will be installed to limit transport and deposition of sediment suspended caused by this work.

Demolition and Construction

- The planned access methods and staging yards have been designated to facilitate demolition and construction while minimizing, as much as practicable, impacts to park facilities, sewer lines and other utilities, pedestrians, rail traffic, street traffic, and large vessel passage on the river. A barge will be staged under the bridge during demolition to capture pieces of the superstructure as they are broken off. Once demolition is completed, the barges will be offloaded and the material recycled or disposed of properly. Close to banks where barges cannot reach all the way to land, the contractor may use fabric, road plates, or other materials that will act as a ramp to divert broken concrete pieces to the barge or to areas landward of OHW, such that inadvertent discharge of concrete debris into the water is avoided.
- Piles will be installed and removed by using a vibratory hammer. If impact hammering is necessary, a bubble curtain will be installed and operated in accordance with National Marine Fisheries Service design requirements to reduce hydroacoustic impacts to fish. If possible, removal of the piles will begin with the vibratory method followed by pulling. If the pile cannot be extracted, it will be cut at least three feet below the riverbed surface.

- The existing piers will be cut a few feet below the riverbed using a wire saw and the new perched footing caps will be constructed within perched cofferdams. This approach will obviate the need for driving sheet pile and deep excavation of riverbed material necessary to create dry spaces within large conventional cofferdams.
- Fish salvage will occur during dewatering of the perched cofferdams and will be conducted according to the best practices established in Federal-Aid Highway Program guidance. Fish present in the work isolation areas will be captured, handled, and released under the supervision of an experienced fish biologist. Appropriate protocols would be followed to minimize death or injury of all species during fish capture and removal from the cofferdams. If needed, electrofishing will be conducted consistent with NMFS' Guidelines for Electrofishing Waters Containing Salmonids Listed under the Endangered Species Act or most recent version. A fish salvage report will be prepared and submitted to NOAA and USFWS following the completion of each in-water work season.
- Drilled shaft installation will occur within shaft casings advanced into the riverbed, greatly limiting the possibility of riverbed sediment release from pressure induced during the concrete pour; the point of pressure will be sufficiently deep to prevent any 'blowouts' at the bed surface. The casing will isolate the river from any disturbance and contain sediment generated during excavation and any construction materials used to complete the drilled shafts. The drilled shaft casing will extend through the work bridge surface to minimize the risk of material placed into or taken out of the shaft from falling into the river.
- During the concrete pour, the contractor will pump and treat any water from the shafts prior to discharging to the river.
- Pollutants such as green concrete, contaminated water, silt, welding slag, sandblasting abrasive, or grout cured less than 24 hours will not be discharged or allowed to contact any water body. Any water having direct contact with uncured concrete shall be contained and treated or removed from the site, as appropriate.
- Construction access and maneuvers will be managed to avoid impacts to the navigation channel as much as practicable. With either construction approach, the shafts closest to the navigational channel will be constructed using access from work bridges extending from the shoreward side of the river. Work bridges may be removed incrementally after each shaft is installed. For the vast majority of the construction period, a minimum width of 165 feet will be open to navigation (Temporary Structures – Attachment A, Figure 16).
- The Project will maintain frequent coordination with the Oregon State Marine Board to establish safe boating practices around the construction areas.
- The navigation channel will remain open during construction except for short-term closures. Each closure will be no more than 3 weeks in duration, and the number of closures will range from 2 to 10 over the length of the construction period. Removing the existing movable span and installing the movable span as one piece will each require closing the navigation channel to ship traffic for approximately one week. Multnomah County will coordinate with the U.S. Coast Guard to secure a temporary work permit in preparation for each closure.

All Project Activities

- Existing vegetation to be retained, where shown in the plans, will be protected throughout construction and marked as off-limits to cutting or pruning with individual flagging and/or high-visibility construction fencing.
- Disturbed areas that are currently vegetated and not maintained as lawns will be restored to pre- construction topography and planted with native species. Disturbed areas that are currently lawns will be seeded with commercially available lawn grass species.
- Construction will adhere to an Erosion and Sediment Control Plan developed in accordance with Oregon DEQ requirements. Construction areas will be tailored to existing contours and vegetation to minimize erosion. Energy dissipaters, sediment basins, and/or sediment barriers will be employed to minimize release of sediment into the river.
- Temporary lighting will be kept to the minimum necessary, in both intensity and area illuminated. Lighting will be prevented, where practicable, from shining directly on surface waters.
- Impacts to parks and recreation will be minimized in coordination with Portland Parks & Recreation and compensated by following established regulations for reconstructing temporarily impacted areas and replanting trees and landscaping. Additional mitigation for recreation and event impacts would be developed in accordance with the Section 4(f) evaluation process and in coordination with Portland Parks & Recreation through acquisition of Non-Park Use Permits.

- Detour routes will be established for portions of trails in Waterfront Park and for the floating ramp portion of the Eastbank Esplanade, which may be closed throughout the construction period.

(4) PROJECT DESCRIPTION (continued)

D. Describe source of fill material and disposal locations if known.

Fill material will be brought in from an offsite, approved, and clean source. Materials removed/demolished during construction will be temporarily stockpiled in an upland location and disposed of offsite at an approved disposal site to be determined by the contractor. Areas of excavation containing hazardous materials will be handled and disposed of in accordance with the Oregon Department of Environmental Quality regulations.

E. Construction timeline.

What is the estimated project start date? **June 2024**

What is the estimated project completion date? **December 2030**

Is any of the work underway or already complete? ☐ **Yes** ☒ **No**

If yes, please describe.

F. Removal Volumes and Dimensions (if more than 7 impact sites, include a summary table as an attachment)

Wetland / Waterbody Name *	Removal Dimensions					Time Removal is to remain**	Material***
	Length (ft.)	Width (ft.)	Depth (ft.)	Area (sq.ft. or ac.)	Volume (c.y.)		
Willamette River							
See Attachment C							

G. Total Removal Volumes and Dimensions

Total Removal to Wetlands and Other Waters	Length (ft.)	Area (sq. ft or ac.)	Volume (c.y.)
Total Removal to Wetlands			
Total Removal Below Ordinary High Water	Varies	1.320	48,347
Total Removal Below Highest Measured Tide			
Total Removal Below High Tide Line			
Total Removal Below Mean High Water Tidal Elevation			

H. Fill Volumes and Dimensions (if more than 7 impact sites, include a summary table as an attachment)

Wetland / Waterbody Name*	Fill Dimensions					Time Fill is to remain**	Material***
	Length (ft.)	Width (ft.)	Depth (ft.)	Area (sq. ft. or ac.)	Volume (c.y.)		
Willamette River							
See Attachment C							

(4) PROJECT DESCRIPTION (CONTINUED)

I. Total Fill Volumes and Dimensions			
Total Fill to Wetlands and Other Waters	**Length (ft.)**	**Area (sq. ft or ac.)**	**Volume (c.y.)**
Total Fill to Wetlands			
Total Fill Below Ordinary High Water	varies	1.973	36,319
Total Fill Below Highest Measured Tide			
Total Fill Below High Tide Line			
Total Fill Below Mean High Water Tidal Elevation			

*If there is no official name for the wetland or waterbody, create a unique name (such as "Wetland 1" or "Tributary A").
**Indicate whether the proposed area of removal or fill is permanent or, if you are proposing temporary impacts, specify the days, months or years the fill or removal is to remain.
*** Example: soil, gravel, wood, concrete, pilings, rock etc.

(5) PROJECT PURPOSE AND NEED

Provide a statement of the purpose and need for the overall project.

The primary purpose of this project is to create a seismically resilient Burnside Street lifeline crossing of the Willamette River that will remain fully operational and accessible for vehicles and other modes of transportation immediately following a major Cascadia Subduction Zone (CSZ) earthquake. There is a 30 percent chance that a magnitude 8.0+ earthquake will occur in western Oregon within the next 50 years. Transportation infrastructure resilience is one of the primary components required for an effective recovery following this significant natural disaster. In the event of a major earthquake, a seismically resilient Burnside Bridge may sustain one of the only functional routes over the Willamette River within Portland and would thereby be critical for transporting supplies and services within the Metropolitan area. A seismically resilient Burnside Bridge will bolster the region's ability to provide rapid and reliable emergency response, rescue and evacuation after a major earthquake, as well as enable post-earthquake economic recovery. In addition to ensuring that the crossing is seismically resilient, the Project would also provide a long-term, low-maintenance and safe crossing for all users.

(6) DESCRIPTION OF RESOURCES IN PROJECT AREA

A. Describe the existing physical, chemical, and biological characteristics of each wetland or waterbody. Reference the wetland and waters delineation report if one is available. Include the list of items provided in the instructions.

