Department of Community Services
Land Use Planning Division
www.multco.us/landuse

1600 SE 190th Avenue, Portland Oregon 97233-5910 • PH. (503) 988-3043 • Fax (503) 988-3389

14 DAY OPPORTUNITY TO COMMENT

Application for Willamette River Greenway Permit & Design Review

This notice serves to notify neighboring property owners of the opportunity to submit written comments on the proposal described below. All comments should relate to the approval criteria and any neighbor that submits comments will receive the County's complete decision in the mail. **If you do not wish to submit comments, no response is necessary.**

Case File: T2-2021-14229

Subject Site: Multiple Tracts adjacent to NW St. Helen's Rd., Portland. Tracts described below. (See illustrative map on p.2 of this notice).

Map # 2N1W18 -200; 2N1W18 -600; 2N1W18 -400; 2N1W18 -300; 2N1W18 -500
Alt. Acct. # R971180330; R971181020; R971180950; R971180900; R971181000
Property ID # R325039; R506054; R325096; R325091; R503257

Map # 2N1W18D -200; 2N1W18D -100; 2N1W18D -300
Alt. Acct. # R971180340; R971181010; R971181030
Property ID # R325040; R506053; R506055

Map # 2N1W17 -700; 2N1W -2200; 2N1W17 -800; 2N1W20 -100; 2N1W20 -200
Alt. Acct. # R971170060; R971200020; R971170070; R971200010; R971200040
Property ID # R324969; R325132; R324970; R325131; R325133

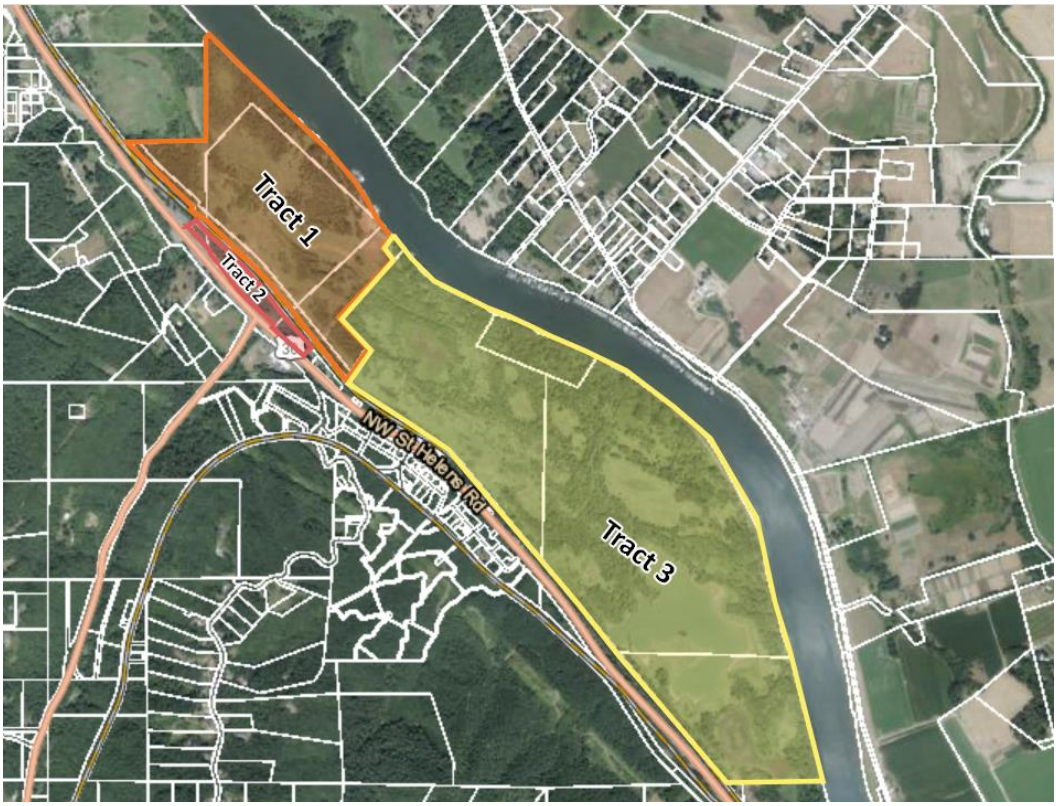
Applicant: Jason Smith, CREST

Base Zone: MUA-20

Overlays: Willamette River Greenway (WRG); Flood Hazard (FD); Protected Aggregate and Mineral – Impact Area (PAM-IA)

Proposal: Columbia River Estuary Study Taskforce (CREST) requests a Willamette River Greenway Permit and Design Review for a restoration project of the "Palensky Wildlife Area" (PWA). CREST will remove a water control structure and two undersized fish barrier culverts, lower marsh-plain elevations, install beaver dam analogs, turtle basking structures, large wood, and replant native shrubs, trees and grasses. The project aims to restore and enhance the natural hydrology and wetlands of the PWA, which will improve the wetland functionality, stormwater infiltration, and water quality.

Vicinity Map **North ↑**



Comment Period: Written comments regarding this application will be accepted, if received by **4:00 pm on May 17, 2021**. Comments should be directed toward approval criteria applicable to the request. Application materials and other evidence relied upon are available for digital review at no cost. Copies of these materials may be purchased for $0.35/per page. For further information regarding this application contact planner, Chris Liu via email at *chris.liu@multco.us*.

