Public Notice of Application for State of Washington 401 Water Quality Certification & Coastal Zone Management Act Consistency

**Project Name:** Harper Estuary Emergency Bank Stabilization

**Applicant:** Washington Department of Fish and Wildlife

**Project Description:** Retain rock riprap (44 cy below MHHW and 103 cy total) placed along 110 feet of road to stabilize an eroding bank in March 2017. Prior to rock placement, loose bricks, debris, and 2 creosote piles were removed from the site.

**Project Location:** Along SE Olympian Drive at the intersection of SE Southworth Drive, Puget Sound, Port Orchard, Kitsap County, Washington.

**Public Notice Date:** October 17, 2018

**Comment Period Ends:** November 7, 2018


Ecology will review the work pursuant to Section 401 of the Clean Water Act, with applicable provisions of State water pollution control laws and the Coastal Zone Management Act.

Ecology is requesting comments from the public, state and local agencies, tribes, and other interested parties to evaluate the impacts of each proposed activity. Conventional mail or e-mail comments on this public notice will be accepted and made part of the record.

**Comments should be sent to:**
Department of Ecology—SEA Program
Federal Project Coordinator
Post Office Box 47600
Olympia, Washington 98504

or

Online - [http://ws.ecology.commentinput.com/?id=QHsBP](http://ws.ecology.commentinput.com/?id=QHsBP)

To obtain a hard copy of the project information, please call 360-407-6076.
### Part 1 - Project Identification

1. Project Name

Harper Estuary Restoration Project Phase 1 bank stabilization actions (revised 3/9/2017) – This revision is specific to the work taking place on DNR lands, per request of DNR. The revised JARPA dated 3/16/2016 addresses the entire site and was the application for Corps permit, HPA and DOE permits.

### Part 2 - Applicant

The person and/or organization responsible for the project.

<table>
<thead>
<tr>
<th>2a. Name (Last, First, Middle)</th>
<th>Small, Doris</th>
</tr>
</thead>
<tbody>
<tr>
<td>2b. Organization (if applicable)</td>
<td>Washington Department of Fish and Wildlife</td>
</tr>
<tr>
<td>2c. Mailing Address (Street or PO Box)</td>
<td>600 Capitol Way N</td>
</tr>
<tr>
<td>2d. City, State, Zip</td>
<td>Olympia, WA 98501-1076</td>
</tr>
<tr>
<td>2e. Phone (1)</td>
<td>2f. Phone (2)</td>
</tr>
<tr>
<td>(360) 902-2258</td>
<td></td>
</tr>
</tbody>
</table>

### Part 3 - Authorized Agent or Contact

Person authorized to represent the applicant about the project. (Note: Authorized agent(s) must sign 11b of this application.)

<table>
<thead>
<tr>
<th>3a. Name (Last, First, Middle)</th>
<th>Small, Doris</th>
</tr>
</thead>
<tbody>
<tr>
<td>3b. Organization (if applicable)</td>
<td></td>
</tr>
</tbody>
</table>
Part 4 - Property Owner(s)

Contact information for people or organizations owning the property(ies) where the project will occur. Consider both upland and aquatic ownership because the upland owners may not own the adjacent aquatic land.

☐ Same as applicant. (Skip to Part 5.)
☐ Repair or maintenance activities on existing rights-of-way easements. (Skip to Part 5.)
☒ There are multiple upland property owners. Complete the section below and fill out JARPA Attachment A for each additional property owner.
☒ Your project is on Department of Natural Resources (DNR)-managed aquatic lands. If you don't know, contact the DNR at (360) 902-1100 to determine aquatic land ownership. If yes, complete JARPA Attachment E to apply for the Aquatic Use Authorization.