The Willamette River is a traditional navigable water that flows into the Columbia River in north Portland. Within the Project area, the river channel is roughly 900 to 1,000 feet wide. As documented in the EQRB Wetlands and Waters Technical Report (Attachment D), the OHW of the river in the Project area was confirmed as running along the 20.1-foot contour (NAVD 88); this OHW was originally established by the Portland District of the U.S. Army Corps of Engineers.

The Willamette River is listed as an impaired waterbody under Section 303(d) of the Clean Water Act for 21 pollutants including arsenic, copper, dissolved oxygen, lead, mercury, pentachlorophenol, pH, tetrachloroethylene, and turbidity. Stormwater runoff from roads and buildings in the watershed conveys many of these pollutants as well as others including sediment, pesticides, and petrochemicals. All of these pollutants have adverse impacts upon the river, which adversely affects the aquatic ecosystem and human health.

Aquatic species occurring in the Project area include nearly 50 species of fish of which several are listed under the Endangered Species Act as threatened or endangered, including Chinook Salmon, Coho Salmon, Steelhead, Eulachon, and Green Sturgeon. Also present are harbor seals and sea lions, both of which are protected under the Marine Mammal Protection Act. Of the approximately 25 acres of river within the Project area, there is approximately 3.4 acres of shallow water habitat, all of it near the east bank of the river (Impacts to Shallow Water and Vegetation – Attachment A, Figure 13). Shallow water is less than 20 feet of water depth as measured at the ordinary low water level and is critical to juvenile salmonids for refuge and foraging but has been extensively reduced over the past 150 years from activities associated with development.

The riparian areas along the Willamette River in the Project area are primarily developed for transportation as well as recreational, residential, and commercial use, but there are several trees and other vegetation (Impacts to Shallow Water and Vegetation – Attachment A, Figure 13). Vegetation is generally a mix of native and non-native trees, shrubs, and

herbaceous plants (primarily lawn grass). The west bank of the Willamette River upstream and downstream of the Burnside Bridge is Waterfront Park, which has extensive lawns and many mature trees including ornamental oak and cherry trees. On the east bank of the river south of the bridge, vegetation is primarily dominated by Armenian blackberry (*Rubus armeniacus*), an aggressive, non-native invasive species, with scattered mature trees and saplings including Pacific willow, Pacific madrone, and black cottonwood, which are native species, as well as white ash, tree of heaven, and American elm, which are non-native species. North of the bridge on the east bank there is much shade from the I-5 overpass, but there is patch of semi-mature trees primarily dominated by big-leaf maple, a native species, with some American elm and tree of heaven.

B. Describe the existing navigation, fishing and recreational use of the waterbody or wetland.

According to the EQRB Preliminary Navigation Technical Report (Attachment B), nearly two-thirds of the river use in the lower Willamette River is commercial. These vessel operations are compensated financially and are primarily comprised by tugboats, barges, and cruise boats. Although freight tonnage remained fairly consistent from 2007 through 2016, the number of commercial trips increased by a factor of eight over this period and averaged over 27,000 trips annually between 2012 and 2016. Approximately one quarter of the river use is recreational and include both motorized and non-motorized pleasure boats including some large river users that infrequently moor in Portland. Data from the Oregon State Marine Board surveys indicates that there may be 250,000 to 300,000 use days on the Willamette River in the Portland area. Government operators, representing less than one-tenth of river use, include federal and state agencies that transit the Willamette River for emergency operations, defense activities, or channel maintenance.

US Coast Guard (USCG) requires that all current ship traffic be safely accommodated with adequate clearances, which, for the Burnside Bridge results in a water crossing span with a 147-foot vertical clearance (when raised) above OHW and 205-foot-wide horizontal clearance (Temporary Structures – Attachment A, Figure 16).

Within the Project area, the Willamette River and its shorelines are an important and accessible recreation resource. According to the Oregon State Marine Board, the Project area includes a stretch of the Willamette River that receives over 250,000 boater use days with approximately 79 percent by motorized boats and 21 percent as non-motorized boats, making it the most-used section of water in Oregon for recreational boaters. The portion of the river around the Burnside Bridge mainly serves as a pass-through area, rather than as a destination. However, several non-motorized boaters use the Kevin J. Duckworth Memorial Dock, a floating dock connected to the Eastbank Esplanade north of the Burnside Bridge. The dock also enables river access for observation, fishing and swimming. In addition, several on-river events occur annually at the Project area including The Big Float and the Portland Bridge Swim, among others.

There is also frequent use of the shorelines in the Project area, especially via the Eastbank Esplanade and Waterfront Park. The 1.5-mile Eastbank Esplanade is a multi-use trail that extends along the river's east bank and supports walking, running and biking with connections to eastside neighborhoods as well as across the river to Waterfront Park under the Steel Bridge. A multi-use path extends the length of Waterfront Park as well. Most organized walking or running events in downtown Portland include the Eastbank Esplanade and portions of Waterfront Park.

Waterfront Park is a 36-acre City park stretching between the Willamette River and downtown Portland from SW Montgomery Street at the south end to the Steel Bridge at the north end. The park hosts a variety of widely attended events throughout the year including the Waterfront Blues Festival, Oregon Brewers Festival, The Bite of Oregon Festival, and many events associated with Rose Festival. Waterfront Park also hosts the Saturday Market, a popular, non-profit outdoor market comprised of Pacific Northwest vendors selling their artwork and crafts every Saturday and Sunday from March through Christmas Eve. Ankeny Plaza, a 1.33-acre hardscaped plaza within the park and just south of Burnside Bridge, is on the National Register of Historic Places and contains the Bill Naito Legacy Fountain as well as other historic components. Extending north from the Burnside Bridge within Waterfront Park is the Japanese American Historical Plaza and Bill of Rights Memorial, which is managed by the Japanese American Museum of Oregon to raise public awareness of

diverse cultural experiences in America, specifically the Japanese-American experience and the history of the internment camps during World War II.

(7) PROJECT SPECIFIC CRITERIA AND ALTERNATIVES ANALYSIS

Describe project-specific criteria necessary to achieve the project purpose. Describe alternative sites and project designs that were considered to avoid or minimize impacts to the waterbody or wetland.*

The Project purpose is to create a seismically resilient Burnside Street crossing of the Willamette River that will remain fully operational and accessible for vehicles and other modes of transportation immediately following a major CSZ earthquake.

Although other crossing locations were evaluated, none were determined practicable due to their inability to re-establish an efficient connection between West Burnside Road and East Burnside Road. Aside from the Burnside Bridge, the 17 miles of Burnside Street from Washington County to Gresham has very few sections (overpasses) that are vulnerable to collapse. By comparison, I-84, which runs relatively parallel to Burnside Street for the first three miles east of the river, is crossed in this section by 18 overpasses that were not built to current earthquake standards. In addition, unlike nearly all the other downtown bridges, the Burnside Bridge approaches are not crossed by any I-5 or other highway overpasses that will collapse and block bridge access after a major earthquake. The intrinsic resiliency of Burnside Street (not including the existing bridge) is a key reason that the Regional Disaster Preparedness Organization, comprised of cities, counties, Metro, and the Red Cross, designated the Burnside Corridor as a "Primary East West Emergency Transportation Route", a designation of the 2006 Oregon Transportation Plan.

Many alternative designs were considered in the DEIS including the No Build Alternative. When considering all potential impacts of a major earthquake, the No Build Alternative will cause the largest impact because the existing bridge is expected to collapse into the river and adjacent shoreline areas. Of the four build alternatives, the Refined Long-span Alternative will have the smallest in-water footprint. The four build alternatives are briefly described as follows (these descriptions exclude reconstruction of the Eastbank Esplanade pedestrian connection):

Enhanced Seismic Retrofit: This alternative entails a partial enhancement to the stability and safety of the existing bridge and replacement of the major components required to meet seismic design criteria. It would encase existing Piers 2 and 3 in concrete, add multiple deep reinforced concrete foundation columns to Piers 1 through 4, and seismically upgrade all 34 existing on-land support bents and East and West bridge abutments. It would also stabilize soils surrounding 5 bents including Piers 1 and 4 to reduce potential for liquefaction during a major earthquake.

Short-span Replacement, Bascule Lift: This alternative entails replacing the bridge and installing two in- water piers with deep foundations. It would install a set of in-water columns near the east bank where Pier 4 is located and span lengths would be very similar to the existing bridge. It would replace bents on both approaches with ones supported by columns on drilled shafts. It would also stabilize 5 bents including Pier 1 to reduce potential for liquefaction during a major earthquake.