Applicable Approval Criteria: [Multnomah County Code (MCC)]

General Provisions: MCC 39.1515 Code Compliance and Applications, MCC 39.2000 Definitions, MCC 39.3005 Lot of Record – Generally, MCC 39.3080 Lot of Record – (MUA-20)

MUA-20 Zone: MCC 39.4310 Allowed Uses – (D), MCC 39.4325 Dimensional Requirements – (C), MCC 39.6850 Dark Sky Lighting Standards

Willamette River Greenway: MCC 39.5910 Uses – Greenway Permit Required, MCC 39.5925 Greenway Permit Application, MCC 39.5935 Greenway Design Plan, MCC 39.5940 Significant Wetlands

Design Review: MCC 39.8025 Design Review Plan Contents, MCC 39.8040 Design Review Criteria - (A)(1)(a), (1)(c), (4) and (7).

Comprehensive Plan Policies: Policy 5.6, Policy 5.15

Copies of the referenced Multnomah County Code sections can be obtained by contacting our office or by visiting our website at *http://multco.us/landuse/zoning-codes/* under the link **Chapter 39 – Zoning Code**.

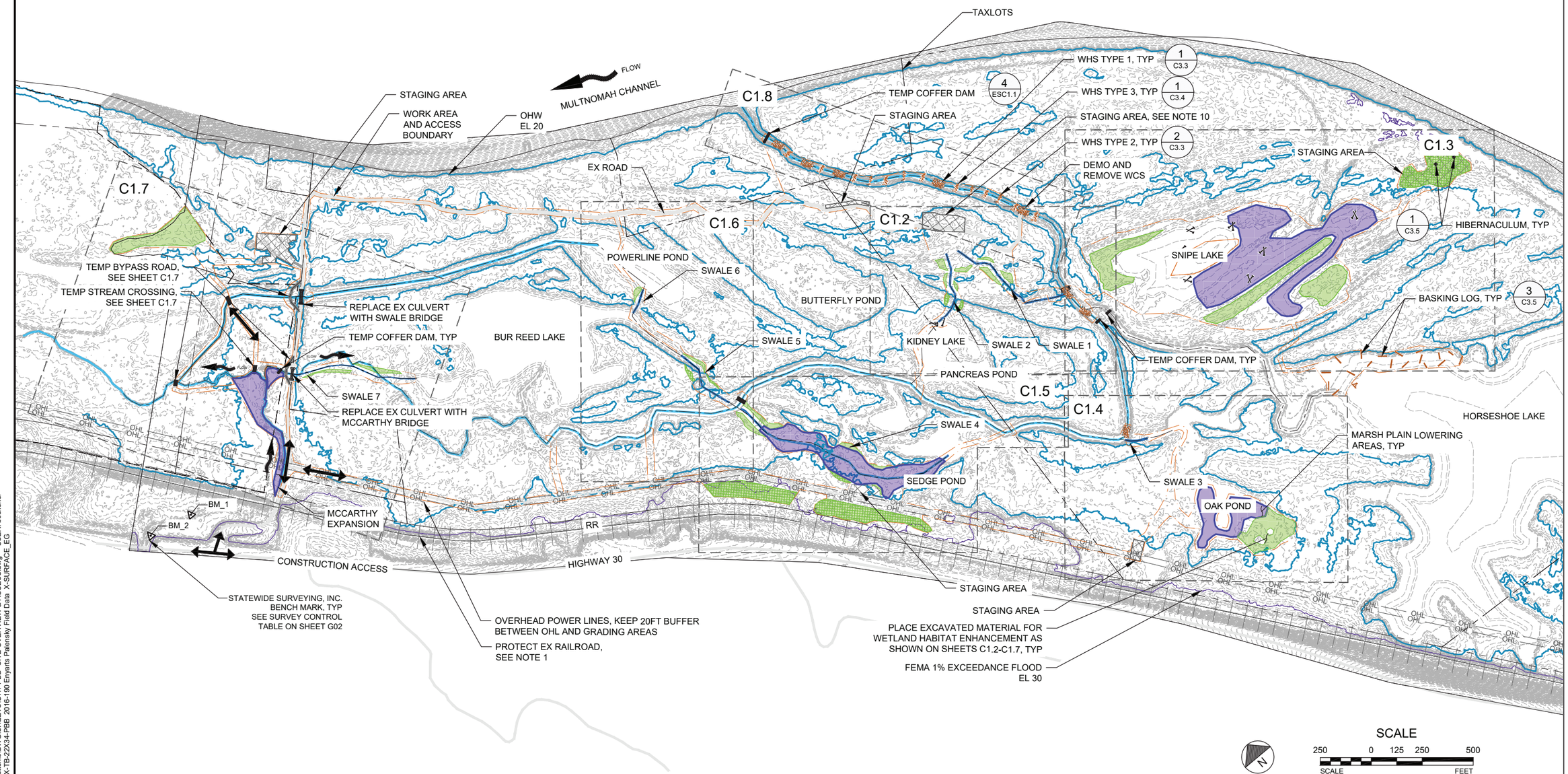
Decision Making Process: The Planning Director will render a decision on this application after the comment period expires. Notice of the Director's decision will be mailed to the applicant, parties within 750 feet of the subject property, any recognized neighborhood associations, and any other persons who submitted written comments during the comment period. The Planning Director's decision can be appealed. An explanation of the requirements for filing an appeal will be included in the notice of decision.

Important Note: Failure to raise an issue before the close of the public record in sufficient detail to afford the County and all parties an opportunity to respond may preclude appeal on that issue to the Land Use Board of Appeals.