4a. Name (Last, First, Middle)

Lead Contact: Lindie Schmidt

4b. Organization (if applicable)

Washington Dept. Natural Resources, Aquatic Division

4c. Mailing Address (Street or PO Box)

960 Farman Ave North

Enumclaw, WA 98022

4e. Phone (1) 4f. Phone (2) 4g. Fax 4h. E-mail

(360) 825-1631  ( )  ( )  Lindie.Schmidt@dnr.wa.gov

Part 5 - Project Location(s)

Identifying information about the property or properties where the project will occur.

5a. Indicate the type of ownership of the property. (Check all that apply.)

☐ Private
☐ Federal
Publicly owned (state, county, city, special districts like schools, ports, etc.)

Tribal

Department of Natural Resources (DNR) - managed aquatic lands (See JARPA Attachment E)

5b. Street Address (Cannot be a PO Box. If there is no address, provide other location information in 5p.)

At intersection of Olympiad Dr & Southworth Dr near Southworth

5c. City, State, Zip (If the project is not in a city or town, provide the name of the nearest city or town.)

Port Orchard, WA

5d. County

Kitsap

5e. Provide the section, township, and range for the project location.

<table>
<thead>
<tr>
<th>1/4 Section</th>
<th>Section</th>
<th>Township</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>02</td>
<td>23 N</td>
<td>02 E</td>
</tr>
</tbody>
</table>

5f. Provide the latitude and longitude of the project location.

- Example: 47.03922 N lat. / -122.89142 long. (Use decimal degrees - NAD 83)

47.516622 / -122.516761

5g. List the tax parcel number(s) for the project location.

- The local county assessor's office can provide this information.

022302-2-005-2006

5h. Contact information for all adjoining property owners.

<table>
<thead>
<tr>
<th>Name</th>
<th>Mailing Address</th>
<th>Tax Parcel # (If known)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kitsap County</td>
<td>614 Division St. Attn: Kathy Peters</td>
<td>Tideland survey is nearly complete</td>
</tr>
<tr>
<td></td>
<td>Port Orchard, WA 98366</td>
<td></td>
</tr>
<tr>
<td>Washington Dept of Natural Resources</td>
<td>provided</td>
<td>Tideland survey is nearly complete</td>
</tr>
<tr>
<td>Patrick Healey</td>
<td>9934 SE Scatterwood Lane, Port Orchard WA 98366</td>
<td>Tideland survey is nearly complete. Mr. Healey has been informed of project and has verbally agreed to it 3/7/2017.</td>
</tr>
<tr>
<td>Doug Deford</td>
<td>2717 Long Lake Road, Port Orchard WA 98366</td>
<td>Mr. Deford has an offer from Kitsap County for purchase. Negotiations are currently underway.</td>
</tr>
</tbody>
</table>

5i. List all wetlands on or adjacent to the project location.

See Wetland delineation and report for wetlands information. No wetlands are directly or indirectly impacted by the proposed project.
5j: List all waterbodies (other than wetlands) on or adjacent to the project location.

Harper Estuary in Puget Sound is the project location.

5k: Is any part of the project area within a 100-year floodplain?

☐ Yes  ☐ No  ☐ Don't know

5l: Briefly describe the vegetation and habitat conditions on the property.

Grass, small trees and shrubs are present along the road shoulder but are regularly trimmed to low levels for sight visibility and due to power lines.

5m: Describe how the property is currently used.

Olympiad Drive is a county road and local access to residences.

5n: Describe how the adjacent properties are currently used.

The Harper Park (county park) is made up of both Harper Estuary and uplands. A recently completed estuarine restoration project is part of the DNR property and Harper Park. There are also residences along the shoreline and some of the estuary uplands.

5o: Describe the structures (above and below ground) on the property, including their purpose(s) and current condition.

No structures other than roadway.

5p: Provide driving directions from the closest highway to the project location, and attach a map.

From Tacoma: Highway 16 north to Sedgewick Dr exit. Turn east and drive ten miles. Turn left on Cottonwood Dr and left on to Southworth Drive. Estuary is at intersection of Southworth Drive and Olympiad Drive, near the Southworth ferry dock.