Long-span Replacement, Bascule Lift: As proposed, this alternative will replace the bridge and install two in-water piers with deep foundations. The span lengths will be much longer than the existing span lengths. It will replace bents on both approaches with ones supported by columns on drilled shafts and will install fewer intermediate bents including one less in-water pier than the existing bridge. It will also stabilize soils surrounding 1 bent on the east approach to reduce potential for liquefaction during a major earthquake.

Couch Extension, Bascule Lift: This alternative entails replacing the bridge and installing four piers with deep foundations. Span lengths would be very similar to the existing bridge span. It would replace bents on both approaches with ones supported by columns on drilled shafts and construct new bents (including an in-water pier) to support a westbound on-ramp leading from NE Couch Street. It would also stabilize soils surrounding 8 bents including Piers 1 and 4 to reduce potential for liquefaction during a major earthquake.

For each build alternative, there were also two sets of options considered, as follows: 1) movable span type and 2) temporary detour bridge construction/type. Of the two movable span options considered (vertical lift and bascule), the bascule will have a slightly greater in-water footprint but will provide a greater margin of safety because there is no vertical obstacle to river traffic when the lift span is raised. Of the various detour bridge types considered, the No Detour Bridge (Full Closure) option will have much less impact on the local environment, recreation, and project cost.

Following almost two years of coordination, analysis and input, in June 2020, the Project's Community Task Force recommended the DEIS Long-span Replacement Alternative and the No Temporary Bridge option as the Preferred Alternative to be advanced for the DEIS. Their process to reach that recommendation included identifying the community's values, defining evaluation criteria and measures, and reviewing analysis of the anticipated performance and impacts. They also considered the input from the team's technical experts, from resource agencies and other participating agencies, and from other stakeholders including the public. The Community Task Force recommendation (see https://multco.us/earthquake-ready-burnside- bridge/community-task-force) is based upon 49 different criteria covering 13 different topics including:

- Seismic resiliency
- Community quality of life
- Equity and environmental justice
- Crime reduction and personal safety
- Business and economics
- Parks and recreation resources
- Historic resources
- Visual and aesthetics
- Natural resources, climate change and sustainability
- Pedestrians, bicyclists and people with disabilities
- Motor vehicles, freight and emergency vehicles
- Transit
- Fiscal responsibility

The DEIS Long-span Alternative was determined to have the highest value based on these criteria. The primary advantages of the DEIS Long-span Alternative are:

-Seismic Resiliency: All the build alternatives will be seismically resilient, but the DEIS Long-span Replacement will carry the least risk. It will place the fewest piers in the geologically hazardous zones particularly on the east side. A large earthquake is expected to liquefy both banks of the river, causing a mudslide that will exert massive lateral forces on the bridge piers and any other structures in the vicinity. The other alternatives considered will include significant jet grouting to stabilize the slope whereas the Long-span Replacement alternative will largely avoid this risk by installing a very long approach span that will eliminate a pier in the geological hazard zone on the west side of the river and require only one pier near the upper portion of the geological hazard zone on the east side.

-Parks and Recreation: With the fewest columns under the bridge, the Long-span Replacement alternative will open up space in Waterfront Park, create views to the river from the park space under the bridge, and improve personal security in the public spaces under the bridge. It would also protect the Burnside Skatepark, which would have been removed by the Retrofit alternative.

-Social Services and Equity: Like the other replacement alternatives, it will maintain the operations of the Portland Rescue Mission at its current location during construction and will provide the greatest improvements to bicycle and pedestrian capacity, comfort and safety on the bridge.

-Natural Resources: The Long-span Alternative has the smallest permanent footprint in the river including avoiding placing any piers in shallow water habitat.

-Cost: The DEIS Long-span Alternative will be the lowest cost alternative.

The DEIS Long-span Alternative has the smallest permanent footprint because it has fewer intermediate bents, including one fewer in-water piers than the Retrofit alternative and the other two replacement alternatives. In contrast to the other build alternatives, there will be no bent (pier) within the river near the east bank as the DEIS Long-span Alternative will include a 740-foot span from the movable span Bent 7 (Pier 3) in the river to Bent 8 located east of Union Pacific Railroad tracks and west of 2nd Avenue.

After the DEIS Long-span Alternative was selected as the preferred alternative, design modifications were proposed to lower the overall cost of the Project. A Supplemental DEIS was published in April 2022, which described the design changes of the "Refined Long-span Alternative" to narrow the bridge width and reduce costs. The Refined Long-span Alternative has two options for the east approach – tied arch or cable stayed – which have yet to be chosen. Multiple construction methods are also possible and have yet to be chosen. For the purposes of this JPA, the bridge type design and construction method with the largest and most detrimental impacts were chosen.

The Refined Long-span Alternative has the smallest permanent footprint because it has fewer intermediate bents, including one fewer in-water piers than the Retrofit alternative and the other two replacement alternatives. In contrast to the other build alternatives, there will be no bent (pier) within the river near the east bank as the Refined Long-span Alternative will include either a 740-foot or 600-foot fixed span from the movable span Bent 7 (Pier 3) in the river to Bent 8 located east of Union Pacific Railroad tracks and west of 2nd Avenue.

Also unlike the other alternatives, there will be no bent (currently Pier 1) situated within Waterfront Park near the harbor wall, which thereby precludes the need to move sewage lines located there and creates more open space in the park. Pier 1 will be cut off a few feet above OHW and the pier will remain in place, but unconnected to the new bridge. Furthermore, unlike some of the other build alternatives, the Refined Long-span Alternative does not require seismic soil mitigation ("ground improvements") below OHW at Pier 1 or Pier 4, which will otherwise cause additional disturbance to the aquatic environment.

(8) ADDITIONAL INFORMATION

Are there state or federally listed species on the project site?	☒ **Yes**	☐ **No**	☐ **Unknown**
Is the project site within designated or proposed critical habitat?	☒ **Yes**	☐ **No**	☐ **Unknown**
Is the project site within a national Wild and Scenic River?	☐ **Yes**	☒ **No**	☐ **Unknown**
Is the project site within a State Scenic Waterway?	☐ **Yes**	☒ **No**	☐ **Unknown**
Is the project site within the100-year floodplain?	☒ **Yes**	☐ **No**	☐ **Unknown**

If yes to any above, explain in Block 6 and describe measures to minimize adverse effects to those resources in Block 7.

Is the project site within the Territorial Sea Plan (TSP) Area?	☐ **Yes**	☒ **No**	☐ **Unknown**

If yes, attach TSP review as a separate document for DSL.

Is the project site within a designated Marine Reserve? ☐ **Yes** ☒ **No** ☐ **Unknown** **If yes, certain additional DSL restrictions will apply.**
Will the overall project involve ground disturbance of one acre or more? ☒ **Yes** ☐ **No** ☐ **Unknown** **If yes, you may need a 1200-C permit from the Oregon Department of Environmental Quality (DEQ).**
Is the fill or dredged material a carrier of contaminants from on-site or off-site spills? ☐ **Yes** ☐ **No** ☒ **Unknown** Has the fill or dredged material been physically and/or chemically tested? ☐ **Yes** ☒ **No** ☐ **Unknown** **If yes, explain in Block 6 and provide references to any physical/chemical testing report(s).**
Has a cultural resource (archaeological and/or built environment) survey been performed on the project area? ☒ **Yes** ☐ **No** ☐ **Unknown**
Do you have any additional archaeological or built environment documentation, or correspondence from tribes or the State Historic Preservation Office? ☐ **Yes** ☒ **No** ☐ **Unknown** **If yes, provide a copy of the survey and/or documentation of correspondence with this application to the Corps only. Do not describe any resources in this document. Do not provide the survey or documentation to DSL.**

* Not required by the Corps for a complete application but is necessary for individual permits before a permit decision can be rendered.

Is the project part of a DEQ Cleanup Site? ☒ No ☐ Yes Permit Number: _____

DEQ contact _____

Will the project result in new impervious surfaces or the redevelopment of existing surfaces? ☒ **Yes** ☐ **No**

If yes, the applicant must submit a post-construction stormwater management plan as part of this application to DEQ's 401 WQC program for review and approval, see https://www.oregon.gov/deq/FilterDocs/401wqcertPostCon.pdf

Identify any other federal agency that is funding, authorizing or implementing the project.

Agency Name	Contact Name	Phone Number	Most Recent Date of Contact
Federal Highway Administration	Thomas Parker	503-316-2549	March 2023

List other certificates or approvals/denials required or received from other federal, state or local agencies for work described in this application.

Agency	Certificate / approval / denial description	Date Applied

Other DSL and/or Corps Actions Associated with this Site (Check all that apply.)

☐ Work proposed on or over lands owned by or leased from the Corps (may require authorization pursuant to 33 USC 408). These could include the federal navigation channel, structures, levees, real estate, dikes, dams, and other Corps projects.