Enclosures:
Site Plans

Notice to Mortgagee, Lien Holder, Vendor, or Seller:
ORS Chapter 215 requires that if you receive this notice it must be promptly forwarded to the purchaser.

FINAL DESIGN
MARCH 2021



SITE OVERVIEW & ACCESS PLAN

ODFW IN-WATER WORK WINDOW
JULY 15TH TO SEPTEMBER 30TH

NOTES:

1. CONTRACTOR SHALL COORDINATE WITH CREST FOR ACCESS ACROSS PRIVATE PROPERTY AND RAILROAD PRIOR TO MOBILIZATION.
2. FLAG AREAS TO BE CLEARED AND GRUBBED. CREST SHALL REVIEW AND APPROVE MARKED AREAS BEFORE CLEARING.
3. EXCAVATE MARSH PLAIN LOWERING AREAS PER PLAN C1.3, C1.4, C1.5, C1.7 AND SECTIONS C2.2 AND C2.3.
4. REMOVE EX CULVERTS AND WCS PER PLAN AND SECTIONS CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OF CULVERTS OFF SITE (C4.1, C4.2, C4.4).
5. PLACE EXCAVATION MATERIAL IN THE HABITAT ENHANCEMENT LOCATIONS PER PLANS C1.4, C1.5 AND PER SECTION ON SHEET C2.2. EXCAVATION MATERIAL SHALL BE BLENDED INTO THE SURROUNDING LANDSCAPE. HABITAT ENHANCEMENT AREAS TO BE MARKED IN THE FIELD AND APPROVED BY CREST PRIOR TO CONSTRUCTION.
6. REVEGETATE GRADING AREAS PER PLAN ON THIS SHEET AND ON SHEET L1.1.
7. DOWNED OR CLEARED LOGS ENCOUNTERED DURING EXCAVATION TO BE SALVAGED, STOCKPILED AND PLACED ON OR EMBEDDED IN THE FINISHED GRADE MARSH PLAIN ACCORDING TO THE SPECIFICATIONS.
8. EQUIPMENT SHALL NOT BE DRIVEN OUTSIDE THE WORK AREA AND ACCESS BOUNDARY.
9. CONTRACTOR SHALL PROVIDE SECONDARY CONTAINMENT FOR ALL EQUIPMENT AND MATERIAL STORAGE IN STAGING AREAS WITHIN 150 FEET OF STREAMS AND WETLANDS.
10. ALL VEHICLE STAGING AREAS AND RE-FUELING AREAS SHALL BE ABOVE OHW. STAGING AREAS BELOW OHW ARE FOR TEMPORARY WOOD STOCKPILING AND WCS DEBRIS PRIOR TO OFF-HAULING.