From Port Orchard: Drive east on Mille Hill Drive to Harper area. Turn right onto Southworth Drive. Site is at intersection of Olympiad Drive and Southworth Drive.

See project plans for vicinity map.

Part 6 - Project Description

6a: Briefly summarize the overall project. You can provide more detail in 6b.

The proposed project will address an erosion issue along the North side of Olympiad Drive that has developed since the estuarine restoration project was completed. The road was built on loose brick fill and is rapidly eroding since receiving more direct storm waves after removal of the boat landing.

We propose adding approximately 103 cy of rock rip rap along a 110 section of road embankment as indicated in the attached plans. The rip rap (mix of up to 4 man rock) sloped at 1:1. The brick material that has eroded from the road fill onto the substrate and a small amount of vegetation along the edge of the road shoulder will be removed from the substrate in order to key in the toe rock (approximately two feet deep). We will not be able to excavate into the road fill as it is very close to the water main and roadway at this time.
The total project is approximately 545 square feet with 44 cy of material below MHHW. After completion, we will hydro seed the upper slope and plant low growing plants along the upper bank above the high water line and along the edge of the road shoulder where there is room to do so.

For the Harper Estuary restoration project, a stairway in this location was initially proposed and received authorization from the Corps of Engineers, Kitsap County and WDFW. This stairway was a larger footprint than the proposed work (approximately 2000 sq ft) and extended further into the estuary. We will not be building the stairway, but will instead construct the bank protection along the eroded bank that it would have covered.

6b. Describe the purpose of the project and why you want or need to perform it:

The proposed bank protection will protect Olympiad Drive until Phase 2 of the Harper Estuary Restoration project is funded to install a 120' bridge. The bank protection is necessary to avoid endangering the public from eminent road failure that would increase emergency response times to residents in the area. In addition, a water main (Manchester Water District) is approximately two feet from the edge of the roadway and at risk from erosion. A power pole will also be protected with this work. The bank protection would be modified or removed at the time of bridge installation, making it a temporary impact.

The portion of the project on DNR land is essential to accomplishment of the bank stabilization actions. The project will protect Olympiad Drive until Phase 2 (bridge replacement of 120') will begin.

6c. Indicate the project category. (Check all that apply.)

- Commercial
- Residential
- Institutional
- Transportation
- Recreational
- Maintenance
- Environmental Enhancement

6d. Indicate the major elements of your project. (Check all that apply.)

- Aquaculture
- Bank Stabilization
- Boat House
- Boat Launch
- Boat Lift
- Bridge
- Bulkhead
- Buoy
- Channel Modification
- Culvert
- Dam / Weir
- Dike / Levee / Jetty
- Ditch
- Dock / Pier
- Dredging
- Fence
- Ferry Terminal
- Fishway
- Float
- Floating Home
- Geotechnical Survey
- Land Clearing
- Marina / Moorage
- Mining
- Outfall Structure
- Piling / Dolphin
- Raft
- Retaining Wall (upland)
- Road
- Scientific Measurement Device
- Stairs
- Stormwater Facility
- Swimming Pool
- Utility Line
- Other:

6e. Describe how you plan to construct each project element checked in 6d. Include specific construction methods and equipment to be used.

- Identify where each element will occur in relation to the nearest waterbody.
- Indicate which activities are within the 100-year floodplain.

Debris Removal and Bank Stabilization: Surface exposed bricks and debris will be removed from the 585 square foot project area before rock is installed. The amount removed will be less than 1 cy of debris and bricks and will be disposed of in a proper upland waste facility. The rock wall will countersunk 2 feet below the existing estuary elevation as a base layer. The rock will slope at a 1:1 ratio and extend up to 6 feet waterward of the top of the slope at a length of 120 feet and a project footprint of 585 square feet.
Construction contractor will work at low tide in order to remove debris and place rock. We expect to use excavators and dump trucks to remove debris and place rock stabilization from the roadway. Equipment will not need to access the mudflat to perform this work.