☒ State owned waterway DSL Waterway Lease #:

☐ Other Corps or DSL Permits Corps # DSL #

☐ Violation for Unauthorized Activity Corps # DSL #

☒ Wetland and Waters Delineation Corps # DSL #

Submit the entire delineation report to the Corps; submit only the concurrence letter (if complete) and approved maps to DSL. If not previously submitted to DSL, send under a separate cover letter

(9) IMPACTS, RESTORATION/REHABILITATION, AND COMPENSATORY MITIGATION

A. Describe unavoidable environmental impacts that are likely to result from the proposed project. Include permanent, temporary, direct, and indirect impacts.

In-Water Footprint

Approximately 48,347 CY of material extending across approximately 1.32 acres below OHW will be removed for Project construction. Of this amount, about 27,357 CY will be existing pier structure and debris fender occupying about 0.35 acres below OHW. Removal of rip rap historically placed around the existing piers, which is mainly above EL -55 feet (NAVD 88), will remove 20,820 CY of material over approximately 0.95 acres.

Fill placement for the Project will total 36,319 CY of material over 1.97 acres below OHW. Of this, 16,145 CY will be steel-reinforced concrete for the bridge foundations and starlings. Clean sand will be placed in the riverbed to backfill the holes created from removing the existing piers and will total approximately 5,992 CY spread over approximately 0.69 acre. The remaining fill placement below OHW will be temporary structures to be removed at the close of construction; these structures entail steel perched cofferdam walls, riprap along the Eastbank Esplanade, and steel pipe pile needed for work bridges, stabilizing drilled shafts during their installation, and moorage of the Eastbank Esplanade floating ramp sections.

The drilled shafts, concrete footing caps, pier substructure, pier starlings, and associated piling will be permanently installed below OHW. The permanent structure placed in jurisdictional waters to construct the bridge will cover 0.30 acre, which is the combined area of the bridge footings, drilled shafts, piers, and pier starlings, the features that combine to occupy the greatest area of structure. An additional 0.69 acre of clean sand will be permanently placed below OHW. The volume of permanent structure to be placed below OHW will be 16,145 CY, plus 5,992 CY of sand for a

combined total of 22,137 CY of permanent fill. With 22,137 CY of permanent fill and 45,947 CY of permanent removal, the Project would result in a net removal of 23,810 CY of material from the Willamette River.

The approximate 30 steel pipe piles that will be driven into the riverbed to moor the floating ramp sections of the Eastbank Esplanade will collectively occupy 100 square feet and 600 CY below OHW. At least some of the piles used to store the ramp sections will have been removed from where they currently support the ramp sections. The piles used for ramp storage will be removed at the close of construction.

Other Impacts

Although the perched cofferdams will isolate much of the demolition and construction activities from the river, their installation, presence and removal will cause temporary impacts. The presence of these large structures may slightly and temporarily decrease the river's flood storage capacity. Dredging and other activities near the cofferdams during construction and during cofferdam removal will incur risk of contaminant spills and increased turbidity.

The use of barges will temporarily and minimally increase turbidity during spud installation and induce avoidance behavior of fish and other large organisms in response to barge movement and activity.

Hydroacoustic impacts caused by pile driving will occur both from within and outside the perched cofferdams. It is anticipated that approximately 400 temporary piles will be needed to support work bridges used to facilitate bridge demolition and construction. Piling installation is expected to be accomplished using a combination of vibratory and percussive methods. The contractor will vibrate piles in as far as can be done, and then switch over to pile driving hammers to install piles to their required tip elevations. Bubble curtains will be used during installation to reduce impacts to fish and other aquatic organisms during impact pile driving. Temporary piles will be extracted using vibratory hammers. If piles cannot be extracted, they will be cut off a minimum of three feet below the riverbed.

The in-water work activities occurring outside cofferdams will be restricted to an in-water work period approved by the National Marine Fisheries Service, U.S. Fish and Wildlife Service, and Oregon Department of Fish and Wildlife to minimize harm to fish and other aquatic organisms protected under the federal and state Endangered Species Act. Although the normal in-water work period for the lower Willamette River is July 1st through October 31st, the Services have indicated they may oblige a Project-specific request to extend the in-water work window from July 1st through December 31st. Work within perched cofferdams could occur at any time of the year.

As discussed in Block 4.C., fish salvage measures will be employed to remove fish from the isolated work areas created during installation of cofferdams. Fish salvage within isolated work areas will be conducted according to the best practices established in Federal-Aid Highway Program guidance. A fish biologist with the experience and competence to ensure the safe capture, handling, and release of all fish will supervise all fish capture and release. To minimize take, efforts will be made to capture Endangered Species Act-listed fish known or likely to be present in an in-water isolated work area using methods that minimize fish handling and the potential for injury.

Rip rap removed from around the main river piers and from other areas to enable pile driving will be disposed in an upland location. Although rip rap removal is necessary for construction, it will also offset the Project's impacts by reducing net functional fill in the floodplain. However, rip rap removed from the east bank of the river will be replaced at the close of construction to re-stabilize the bank. No rip rap or other means of scour protection will be needed at the piers because the reinforced shafts to be installed are designed to withstand liquefaction of soil; therefore, riverbed scour in proximity to the shafts will not destabilize the piers.

The use of perched footings could reduce the impact of scour at the bridge piers; however, detailed analysis is required to determine the impact. As part of the construction phase, sand will be brought in and placed to backfill the holes around the existing piers created during removal.

The Project would result in a net decrease in impervious area of approximately 0.40 acre due to a decrease in bridge width on the west end. The total area treated will be 5.9 acres, compared to no treatment under existing conditions. As described in the Post-Construction Stormwater Management Plan (Attachment E), stormwater runoff from new

contributing impervious area and existing impervious area will be treated to current regulatory standards, resulting in an increase in treated impervious area. Despite the proposed treatment, the overall effect of the Project to river flow regime and water quality will be relatively mild due to the large size of the river and the various other stormwater inputs present.

The Project has identified a staging area in Waterfront Park just north of the bridge, another at the current Saturday Market Administration Building and parking lot north of SW Ankeny Street between SW 1st and SW 2nd Avenues, and one on the south sides of the bridge east of I-5 and west of SE 2nd Avenue (Access Plan and Staging Layout – Attachment A, Figure 5). A detour for the multi-use path on the west side of the river will be constructed to remain within Waterfront Park whereas no detour may be available for portion of the Eastbank Esplanade that traverses the Project area.

As mentioned in Block 4.B., the Project will likely require at least one offsite storage yard. It is assumed that any additional staging area that the contractor chooses will be fully developed and accessible by road and river. It is also assumed that the contractor will be responsible for any relevant permitting and/or mitigation required for their chosen use of a site. Off-site staging may require cutting and/or pruning vegetation and indirect impacts to fish and wildlife from construction activity including barge use, but these impacts will likely be minimal.

The floating walkway portion of the Eastbank Esplanade will be disassembled and moved out of the way intermittently during the construction period and users will be rerouted using detours.

Construction activities that may impact vegetation include excavation, fill, grading, demolition, staging and access. Approximately 100 trees will be cut or removed and replaced after construction is complete. Several of these trees are east bank north of the bridge, but most are on the west side of the bridge in Waterfront Park and on W Burnside Street. Tree removal will occur concurrently with removal of approximately 1.1 acre of other vegetation in Waterfront Park (mostly lawn grass) and approximately 0.75 acre of riparian vegetation on the east bank (mostly scrub dominated by Armenian blackberry, a non-native invasive shrub). Best Management Practices will be implemented during construction to reduce the potential to spread this and other non-native invasive plant species during construction. Such practices will include minimizing the extent of disturbance areas and removing non-native invasive species in a manner that prevents their propagules from being dispersed.

Property acquisitions and business displacements will be required to build the bridges. With no change in traffic capacity, the Refined Long-span Alternative will not have indirect effects on land use patterns or regional economics during construction, although mitigation measures will be put in place to reduce impacts to local residents.

Project construction will generate increased noise, dust and emissions that could disproportionately affect individuals in the area.

B. For temporary removal or fill or disturbance of vegetation in waterbodies, wetlands or riparian (i.e., streamside) areas, discuss how the site will be restored after construction to include the timeline for restoration.

As discussed in Block 9.A., several trees and other vegetation will be removed during construction. Replacement of trees removed will occur on both banks after construction is complete at a 2:1 ratio (2 trees planted and maintained per 1 tree removed). Tree planting and revegetation in Waterfront Park will be under the direct supervision of Portland Parks & Recreation.