SCALE
250 0 125 250 500
SCALE FEET

LEGEND

- WORK AREA AND ACCESS BOUNDARY
- MARSH PLAIN LOWERING (MPL)
- UPLAND HABITAT ENHANCEMENT
- WETLAND HABITAT ENHANCEMENT

REGISTERED PROFESSIONAL ENGINEER 84779PE OREGON MAR. 8, 2016 AMANDA L. JONES
RENEWS: 6/30/2021

WOLF WATER RESOURCES, INC.
1001 SE WATER AVE. SUITE #160
PORTLAND, OR 97214
503.207.6888

crest
COLUMBIA RIVER ESTUARY STUDY TASKFORCE
818 COMMERCIAL ST., SUITE 203
ASTORIA, OR 97103
503.325.0459

DESIGNED BY AJ/RCC
DRAWN BY RW/BS
CHECKED BY AJ/RCC
APPROVED BY CJL

NO.	DATE	DESCRIPTION
		REVISION

COLUMBIA RIVER ESTUARY STUDY TASKFORCE
PALENSKY RESTORATION PROJECT
PORTLAND, OR

SITE OVERVIEW & ACCESS PLAN

JOB NO. 20160007.2
SHEET NO. C1.1

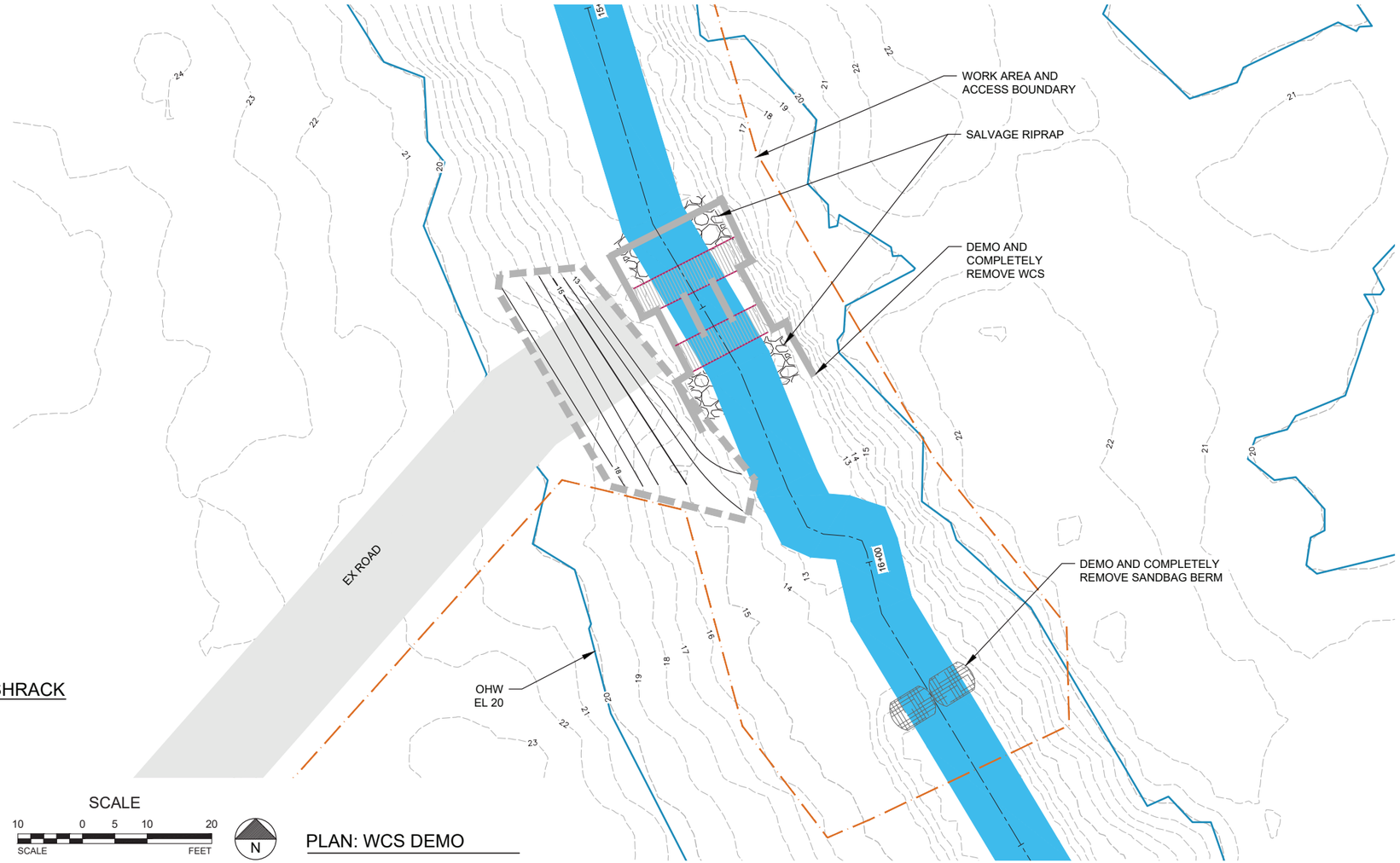
DWG: Z:\Shared\W2\CAD\20160007.2-Palensky-Burlington Bottoms\DWG\SHEETS\C1.1-PBB_SITE OVERVIEW & ACCESS.dwg USER: bschoner
DATE: Mar 15, 2021 2:12pm XREFS:X-DESIGN X-AERIAL X-TB-22X34-PBB 2016-190 Eryarts Palensky Field Data X-SURFACE_EG

FINAL DESIGN
MARCH 2021

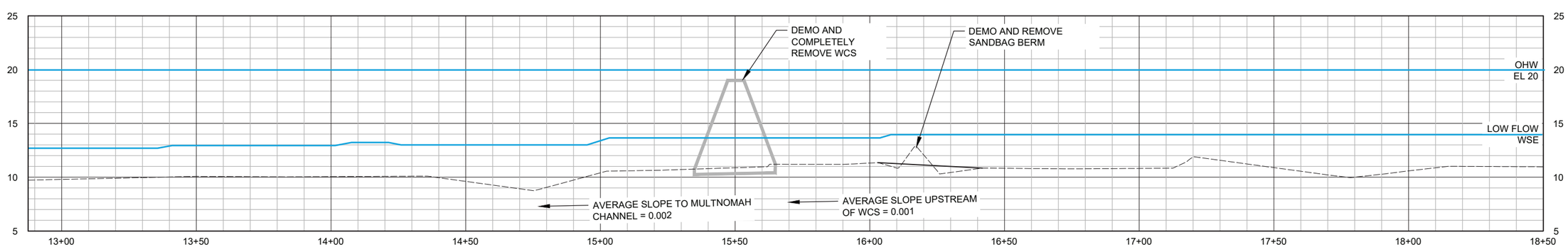
NOTES:

1. DEMO AND COMPLETELY REMOVE WATER CONTROL STRUCTURE. REMOVE ALL NON NATIVE MATERIAL FROM THE SITE AND DISPOSE OF IT IN A LEGAL MANNER.
2. SALVAGE RIPRAP FROM WCS FOR REUSE IN UPLAND HIBERNACULA.
3. FOR REF, WCS CONSISTS OF, BUT IS NOT LIMITED TO:
   - WINGWALLS - APPROX 16' THICK REINFORCED CONCRETE
   - STEEL TUBE RAIL
   - STEEL TRASHRACK
   - STEEL GATE
   - SHOTCRETE
   - RIPRAP