Project plan is attached to this application.

6f. What are the anticipated start and end dates for project construction? (Month/Year) [help]
   - If the project will be constructed in phases or stages, use JARPA Attachment D to list the start and end dates of each phase or stage.

   Start Date: 3/13/2017    End Date: 04/15/2017    [x] See JARPA Attachment D

6g. Fair market value of the project, including materials, labor, machine rentals, etc.

   TBD – approximately $100,000

6h. Will any portion of the project receive federal funding?
   - If yes, list each agency providing funds.

   [ ] Yes  [x] No  [ ] Don't know

Part 7 - Wetlands: Impacts and Mitigation
   [x] Check here if there are wetlands or wetland buffers on or adjacent to the project area.

7a. Describe how the project has been designed to avoid and minimize adverse impacts to wetlands.

   [x] Not applicable

7b. Will the project impact wetlands?

   [ ] Yes  [x] No  [ ] Don't know

7c. Will the project impact wetland buffers?

   [ ] Yes  [ ] No  [ ] Don't know

7d. Has a wetland delineation report been prepared?
   - If Yes, submit the report, including data sheets, with the JARPA package.

   [x] Yes  [ ] No  Not applicable to this project

7e. Have the wetlands been rated using the Western Washington or Eastern Washington Wetland Rating System?
   - If Yes, submit the wetland rating forms and figures with the JARPA package.

   [x] Yes  [ ] No  

7f. Have you prepared a mitigation plan to compensate for any adverse impacts to wetlands?
   - If Yes, submit the plan with the JARPA package and answer 7g.
   - If No, or Not applicable, explain below why a mitigation plan should not be required.
7g. Summarize what the mitigation plan is meant to accomplish, and describe how a watershed approach was used to design the plan.

7h. Use the table below to list the type and rating of each wetland impacted, the extent and duration of the impact, and the type and amount of mitigation proposed. Or if you are submitting a mitigation plan with a similar table, you can state (below) where we can find this information in the plan. [help]

<table>
<thead>
<tr>
<th>Activity (fill, drain, excavate, flood, etc.)</th>
<th>Wetland Name¹</th>
<th>Wetland type and rating category²</th>
<th>Impact area (sq. ft. or Acres)</th>
<th>Duration of Impact³</th>
<th>Proposed mitigation type⁴</th>
<th>Wetland mitigation area (sq. ft. or acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>

7i. For all filling activities identified in 7h, describe the source and nature of the fill material, the amount in cubic yards that will be used, and how and where it will be placed into the wetland.

No wetlands impacted.

7j. For all excavating activities identified in 7h, describe the excavation method, type and amount of material in cubic yards you will remove, and where the material will be disposed.

No wetlands impacted.

Part 8 - Waterbodies (other than wetlands): Impacts and Mitigation

In Part 8, "waterbodies" refers to non-wetland waterbodies. (See Part 7 for information related to wetlands.)

☑ Check here if there are waterbodies on or adjacent to the project area. (If there are none, skip to Part 9.)

8a. Describe how the project is designed to avoid and minimize adverse impacts to the aquatic environment.

☐ Not applicable
We will avoid and minimize impacts by working with tidal cycles to maximize work at low tides, low impact construction methods and erosion control work. We will also sequence construction activities to minimize work in sensitive areas.

8b. Will your project impact a waterbody or the area around a waterbody?
- Yes
- No

8c. Have you prepared a mitigation plan to compensate for the project's adverse impacts to non-wetland waterbodies?
- If Yes, submit the plan with the JARPA package and answer 8d.
- If No, or Not applicable, explain below why a mitigation plan should not be required.
- Yes
- No
- Not applicable

We are proposing to plant native willow stakes between the road and the proposed bank protection rock.

8d. Summarize what the mitigation plan is meant to accomplish. Describe how a watershed approach was used to design the plan.