The goal of the riparian rehabilitation will be to re-establish a native riparian forest community. The rehabilitation will entail planting native riparian trees and shrubs and controlling regrowth of Armenian blackberry and other non-native invasive species Armenian blackberry and other species on the Oregon Noxious Weed List will be removed manually and disposed safely away from the site and all other natural areas. If necessary, noxious weeds present on site will also be spot-treated with herbicide authorized for use in aquatic areas. The site will be monitored and maintained for up to three years after installation. Rehabilitation objectives, success criteria and monitoring are summarized below.

Objective 1: Establish 0.75 acres of riparian forest/scrub shrub

Success Criterion 1A: Native woody vegetation will have a basal stem count of at least 1,200 live stems (>1,600 per acre) during summer in Year 1, Year 2, and Year 3.

Monitoring Measurement 1A: Basal stem counts in randomly stratified belt transects.

Success Criterion 1B: Native woody vegetation will have an areal cover of >5% in summer of Year 1, >12.5% in summer of Year 2, and >30% in summer of Year 3.

Monitoring Measurement 1B: Areal cover assessments using the same randomly stratified belt transects used for the stem counts.

Objective 2: Minimize the abundance of non-native invasive plant species

Success Criterion 2: Total areal cover by species on the Oregon Noxious Weed List (including Armenian blackberry) will have <50% areal cover in summer of Year 1, <40% in summer of Year 2, and <30% in summer of Year 3.

Monitoring Measurement 2: Areal cover assessments using the same randomly stratified belt transects used for the stem counts.

Compensatory Mitigation

C. Proposed mitigation approach. Check all that apply:

Permittee responsible Permittee responsible Mitigation Bank or Payment In-Lieu

☐ Onsite Mitigation ☐ Offsite Mitigation ☐ In-Lieu Fee Program ☐ (Not approved for use with Corps permits)

C. Provide a brief description of proposed mitigation approach and the rationale for choosing that approach. If you believe mitigation should not be required, explain why.

Temporary and permanent impacts to the Willamette River are anticipated. The Project would result in a permanent net removal of 31,901 square feet (0.73 acre) of existing bridge material and rip rap below the OHWM (13,105 square feet of fill minus 45,006 square feet of removal). The permanent footprint of the Project (including the area of rip rap removal) would be reduced from the existing footprint, resulting in an increase in available aquatic habitat. The bridge footings, piers, perched cofferdam floor, and drilled shafts all occupy the same area (12,650 square feet), plus the area of the pier starlings (455 square feet) results in a total permanent fill area of 13,105 square feet (0.30 acre). The removal of the existing piers (13,586 square feet), debris fenders (1,510 square feet), and rip rap around the existing piers 2 and 3 (29,010 square feet), and riverbed material around existing pier 4 (900 square feet) totals 45,006 square feet (1.03 acre) of removal.

Removal of existing rip rap and replacement with substrate that is consistent with naturally occurring substrate (sand) would be beneficial to fish and other aquatic species in the Project vicinity. Macroinvertebrates are found on and below the ground surface within the sediment, which directly influences the distribution and abundance of populations through grain size and soil stability. Replacing existing rip rap with clean sand could affect macroinvertebrate productivity, as many macroinvertebrates require soft substrate in the early stages of development. This could lead to an increasing the availability of food resources for aquatic species, including ESA-listed fish. Removal of rip rap will also encourage more natural sediment transport, scour, and deposition, resulting in more diverse and natural in-stream conditions, as rip rap can inhibit local sediment supply and result in downstream scour and erosion.

The existing riparian area on the east side of the river is comprised of banks blanked in rip rap with little to no herbaceous vegetation, providing limited functions and values. Vegetation currently growing within the eastern riparian area is dominated by invasive, weedy species and non-native grasses with very few large trees are present. Temporarily impacted riparian areas will be restored as described in block 9B. Although existing riparian vegetation would be

temporarily removed, it would be replaced post-construction with native tree and shrub species, increasing species diversity and contributing to a higher quality habitat than currently exists. Removal of invasive vegetation and replacement with native species would improve functions and values, including providing wildlife habitat, bank stabilization, and water quality support.

Construction of the Project would result in some permanent adverse impacts, but the beneficial impacts as described above would be greater than the adverse impacts; therefore, compensatory mitigation is not proposed.

Mitigation Bank / In-Lieu Fee Information:
Name of mitigation bank or in-lieu fee project:
Type and amount of credits to be purchased:

If you are proposing permittee-responsible mitigation, have you prepared a compensatory mitigation plan?
☐ Yes. Submit the plan with this application and complete the remainder of this section.
☐ No. A mitigation plan will need to be submitted (for DSL, this plan is required for a complete application).

Mitigation Location Information (Fill out only if permittee-responsible mitigation is proposed)

Mitigation Site Name/Legal Description	Mitigation Site Address	Tax Lot #

County	City	Latitude & Longitude* (in DD.DDDD format)

Township	Range	Section	Quarter/Quarter

(10) ADJACENT PROPERTY OWNERS FOR PROJECT AND MITIGATION SITE		
☒ **Pre-printed mailing labels of adjacent property owners attached separately (if more than 30).**	**Project Site Adjacent Property Owners**	**Mitigation Site Adjacent Property Owners**
Contact Name **Address 1** **Address 2** **City, ST ZIP Code**	See Attachment F	
Contact Name **Address 1** **Address 2** **City, ST ZIP Code**		
Contact Name **Address 1** **Address 2** **City, ST ZIP Code**		

(11) CITY/COUNTY PLANNING DEPARTMENT LAND USE AFFIDAVIT (TO BE COMPLETED BY LOCAL PLANNING OFFICIAL)

I have reviewed the project described in this application and have determined that:

- ☐ This project is not regulated by the comprehensive plan and land use regulations
- ☐ This project is consistent with the comprehensive plan and land use regulations
- ☑ This project is consistent with the comprehensive plan and land use regulations with the following:
  - ☐ Conditional Use Approval
  - ☐ Development Permit
  - ☑ Other Permit (explain in comment section below)
- ☐ This project is not currently consistent with the comprehensive plan and land use regulations. To be consistent requires:
  - ☐ Plan Amendment
  - ☐ Zone Change
  - ☐ Other Approval or Review (explain in comment section below)

An application or variance request has ☐ has not ☑ been filed for the approvals required above.

Local planning official name (print)	Title	City / County
Marisol Caron	Senior City Planner	Portland

Signature	Date
Marisol Caron	2/1/21

Comments:

This project received preliminary guidance for required land use review submittals in Early Assitance Appointment number EA 20-185944. Required land use review approvals identified include: Demolition Review, Historic Resource Review, Design Review, and River Review.

(12) COASTAL ZONE CERTIFICATION

If the proposed activity described in your permit application is within the Oregon Coastal Zone, the following certification is required before your application can be processed. The signed statement will be forwarded to the Oregon Department of Land Conservation and Development (DLCD) for its concurrence or objection. For additional information on the Oregon Coastal Zone Management Program and consistency reviews of federally permitted projects, contact DLCD at 635 Capitol Street NE, Suite 150, Salem, Oregon 97301 or call 503-373-0050 or click here.

CERTIFICATION STATEMENT

I certify that, to the best of my knowledge and belief, the proposed activity described in this application complies with the approved Oregon Coastal Zone Management Program and will be completed in a manner consistent with the program.

Print /Type Applicant Name	Title
Applicant Signature	**Date**

(13) SIGNATURES

Application is hereby made for the activities described herein. I certify that I am familiar with the information contained in the application, and, to the best of my knowledge and belief, this information is true, complete and accurate. I further certify that I possess the authority to undertake the proposed activities. By signing this application I consent to allow Corps or DSL staff to enter into the above-described property to inspect the project location and to determine compliance with an authorization, if granted. I hereby authorize the person identified in the authorized agent block below to act in my behalf as my agent in the processing of this application and to furnish supplemental information in support of this permit application. I understand that the granting of other permits by local, county, state or federal agencies does not release me from the requirement of obtaining the permits requested before commencing the project. I understand that payment of the required state processing fee does not guarantee permit issuance.

To be considered complete, the fee must accompany the application to DSL. The fee is not required for submittal of an application to the Corps.

Fee Amount Enclosed	$

Applicant Signature (required) must match the name in Block 2	
Print Name	Title
Signature	Date
Authorized Agent Signature	
Print Name	Title
Signature	Date

Landowner Signature(s)*	
Landowner of the Project Site (if different from applicant)	
Print Name	Title
Signature	Date
Landowner of the Mitigation Site (if different from applicant)	
Print Name	Title
Signature	Date
Department of State Lands, Property Manager (to be completed by DSL)	
If the project is located on state-owned submerged and submersible lands, DSL staff will obtain a signature from the Land Management Division of DSL. A signature by DSL for activities proposed on state-owned submerged/submersible lands only grants the applicant consent to apply for a removal-fill permit. A signature for activities on state-owned submerged and submersible lands grants no other authority, express or implied and a separate proprietary authorization may be required.	
Print Name	Title
Signature	Date

* Not required by the Corps.