1 VIEW OF WCS LOOKING EAST FROM U/S END AT TRASHRACK



PLAN: WCS DEMO



PROFILE: WCS REMOVAL

SCALE: HORIZONTAL 1" = 20'
VERTICAL EXAGGERATION 4:1

REGISTERED PROFESSIONAL ENGINEER 84779PE OREGON MAR. 8, 2016 AMANDA L. JONES
RENEWS: 6/30/2021

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503.325.0459

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AJ/RCC	RW/BS	AJ/RCC	CJL

NO.	DATE	DESCRIPTION
		REVISION

COLUMBIA RIVER ESTUARY STUDY TASKFORCE
PALENSKY RESTORATION PROJECT
PORTLAND, OR

WCS DEMO PLAN

JOB NO. 20160007.2
SHEET NO. C4.4

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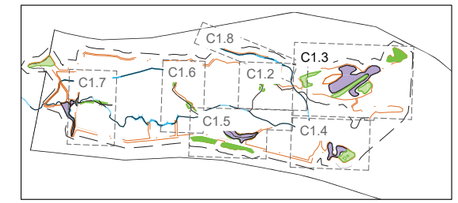
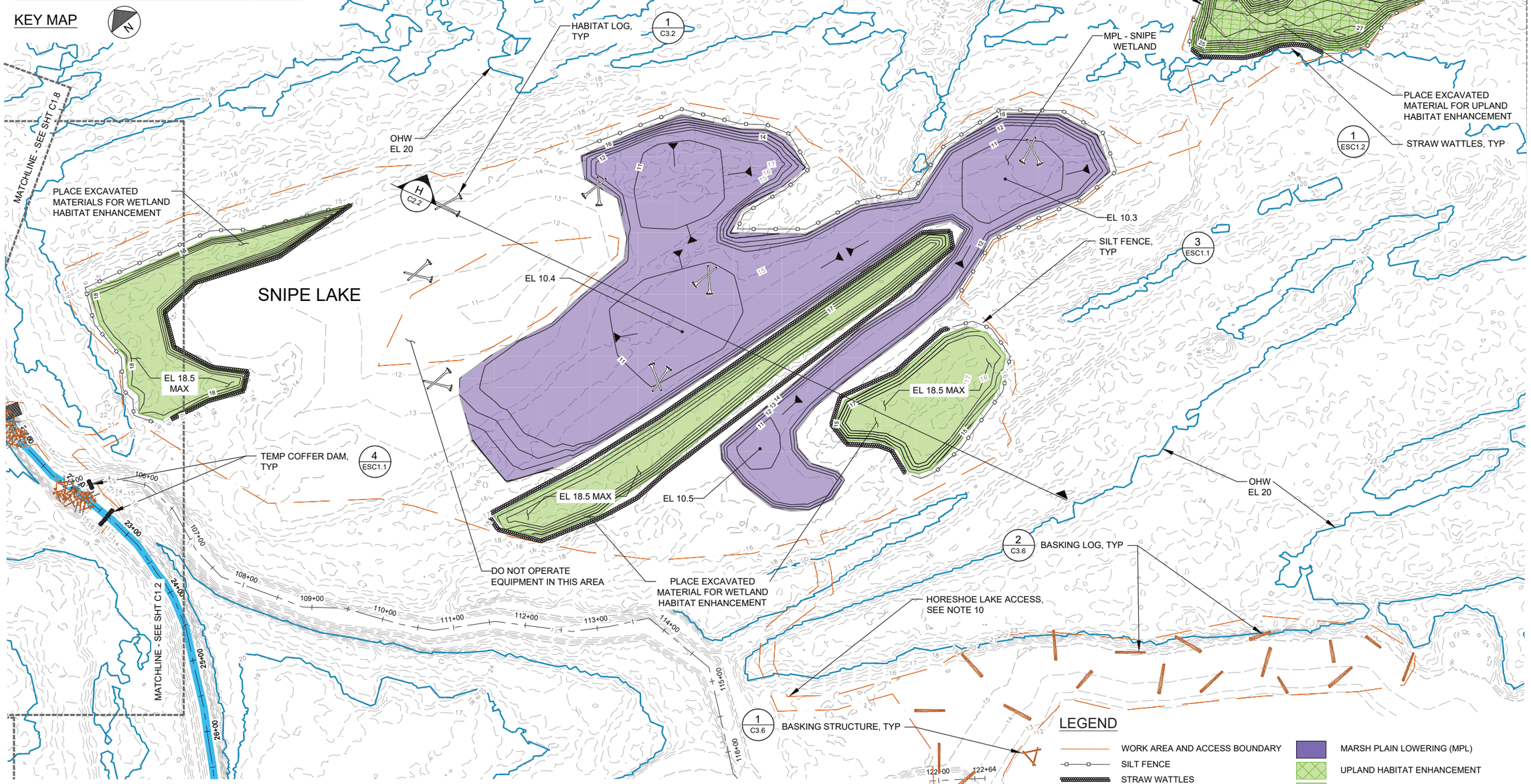
FINAL DESIGN
MARCH 2021



KEY MAP



LEGEND

- WORK AREA AND ACCESS BOUNDARY
- SILT FENCE
- STRAW WATTLES
- MARSH PLAIN LOWERING (MPL)
- UPLAND HABITAT ENHANCEMENT
- WETLAND HABITAT ENHANCEMENT

PLAN: SNIPE WETLAND

SCALE

70 0 35 70 140

SCALE FEET

ODFW IN-WATER WORK WINDOW
JULY 15TH TO SEPTEMBER 30TH

NOTES:

1. TEMPORARY STREAM CROSSINGS ARE NOT PERMITTED UNLESS APPROVED BY DSL AND CAR PRIOR TO IMPLEMENTATION.
2. FLAG AREAS TO BE CLEARED AND GRUBBED. CREST SHALL REVIEW AND APPROVE MARKED AREAS BEFORE CLEARING.
3. EXCAVATE MARSH PLAIN LOWERING AREAS AS SHOWN.
4. EXCAVATED MATERIAL FROM MARSH PLAIN LOWERING TO BE PLACED IN HABITAT ENHANCEMENT AREAS PER THIS SHEET.
5. WETLAND ENHANCEMENT AREAS WHICH ARE BELOW OHW EL 20, MAX FG ELEVATION SHALL BE EL 18.5.
6. CONSTRUCT WOOD STRUCTURES AS SHOWN ON SHEETS C3.1 THROUGH C3.4.
7. DOWNED LOGS ENCOUNTERED DURING EXCAVATION TO BE SALVAGED, STOCKPILED AND PLACED ON OR EMBEDDED IN THE FINISHED GRADE MARSH PLAIN ACCORDING TO THE SPECIFICATIONS.
8. EQUIPMENT SHALL NOT BE DRIVEN OUTSIDE THE WORK AREA AND ACCESS BOUNDARY.
9. REVEGETATE WORK AREAS PER THIS SHEET AND SCHEDULE ON SHEET L1.1.
10. COORDINATE WITH CREST IN THE FIELD PRIOR TO ACCESSING HORSESHOE LAKE FOR APPROVAL OF ROUTE. PLACE MATS FOR ACCESS ALONG LAKESHORE. MINIMIZE IMPACTS TO VEGETATION TO THE EXTENT PRACTICAL.

REGISTERED PROFESSIONAL ENGINEER 84779PE OREGON MAR. 8, 2016 AMANDA L. JONES

RENEWS: 6/30/2021

WOLF WATER RESOURCES, INC.
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DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
AJ/RCC	RW/BS	AJ/RCC	CJL

NO.	DATE	DESCRIPTION
		REVISION

COLUMBIA RIVER ESTUARY STUDY TASKFORCE

PALENSKY RESTORATION PROJECT

PORTLAND, OR

PLAN
SNIPE WETLAND

JOB NO. 20160007.2

SHEET NO. C1.3

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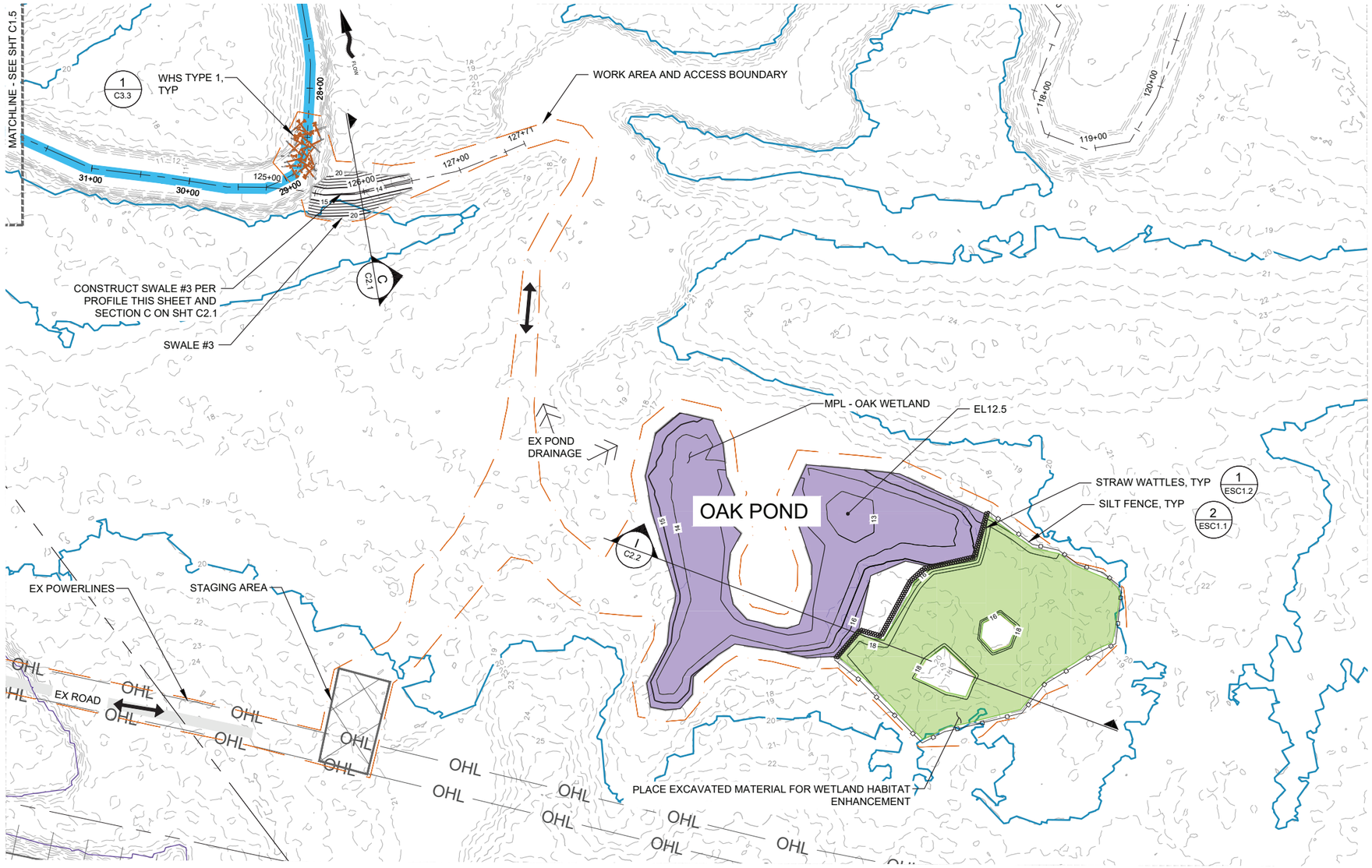
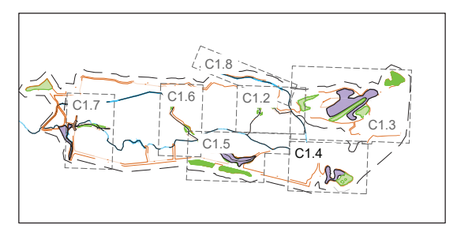
FINAL DESIGN
MARCH 2021