Although planting native species of willows above the bank stabilization is an out of kind mitigation plan, the planting will provide habitat for wildlife, while also providing a food source for estuarine species of fish and wildlife. There are no possibilities for more fill removal, since Phase 1 of the Harper Estuary Restoration Project removed extensive amounts of industrial fill in the same project area.

8e. Summarize impact(s) to each waterbody in the table below.

<table>
<thead>
<tr>
<th>Activity (clear, dredge, fill, pile drive, etc.)</th>
<th>Waterbody name</th>
<th>Impact location</th>
<th>Duration of impact</th>
<th>Amount of material (cubic yards) to be placed in or removed from waterbody</th>
<th>Area (sq. ft. or linear ft.) of waterbody directly affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fill</td>
<td>Harper Estuary</td>
<td>Within Harper Estuary</td>
<td>Temporary</td>
<td>103 cubic yards placed</td>
<td>585 sq ft.</td>
</tr>
<tr>
<td>Removed</td>
<td>Harper Estuary</td>
<td>Within Harper Estuary</td>
<td>Permanent</td>
<td>Less than 1 cubic yard</td>
<td>585 sq ft.</td>
</tr>
</tbody>
</table>

8f. For all activities identified in 8e, describe the source and nature of the fill material, amount (in cubic yards) you will use, and how and where it will be placed into the waterbody.

Class C RESP (rock for erosion and scour protection) of approximately 103 cubic yards, with a total of 44 cubic yards below MHHW will be placed as bank protection. The rock will be angular and up to 4 man stone (40" Boulder). WSDOT Spec. 9-13.4(2).

8g. For all excavating or dredging activities identified in 8e, describe the method for excavating or dredging, type and amount of material you will remove, and where the material will be disposed.
Surface debris and bricks will be removed from the project footprint area before the bank stabilization rock is placed. Any debris removed from the area will be excavated by an excavator and will be disposed of in a proper upland waste facility by dump truck.

### Part 9 - Additional Information

Any additional information you can provide helps the reviewer(s) understand your project. Complete as much of this section as you can. It is ok if you cannot answer a question.

#### 9a. If you have already worked with any government agencies on this project, list them below.

<table>
<thead>
<tr>
<th>Agency Name</th>
<th>Contact Name</th>
<th>Phone</th>
<th>Most Recent Date of Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>WDFW</td>
<td>Brittany Gordon</td>
<td></td>
<td>March 2017</td>
</tr>
<tr>
<td>Kitsap County</td>
<td>Lisa Lewis,</td>
<td></td>
<td>March 2017</td>
</tr>
<tr>
<td>Corps of Engineers</td>
<td>Jerry Gregory</td>
<td></td>
<td>March 2017</td>
</tr>
<tr>
<td>DNR</td>
<td>Lindie Schmidt</td>
<td></td>
<td>March 2017</td>
</tr>
<tr>
<td>Dept of Ecology</td>
<td>Celina Abercrombie</td>
<td></td>
<td>March 2017</td>
</tr>
</tbody>
</table>

#### 9b. Are any of the wetlands or waterbodies identified in Part 7 or Part 8 of this JARPA on the Washington Department of Ecology's 303(d) List?

- [ ] Yes  - [x] No

#### 9c. What U.S. Geological Survey Hydrological Unit Code (HUC) is the project in?

17110019

#### 9d. What Water Resource Inventory Area Number (WRIA #) is the project in?

WRIA 15

#### 9e. Will the in-water construction work comply with the State of Washington water quality standards for turbidity?

- [x] Yes  - [ ] No  - [ ] Not Applicable

#### 9f. If the project is within the jurisdiction of the Shoreline Management Act, what is the local shoreline environment designation?