(14) ATTACHMENTS

☒Drawings
- ☐Location map with roads identified
- ☐U.S.G.S topographic map
- ☐Tax lot map
- ☐Site plan(s)
- ☐Plan view and cross section drawing(s)
- ☐Recent aerial photo
- ☐Project photos
- ☐Erosion and Pollution Control Plan(s), if applicable
- ☐DSL / Corps Wetland Concurrence letter and map, if approved and applicable

☒Pre-printed labels for adjacent property owners (Required if more than 30)

☐Incumbency Certificate if applicant is a partnership or corporation

☐Restoration plan or rehabilitation plan for temporary impacts

☐Mitigation plan

☐Wetland functional assessments, if applicable
- ☐Cover Page
- ☐Score Sheets
- ☐ORWAP OR, F, T, & S forms
- ☐ORWAP Reports
- ☐Assessment Maps
- ☐ORWAP Reports: Soils, Topo, Assessment area, Contributing area

☐Stream Functional Assessments, if applicable
- ☐Cover Page
- ☐Score
- ☐Sheets
- ☐SFAM PA, PAA, & EAA forms
- ☐SFAM Report
- ☐Assessment Maps
  - ☐Aerial Photo Site Map and Topo Site Map (Both maps should document the PA, PAA, & EAA)

☐Compensatory Mitigation (CM) Eligibility & Accounting Worksheet
- ☐Matching Quickguide sheet(s)
- ☐CM Eligibility & Accounting sheet

☐Alternatives analysis

☐Biological assessment (if requested by the Corps project manager during pre-application coordination)

☒Stormwater management plan (may be required by the Corps or DEQ)

☐Other
- ☐ Please describe:

For U.S. Army Corps of Engineers send application to:

USACE Portland District
ATTN: CENWP-ODG-P
PO Box 2946
Portland, OR 97208-2946
Phone: 503-808-4373
portlandpermits@usace.army.mil

Counties:
Baker, Benton, Clackamas, Clatsop, Columbia, Gilliam, Grant, Hood River, Jefferson, Lincoln, Linn, Malheur, Marion, Morrow, Multnomah, Polk, Sherman, Tillamook, Umatilla, Union, Wallowa, Wasco, Washington, Wheeler, Yamhill

U.S. Army Corps of Engineers
ATTN: CENWP-ODG-E
211 E. 7th AVE, Suite 105
Eugene, OR 97401-2722
Phone: 541-465-6868
portlandpermits@usace.army.mil

Counties:
Coos, Crook, Curry, Deschutes, Douglas, Jackson, Josephine, Harney, Klamath, Lake, Lane

For Department of State Lands send application to:

West of the Cascades:
Department of State Lands
775 Summer Street NE, Ste 100
Salem, OR 97301-1279
Phone: 503-986-5200
https://www.oregon.gov/dsl/WW/Documents/uploadinstructions_removalfill.pdf

East of the Cascades:
Department of State Lands
951 SW Simpson Ave, Ste 104
Bend, OR 97702
Phone: 541-388-6112
https://www.oregon.gov/dsl/WW/Documents/uploadinstructions_removalfill.pdf

For Department of Environmental Quality:

Submit all application materials electronically through *Your DEQ Online*.

For questions related to *Your DEQ Online*, please visit the *Your DEQ Online* help page, email YourDEQOnline@deq.state.or.us, or call 503-229-6184

INSTRUCTIONS FOR PREPARING THE JOINT APPLICATION

This is a joint application and must be sent to all agencies (Corps, DSL, and DEQ), who administer separate permit or certification processes. For questions regarding these instructions or the form, contact the Corps, DSL and/or DEQ or refer to the following online resources:

- DSL's Removal-Fill Guide; or,
- The Corps Regulatory website: http://www.nwp.usace.army.mil/Missions/Regulatory.aspx
- DEQ's 401 Water Quality Certification website: https://www.oregon.gov/deq/wq/wqpermits/Pages/Section-401-Certification.aspx

General Instructions and Tips

- Provide the information in the appropriate blocks of the application form. If you need more space, provide a summary in the space provided and attach additional detail as an appendix to the application. Each appendix or attachment must reference which application block number it pertains to.
- Not all items on the application form will apply to all projects.
- Electronic submittal of applications and supporting material is preferred by the Corps. Both electronic and hard copies must be in 8 ½ x 11-inch sized format and reproducible in black and white. Currently DSL does not accept electronic submittals. DSL will accept color figures and 11 X 17. Use either all double sided or all single sided paper. Do not use staples or dividers. NOTE: If the electronic submittal of application and associated documents is 10 megabytes or more, check with each agency for how best to submit the document to that agency.
- **FEES:** Fees for water quality certification apply. Nationwide projects approved by DEQ will incur a fee of $985. Others will be evaluated on a case-by-case basis: https://www.oregon.gov/deq/wq/wqpermits/Pages/Section-401-Fees.aspx.

For complex projects or for those that may have more than minimal impacts, additional information may be necessary to complete the evaluation and make a permit decision. Alternative forms of permit applications may be acceptable; contact the Corps and DSL for more information.

Section 1. Type of Permit(s) if Known

If known, indicate the type of permit/authorization applying for.

Section 2. Applicant and Landowner Contact Information

Applicant: The applicant is the responsible party. If the applicant is an agency, business entity or other organization, indicate the name of the organization and a person that has the authority to sign the application. If applicant is a partnership or corporation, the applicant name must match the Incumbency Certificate, and the business name as listed on OR Secretary of State business registry. Applicant must not be "doing business as" or has an "assumed business name." In such cases the applicant must be an individual.

Applicant Contact Name: If the applicant is a business, provide the contact name for an individual representing the business.

Authorized Agent: An authorized agent is someone who has permission from the applicant to represent their interests and supply information to the agencies. An agent can be a consultant, an attorney, builder, contractor, or any other person or organization. An authorized agent is optional.

Landowner: Provide landowner information if different from the applicant. DSL requires the landowner's signature, unless the project qualifies as a linear project, e.g. road, pipeline, utility.

Section 3. Project Information

A. Provide location information. Latitude and longitude must be reported in decimal format and can be found by zooming in to your respective project location and reading off the coordinates displayed on the bottom many maps, such as Google Earth.

B. Provide information on wetlands and waterbodies within the project area. Indicate the category of activities that make up your project. For projects with multiple locations, provide latitude and longitude for each location. For linear projects, provide the latitude and longitude for the start and end points.

Section 4. Project Description

A. Overall Description: Provide a description of the overall project, including:

- All associated work with the project both outside and within waters or wetlands.
- Total ground disturbance for all associated work (i.e., area and volume of ground disturbance).
- Total area of impervious surfaces created or modified by the project, if applicable.

B. Work within Waters and Wetlands: Provide a description of the proposed work within waters and wetlands, including:

- Each removal or fill activity proposed in waters or wetlands, as well as any construction or maintenance of in-water or over-water structures.
- The number and dimensions of in-water or over-water structures (i.e., pilings, floating docks) proposed within waters or wetlands.

C. Construction Methods: Describe how the removal and/or fill activities will be accomplished, including the following:

- Construction methods, equipment to be used, access and staging areas, etc.
- Measures you will use during construction to minimize impacts to the waterbody or wetland. Examples may include isolating work areas, controlling construction access, site specific erosion and sediment control methods, site specific best management practices, and using specialized equipment or materials. Attach work area isolation and/or erosion and pollution control plans, if applicable.

D. Fill Material and Disposal: Provide a description of fill material and procedure for disposal of removed material, including:

- The source(s) of fill materials (if known).
- Locations for disposal area(s) for dredged material, if applicable. If dredged material is to be discharged on an upland site, identify the site and the steps to be taken (if necessary) to prevent runoff from the dredged material back into jurisdictional waters. If using an upland disposal area that is not a Department of Environmental Quality (DEQ)-regulated landfill, a Solid Waste Letter of Authorization or a Beneficial Use Determination from DEQ may be required.

E. Construction Timing: Provide the proposed start and completion dates for the project. Describe project work that is already complete, if applicable.

F. – I. Summary of Removal and Fill Activities: Summarize the dimensions, volume and type/composition of material being placed or removed in each waterbody or wetland. Describe each impact on a separate row. For instance, if two culverts are being removed from Clear Creek, use two rows. Add extra rows if needed or include an attachment.

The DSL and the Corps use different elevations for determining whether an activity in tidal waters is regulated by the State's Removal-Fill law, the Clean Water Act, and/or the Rivers and Harbors Act. DSL regulates activities below the highest measured tide. The Clean Water Act applies below the high tide line. The Rivers and Harbors Act applies below the mean high water.