PLAN: OAK WETLAND

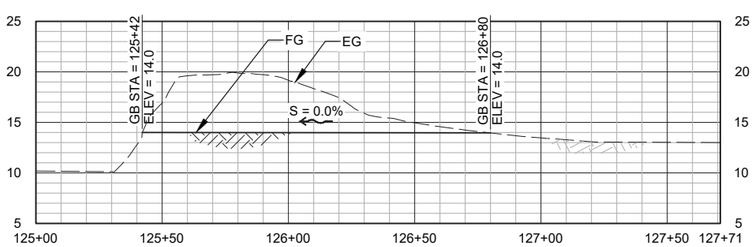
NOTES:

1. TEMPORARY STREAM CROSSINGS ARE NOT PERMITTED UNLESS APPROVED BY DSL AND CAR PRIOR TO IMPLEMENTATION.
2. FLAG AREAS TO BE CLEARED AND GRUBBED. CREST SHALL REVIEW AND APPROVE MARKED AREAS BEFORE CLEARING.
3. EXCAVATE SWALES PER PLAN AND PROFILE ON THIS SHEET AND SECTIONS ON C2.1.
4. EXCAVATE MARSH PLAIN LOWERING AREAS 2-3 FEET.
5. EXCAVATED MATERIAL FROM SWALES SHALL BE SIDE CAST ALONG THE SWALES AND GRADED IN LOW, NATURAL, UNDULATING HUMMOCKS.
6. EXCAVATED MATERIAL FROM MARSH PLAIN LOWERING TO BE PLACED IN HABITAT ENHANCEMENT AREAS PER PLAN ON THIS SHEET AND PER SECTION ON SHEET C2.2.
7. WETLAND ENHANCEMENT AREAS, WHICH ARE BELOW OHW EL 20, MAX FG ELEVATION SHALL BE EL 18.5.
8. CONSTRUCT WOOD STRUCTURES AS SHOWN ON SHEETS C3.1 THROUGH C3.4.
9. DOWNED LOGS ENCOUNTERED DURING EXCAVATION TO BE SALVAGED, STOCKPILED AND PLACED ON OR EMBEDDED IN THE FINISHED GRADE MARSH PLAIN ACCORDING TO THE SPECIFICATIONS.
10. EQUIPMENT SHALL NOT BE DRIVEN OUTSIDE THE WORK AREA AND EXCLUSION BOUNDARY.
11. PLACE EXCAVATION FROM SWALE 3 IN OAK WETLAND HABITAT ENHANCEMENT AREA.
12. REVEGETATE WORK AREAS PER THIS SHEET AND SCHEDULE ON L1.1.



KEY MAP

SCALE
60 0 30 60 120
SCALE FEET



PROFILE: HORESHOE LAKE CONNECTION (SWALE #3)

SCALE: HORIZONTAL 1" = 30'
VERTICAL EXAGGERATION 4:1

LEGEND

- WORK AREA AND ACCESS BOUNDARY
- SILT FENCE
- STRAW WATTLES
- MARSH PLAIN LOWERING (MPL)
- UPLAND HABITAT ENHANCEMENT
- WETLAND HABITAT ENHANCEMENT

ODFW IN-WATER WORK WINDOW
JULY 15TH TO SEPTEMBER 30TH

REGISTERED PROFESSIONAL ENGINEER 84779PE OREGON MAR. 8, 2016 AMANDA L. JONES
RENEWS: 6/30/2021

WOLF WATER RESOURCES, INC.
1001 SE WATER AVE. SUITE #160
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503.207.6888