- [ ] Rural  - [ ] Urban  - [ ] Natural  - [ ] Aquatic  - [ ] Conservancy  - [x] Other: Park

#### 9g. What is the Washington Department of Natural Resources Water Type?

- [x] Shoreline  - [x] Fish  - [ ] Non-Fish Perennial  - [ ] Non-Fish Seasonal

#### 9h. Will this project be designed to meet the Washington Department of Ecology's most current stormwater manual?

- [ ] If No, provide the name of the manual your project is designed to meet.
9l. Does the project site have known contaminated sediment?
   - If Yes, please describe below:

9j. If you know what the property was used for in the past, describe below.

The property has been part of the Harper Park for recent decades. A brick and tile factory was previously at the site (about 1940).

9k. Has a cultural resource (archaeological) survey been performed on the project area?
   - If Yes, attach it to your JARPA package.

9l. Name each species listed under the federal Endangered Species Act that occurs in the vicinity of the project area or might be affected by the proposed work.

Puget Sound Chinook salmon and steelhead are the most likely to be in the vicinity. Other listed species in Puget Sound include killer whale and bull trout, although unlikely at the project site.

9m. Name each species or habitat on the Washington Department of Fish and Wildlife's Priority Habitats and Species List that might be affected by the proposed work.

Puget Sound coastal cutthroat, geoduck, Dungeness crab, Estuarine & marine wetlands; freshwater emergent wetlands

Part 10 - SEPA Compliance and Permits

Use the resources and checklist below to identify the permits you are applying for.

- Online Project Questionnaire at [http://apps.ecy.wa.gov/opes/](http://apps.ecy.wa.gov/opes/)
- Governor's Office for Regulatory Innovation and Assistance at (800) 917-0043 or help@ora.wa.gov.
- For a list of addresses to send your JARPA to, click on agency addresses for completed JARPA.

10a. Compliance with the State Environmental Policy Act (SEPA). (Check all that apply.)
   - For more about SEPA, go to [www.ecy.wa.gov/programs/sea/sepa/e-review.html](http://www.ecy.wa.gov/programs/sea/sepa/e-review.html)

- ☐ A copy of the SEPA determination or letter of exemption is included with this application.
- ☒ A SEPA determination was completed by WDFW (lead agency) with a DNS issued in Nov 2015. With the project changes, WDFW published an addendum and reopened SEPA comments in Mar 2016.

- ☐ I am applying for a Fish Habitat Enhancement Exemption. (Check the box below in 10b)

- ☒ This project is exempt (choose type of exemption below).
   - ☒ Categorical Exemption. Under what section of the SEPA administrative code (WAC) is it exempt?
     - ☒ Emergency work
10b. Indicate the permits you are applying for. (Check all that apply.)

**LOCAL GOVERNMENT**

- Local Government Shoreline permits:
  - ☐ Substantial Development
  - ☑ Administrative Conditional Use
  - ☐ Variance
  - ☑ Shoreline Exemption Type (explain): We are applying for an emergency exemption

- Other City/County permits:
  - ☐ Floodplain Development Permit
  - ☑ Critical Areas Ordinance

**STATE GOVERNMENT**

- Washington Department of Fish and Wildlife:
  - ☐ Hydraulic Project Approval (HPA)
  - ☑ HPA modification

Effective March 9th, 2017, you must submit a check for $150 to Washington Department of Fish and Wildlife, unless your project qualifies for an exemption or alternative payment method below. **Do not send cash.**

Check the appropriate boxes:
- ☐ $150 check was paid in APPS

**Washington Department of Natural Resources:**
- ☑ Aquatic Use Authorization
  - Complete JARPA Attachment E and submit a check for $25 payable to the Washington Department of Natural Resources. **Do not send cash.**

**Washington Department of Ecology:**
- ☐ Section 401 Water Quality Certification

**FEDERAL GOVERNMENT**

- United States Department of the Army permits (U.S. Army Corps of Engineers):
  - ☑ Section 404 (discharges into waters of the U.S.)
  - ☐ Section 10 (work in navigable waters)

- United States Coastal Guard permits:
  - ☐ Private Aids to Navigation (for non-bridge projects)
Part 11 - Authorizing Signature

Signatures are required before submitting the JARPA package. The JARPA package includes the JARPA form, project plans, photos, etc.