If jurisdictional limits are not the same for each agency, prepare a table for each agency stating impacts within that agency's jurisdiction.

Section 5. Project Purpose and Need
Explain the purpose and need for the project. Also include a brief description of any related activities needed to accomplish the project objectives.

The following items are required by DSL, as applicable:
- If the removal-fill would satisfy a public need and the applicant is a public body, include any pertinent findings regarding public need and benefit.
- If the project involves fill in the estuary for a non-water dependent use, explain how the project is for public use and/or satisfies a public need.
- If the project is located within a marine reserve or marine protected area, explain how the project is needed to study, monitor, evaluate, enforce or protect the designated area.

Section 6. Description of Resources in Project Area
Territorial Sea: For activities in the Territorial Sea (mean lower low water seaward 3 nautical miles), provide a separate evaluation of the resources and effects determination.

For each wetland, include:
- Whether the wetland is freshwater or tidal, and the Cowardin class and Hydrogeomorphic (HGM) class.
- Source of hydrology and direction of flow (if any).
- Dominant plant species by layer (herb, shrub, tree).
- Assessment of the hydrologic, water quality, fish habitat, aquatic habitat, and ecosystem support functions and values of the wetland(s) to be permanently impacted. The assessment should be attached as a separate Excel document.
    - DSL requires the use of ORWAP for wetland impacts over 0.2 acre and any wetland that is an Aquatic Resource of Special Concern (ARSC), unless the impacts are to Agate Desert Vernal Pools (VPs). See Appendix B of the Removal Fill Guide for a list of ARSCs. The Vernal Pool Assessment Method is required for all VPs. For impacts to wetlands less than 0.2 acre that are not ARSCs or VPs Best Professional Judgment (BPJ) may be used.
- Identify any Aquatic Resources of Special Concern (ARSC) in or near the project area. ARSCs include alkali wetlands, bogs, cold water habitat, fens, hot springs, interdunal wetlands, kelp beds, mature forested wetlands, native eelgrass beds, off-channel habitats (alcoves and side channels), ultramafic soil wetlands, vernal pools (including Willamette Valley, Medford area, Modoc basalt, and Columbia Plateau vernal pools), wet prairies, or wooded tidal wetlands. See Appendix B of the Removal Fill Guide for a list of ARSCs.
- Include relevant summary information from the wetland delineation report if available. Provide a copy of the wetland delineation report to **the Corps,** if not previously provided to the Corps. If a delineation report has not been previously submitted to DSL, then submit to DSL under a separate cover.
- Describe existing uses, including fish and wildlife use (type, abundance, period of use, and significance of site).
- Next major downstream waterbody name.

For rivers, streams, other waterbodies, lakes and ponds, include a description of, as applicable:
- Streamflow regime (e.g., perennial year-round flow, intermittent seasonal flow, ephemeral event-driven flow). If flow is ephemeral, provide streamflow assessment data sheet or other information that supports your determination.
- Field indicators used to identify the Ordinary High Water Mark (OHWM).
- Channel and bank conditions.

- Type and condition of riparian (streamside) vegetation.
- Channel morphology (structure and shape).
- Stream substrate.
- Assessment of the hydrologic, geomorphic, biologic and water quality functions and values of waters to be permanently impacted.
    - DSL requires use of the Stream Function Assessment Methodology (SFAM) for wadable non-tidal streams. SFAM should be attached as a separate Excel document. For impacts to non-wadable or tidal streams, BPJ can be used. Sections 2.2 through 2.3 of the SFAM User Manual give guidance for the functions and values to be addressed for all streams, even if SFAM does not apply.
- Identify any Aquatic Resources of Special Concern (ARSC) in or near the project area. ARSCs include alkali wetlands, bogs, cold water habitat, fens, hot springs, interdunal wetlands, kelp beds, mature forested wetlands, native eelgrass beds, off-channel habitats (alcoves and side channels), ultramafic soil wetlands, vernal pools (including Willamette Valley, Medford area, Modoc basalt, and Columbia Plateau vernal pools), wet prairies, or wooded tidal wetlands.
- Fish and wildlife use (type, abundance, period of use, and significance of site).
- Water quality impairments, including waterways adjacent to impacted wetlands and waterway to be impacted and next major downstream waterbody

Section 7. Project Specific Criteria and Alternatives Analysis
Provide an explanation describing how impacts to waters and wetlands are being avoided and minimized on the project site. For DSL, the alternatives analysis must include:

- Project-specific criteria that are needed to accomplish the stated project purpose.
- A range of alternative sites and designs that were considered with less impact.
- An evaluation of each alternative site and design against the project criteria and a reason for why the alternative was not chosen.
- If the project involves fill in an estuary for a non-water dependent use, a description of alternative non-estuarine sites must be included.

The level of rigor required in this analysis should be commensurate with the level of impact proposed. Please note that additional information regarding alternatives may be necessary for Corps Individual Permits to comply with the Clean Water Act Section 404(b)(1) Guidelines. Please check with your local Corps contact early in the planning process to determine what level of analysis is required. An alternative analysis is not required for a complete application by the Corps; however, it may be required before a permit decision can be rendered.

Section 8. Additional Information
Any additional information you provide helps the reviewer(s) understand your project and the other approvals or reviews that may be required.

Section 9. Impacts, Restoration/Rehabilitation, and Compensatory Mitigation
A. Description of Impacts: Clearly identify the permanent, temporary, direct and indirect impacts. Provide a written analysis of potential changes the project may make to the hydrologic characteristics of the affected wetlands or waterbodies, and an explanation of measures taken to avoid or minimize any adverse effects of those changes, such as: impeding, restricting or increasing flows; relocating or redirecting flow; and potential flooding or erosion downstream of the project. Provide a table summarizing permanent and temporary impacts by HGM and Cowardin Classifications.

B. Site Restoration/Rehabilitation: For temporary disturbance of soils and/or vegetation in waterbodies, wetlands or riparian (streamside) areas, discuss how you will restore the site after construction. This may include the following:

- Grading plans to restore pre-existing elevations.
- Planting plans and species list (native species only) to replace vegetation in riparian or wetland areas.
- Maintenance and monitoring plans to document restoration to wetland condition and/or vegetation establishment.
- Associated erosion control for site stabilization.

C.-D. Compensatory Mitigation. Describe your proposed compensatory mitigation approach or explain why you believe compensatory mitigation is not required. If proposing permittee-responsible mitigation for permanent impacts to jurisdictional waters, see OAR 141-085-0705 and 33 CFR 332.4(c) for plan requirements. The Oregon Explorer Aquatic Mitigation topic page and map viewers may be a helpful resource.

For activities involving discharges of dredged or fill material into waters of the United States, the Corps requires the application to include a statement describing how impacts to waters of the United States are to be avoided and minimized. The application must also include either a statement describing how impacts to waters of the United States are to be compensated for or a statement explaining why compensatory mitigation should not be required for the proposed impacts.

Section 10. Adjacent Property Owners for Project and Mitigation Site(s)
Names and addresses for properties that are adjacent to the project site and permittee responsible mitigation site (if applicable), are required. "Adjacent" means those properties that share or touch upon a common property line or are across the street or stream. If more than 30, attach pre-printed labels. A list of property owners may be obtained by contacting the county tax assessor's office.

Section 11. City/County Planning Department Land Use Affidavit
This section is required to demonstrate land use compatibility for removal fill permits and water quality certifications. Provide this form to your local planning official for them to complete and sign.

Section 12. Coastal Zone Certification
Your signature for this statement is **required** for projects within the coastal zone (generally, west of the summit of the Coast Range).

Section 13. Signatures
The application **must** be signed by the responsible party as identified in section 1. DSL also requires the landowner's signature. Linear Facilities (e.g. road, pipeline, utility) do not require landowner signature for the impact sites; signatures are required for mitigation sites.

Section 14: Attachments
Project Drawings. A complete application must include a location map, site plan, and plan view and cross-section drawings. DSL also requires a recent aerial photo. All drawings should be clear, legible, and to scale. For the Corps, drawings must be on 8.5 x 11-inch paper and must be in black and white or clearly reproducible in black and white. DSL will accept color and 11 x 17, but all figures must be clear when reproduced in black and white. While illustrations need not be professionally prepared, they should be clear, accurate, and contain all necessary information, as follows:

Location maps (with project boundaries, including staging and construction access, scale bar and north arrow on all):
- Location map with roads identified
- U.S.G.S. Topographic map
- Tax lot map

Site plan(s), including:

- Entire project site and activity areas, which includes staging and construction access areas
- Existing and proposed contours
- Stormwater outfalls and other related features
- Location of Ordinary High Water Mark, wetland boundaries, and other jurisdictional boundaries. Clearly identify temporary, permanent, direct and indirect impact areas within waterbodies and wetlands
- Scale bar, legend, and north arrow
- Location of staging areas and construction access
- Location of cross section(s), as applicable
- Location of mitigation area, if applicable

Cross section drawing(s), including:

- Existing and proposed elevations
- Clearly identify temporary, permanent, direct and indirect impact areas within waterbodies and wetlands
- Ordinary High Water Mark, wetland boundaries, and other jurisdictional boundaries
- Scale bar (horizontal and vertical scale)

Recent Aerial Photo

- 1:200 resolution, or, if not available for your site, highest resolution possible

DSL Wetland Concurrence (map and letter only for DSL; the Corps requires the full wetland/waters delineation report if not already submitted)

Mitigation documents including:

- Functional assessment results for each impacted resource and mitigation area
    - Results should include: Cover sheet, Score Sheet, assessment area maps
- Eligibility and Accounting Worksheet
    - Matching "Quickguide" sheet(s)
    - Compensatory Mitigation (CM) Eligibility & Accounting sheet

Do NOT submit the following items to DSL (unless specifically requested by DSL for your project):

- Wetland delineation report
- Biological assessment
- Cultural/archeological reports
- Stormwater calculations
- Geotechnical reports
- Marketing reports
- Contract agreements
- Applications for other agencies such as local land use applications
- Contractor/construction specifications
- Other extraneous drawings and information

From:	Jeff Heilman
To:	Cline, Emily (FHWA)
Cc:	Bauman, Brian S.; Megan NEILL; Drahota, Steve M.; Tomaselli, Christina; Barksdale, Rachel; Shane Phelps
Subject:	FW: DEQ 401 WQC issued for Earthquake Ready Burnside Bridge (2018-486)
Date:	Wednesday, December 15, 2021 6:28:44 PM
Attachments:	image001.png DEQ_401_WQC_Burnside_Bridge_2018_486.pdf

Hi Emily,
See below! One more approval done. Let us know if you need anything more on this to update the Federal Dashboard. Thanks
Jeff

From: Bauman, Brian S. <Brian.Bauman@hdrinc.com>
Sent: Wednesday, December 15, 2021 5:01 PM
To: Drahota, Steve M. <Steven.Drahota@hdrinc.com>; Jeff Heilman <JHeilman@parametrix.com>
Cc: Tomaselli, Christina <christina.tomaselli@hdrinc.com>; Barksdale, Rachel <Rachel.Barksdale@hdrinc.com>
Subject: FW: DEQ 401 WQC issued for Earthquake Ready Burnside Bridge (2018-486)

DEQ 401 Cert has been received.
Jeff – does there need to be an update to the Permitting Dashboard, and if so is there anything I need to do?

Brian Bauman
D 503.727.3908 **M** 503.289.1722

hdrinc.com/follow-us

From: BRITTAIN Jeffrey * DEQ <Jeffrey.BRITTAIN@deq.oregon.gov>
Sent: Wednesday, December 15, 2021 4:58 PM
To: Megan Neill <megan.neill@multco.us>; REICH Denis A <Denis.A.REICH@odot.oregon.gov>
Cc: Dean, Benny A Jr. CIV USARMY CENWP (USA) <Benny.A.Dean@usace.army.mil>; Holm, James A CIV USARMY CENWP (USA) <James.A.Holm@usace.army.mil>; KLASSEN Russ * DSL <Russ.KLASSEN@dsl.oregon.gov>; tom.loynes@noaa.gov; Bauman, Brian S. <Brian.Bauman@hdrinc.com>
Subject: DEQ 401 WQC issued for Earthquake Ready Burnside Bridge (2018-486)

Good afternoon,

The Oregon Department of Environmental Quality has issued the 401 Water Quality Certification for the Earthquake Ready Burnside Bridge project (2018-486).

Please see the attached 401 Water Quality Certification (WQC) for your project. Read through the document thoroughly to ensure compliance with the certification language and any general or special conditions applicable to your project. A hardcopy will follow in the mail and a digital copy is available to the applicant through *Your DEQ Online*. To access via *Your DEQ Online* please log in, click on the ellipses next to "My Active Permits", click the orange circle to view submittal, choose the "Issuance" tab, and click on the red PDF icon to download.

Please remember the following:

- A copy of the 401 WQC must be kept at the project site at all times for review by all responsible parties and inspectors.
- Work must be done within the scope specified in the 401 WQC.
- The 401 WQC has unique and site-specific conditions and requirements.
- It is recommended that a turbidity monitoring plan be developed *before* initiating in-water work.
- If at any time you require clarification of the 401 WQC conditions, DEQ will provide technical assistance to ensure compliance.
- You must notify DEQ of a change of applicant and/or transfer of ownership of the project within 30 days.

If you have any questions, please let me know.

Best,

Jeff Brittain *(he/him)*
401 Program
Oregon Department of Environmental Quality
700 NE Multnomah St. Ste. #600 Portland, OR 97232
503-229-5395

From: Dean, Benny A Jr CIV USARMY CENWP (USA)
To: Bauman, Brian S.; Higdon, Valerie W CIV USARMY CENWP (USA); Mazer, Gregory
Subject: RE: EQRB JPA submitted
Date: Wednesday, December 30, 2020 12:58:26 PM

Good Morning Greg,

As for the 404 side of things, yes, the application meets the completeness requirements for the standard permit process with the receipt of the labels for adjacent property owner (received them on Monday). Also, I did notice the timeline for construction work, permit issuance timeline and when the work is to be completed is approximately 8 years (March 2022 - August 2030). So, to incorporate that timeline and to ensure there is not any snag in the construction timeline, we will be looking at a 10-year standard permit authorization for the scope of work proposed. We could look at a shorter timeline, but given the scale and scope with all of the various components and approvals, this appears to be the best timeline approach.

Let me know if you have any questions or concerns. Have a Happy New Year!

~Benny

Benny A. Dean Jr.
Regulatory Project Manager
Regulatory Branch, Portland District
U.S. Army Corps of Engineers

Subject: [Non-DoD Source] RE: EQRB JPA submitted

Good afternoon

You will find there are likely several items that are not included that will be required before the USACE can issue, but it is our hope that the application will meet the completeness standard for the 404 at this time.
In addition to 401, other items that will still be required include (likely incomplete list following): letters from land owners, BO from NMFS, Section 106 concurrence, LUC Statement. We will be working throughout the year to gather these items as well as others that you will surely note.

Brian Bauman
D 503.727.3908 **M** 503.289.1722

hdrinc.com/follow-us

From: Higdon, Valerie W CIV USARMY CENWP (USA) <Valerie.W.Higdon@usace.army.mil>
Sent: Wednesday, December 30, 2020 10:06 AM
To: Mazer, Gregory <Gregory.Mazer@hdrinc.com>
Cc: Dean, Benny A Jr CIV USARMY CENWP (USA) <Benny.A.Dean@usace.army.mil>; Bauman, Brian S. <Brian.Bauman@hdrinc.com>
Subject: RE: EQRB JPA submitted

Greg,
Yes, I was able to get the JPA from Benny. We will take some time to look it over and get back to you in Feb, most likely, to let you know what else we're needing. If there is anything that is still being developed by another agency that is required for a complete application (i.e. 401) that will obviously be needed. If something comes up before then I'll be sure to reach out.
Thanks for checking.
-Valerie

From: Mazer, Gregory <Gregory.Mazer@hdrinc.com>
Sent: Thursday, December 24, 2020 8:20 AM
To: Higdon, Valerie W CIV USARMY CENWP (USA) <Valerie.W.Higdon@usace.army.mil>
Cc: Dean, Benny A Jr CIV USARMY CENWP (USA) <Benny.A.Dean@usace.army.mil>; Bauman, Brian S. <Brian.Bauman@hdrinc.com>
Subject: [Non-DoD Source] EQRB JPA submitted

Good morning Valerie,
The JPA for the Earthquake Ready Burnside Project was submitted to USACE through the DOD-administered SAFE site last Friday, the 18th. Have you or will you be able to access the JPA?
The JPA describes both construction approaches under consideration – using in-ground cofferdams for replacing the in-water piers and using perched cofferdams for that purpose. Effects upon

navigation are discussed, and the updated Preliminary Navigation Study is attached to the JPA. The JPA does not include the Sediment Sampling Analysis Plan, which is under development as required by PSET. We anticipate that sampling in the area that will be dredged to attain no net rise certification will occur in spring 2021.

Please let me know if there's anything else that the 408 Review team may need at this time.

Happy holidays,

Greg

Greg Mazer, PWS
Senior Environmental Scientist

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