11a. Applicant Signature (required)
I certify that to the best of my knowledge and belief, the information provided in this application is true, complete, and accurate. I also certify that I have the authority to carry out the proposed activities, and I agree to start work only after I have received all necessary permits.
I hereby authorize the agent named in Part 3 of this application to act on my behalf in matters related to this application. __________ (Initial)

By initialing here, I state that I have the authority to grant access to the property. I also give my consent to the permitting agencies entering the property where the project is located to inspect the project site or any work related to the project. __________ (Initial)

Doris Small
Applicant Printed Name

[Signature]
Applicant Signature

3/8/2017
Date

I certify that to the best of my knowledge and belief, the information provided in this application is true, complete, and accurate. I also certify that I have the authority to carry out the proposed activities and I agree to start work only after all necessary permits have been issued.

Doris Small
Authorized Agent Printed Name

[Signature]
Authorized Agent Signature

3/8/2017
Date

11c. Property Owner Signature (If not applicant).

I consent to the permitting agencies entering the property where the project is located to inspect the project site or any work. These inspections shall occur at reasonable times and, if practical, with prior notice to the landowner.

c/o Lindie Schmidt, DNR

Property Owner Printed Name

[Signature]
Property Owner Signature

Date

18 U.S.C 1001 provides that: Whoever, in any manner within the Jurisdiction of any department of agency of the United States knowingly falsifies, conceals, or covers up any trick, scheme, or devise a material fact or makes any false, fictitious, or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious, or fraudulent statement or entry, shall be fined not more than $10,000 or imprisoned not more than 5 years or both.
HARPER ESTUARY RESTORATION PROJECT - PHASE 1

MATCH EX EL 11.0±
MATCH EX EL 10.0±
MATCH EX EL 8.0±

NOTE: CONTOURS SHOWN ARE PRELIMINARY, SURVEYED BY WDFW FOR AS-BUILT CONDITIONS.

REMOVE BRICKS AND DEBRIS FROM TOE AND CONSTRUCT ROCK WALL 1:1 SLOPE. ROCK FOR EROSION AND SCOUR PREVENTION (R.E.S.P.) CLASS 'C' WSDOT STANDARD SPECIFICATION FOR BRIDGE AND MUNICIPAL CONSTRUCTION SECTION 9-13.4(2). 120' LENGTH / 2'-6' HEIGHT VARYING. APPROX 585 SQ FT FOOTPRINT. ALL WORK OUTSIDE OF RIGHT OF WAY ASSUMED STATE OWNED AQUATIC LANDS.

~ Olympiad Drive Shoulder Erosion Site Plan ~

NOTES:

DATE: MARCH 10, 2016

SHEET 1 of 2
HARPER ESTUARY RESTORATION PROJECT - PHASE 1

CONSTRUCT 1:1 ROCK WALL FROM TOP OF SLOPE TO MATCH EXISTING ESTUARY ELEVATION. COUNTERSINK 2' BELOW MATCH LOCATION. LINE EXISTING ROAD EMBANKMENT WITH NON-WOVEN GEOTEXTILE.

USE WSDOT ROCK FOR EROSION AND SCOUR PROTECTION CLASS 'C' (WSDOT STD SPEC. 9-13.4(2) (TYP).

SECTION 1
SCALE: H/V 1" = 10'

OLYMPIAD DR W.B.
EL 10.0±
EL 8.0±
MHHW = 5.32'

SECTION 2
SCALE: H/V 1" = 10'

OLYMPIAD DR W.B.
EL 11.0±
EL 5.0±
MHHW = 5.32'

~NOTES AND DETAILS~

NOTES:

DATE: MARCH 10, 2016

Washington Department of FISH and WILDLIFE

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