crest
COLUMBIA RIVER ESTUARY STUDY TASKFORCE
818 COMMERCIAL ST., SUITE 203
ASTORIA, OR 97103
503.325.0459

DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
AJ/RCC	RW/BS	AJ/RCC	CJL

NO.	DATE	DESCRIPTION
		REVISION

COLUMBIA RIVER ESTUARY STUDY TASKFORCE

PALENSKY RESTORATION PROJECT
PORTLAND, OR

PLAN & PROFILE
OAK WETLAND

JOB NO. 20160007.2

SHEET NO. C1.4

DWG: Z:\Share4\W2\CAD\20160007.2-Palensky-Burlington Bottoms\DWG\SHEETS\C1.2-1.4-PBB.dwg USER: bschoner
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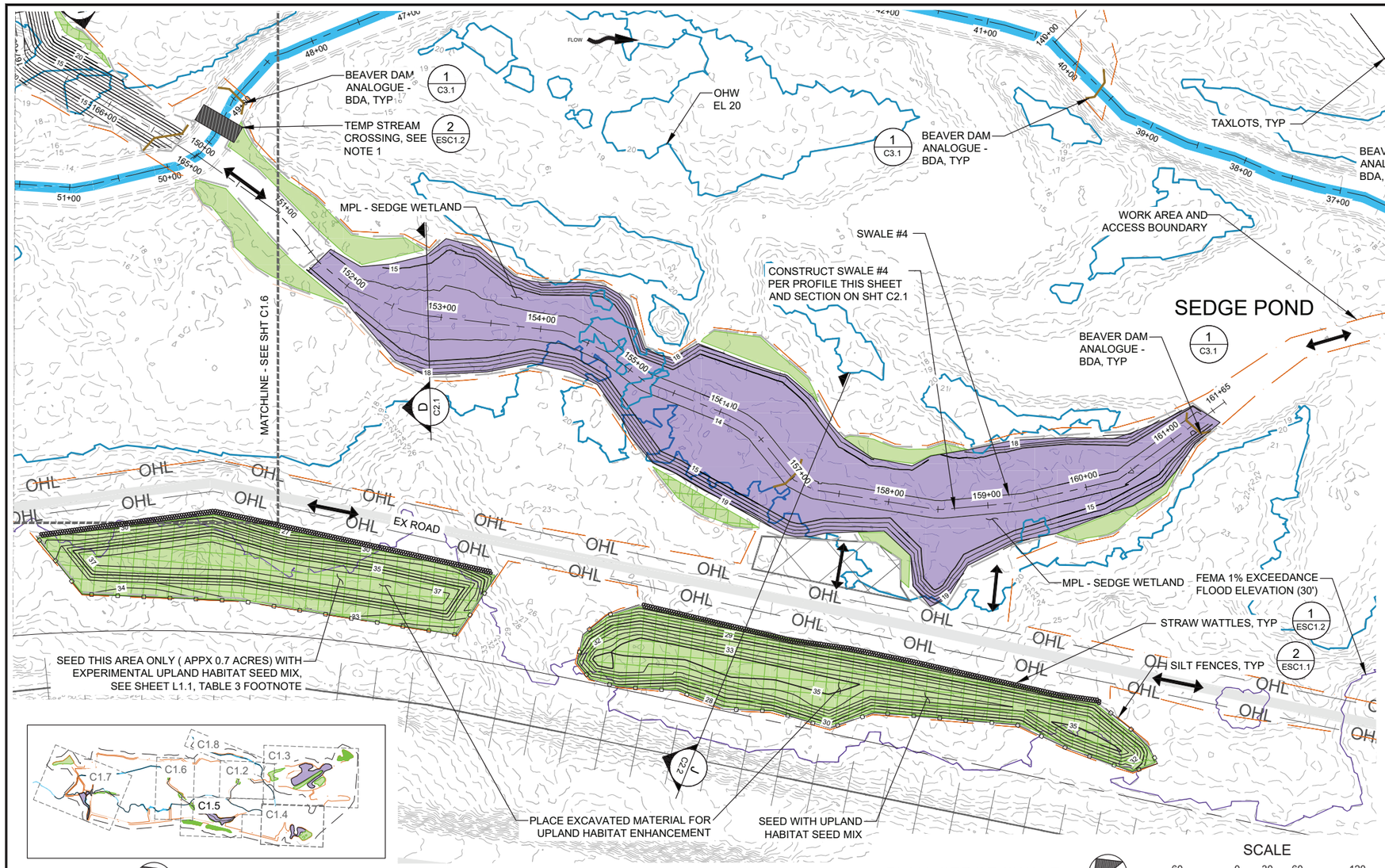
FINAL DESIGN
MARCH 2021



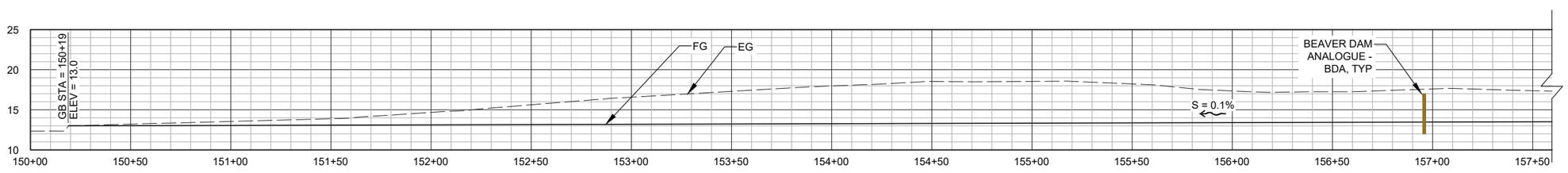
KEY MAP

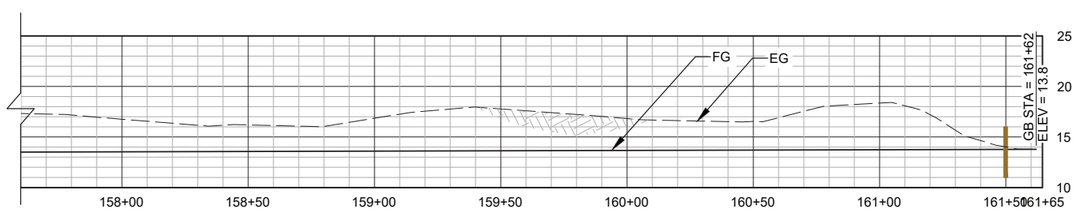
PLAN: SEDGE SWALE

SCALE
60 0 30 60 120
SCALE FEET

NOTES:

1. TEMPORARY STREAM CROSSINGS ARE NOT PERMITTED UNLESS APPROVED BY DSL AND CAR PRIOR TO IMPLEMENTATION.
2. FLAG AREAS TO BE CLEARED AND GRUBBED. CREST SHALL REVIEW AND APPROVE MARKED AREAS BEFORE CLEARING.
3. EXCAVATE SWALES PER PLAN AND PROFILE ON THIS SHEET AND SECTIONS ON C2.1.
4. EXCAVATE MARSH PLAIN LOWERING AREAS 2-3 FEET.
5. EXCAVATED MATERIAL FROM SWALES SHALL BE SIDE CAST ALONG THE SWALES AND GRADED IN LOW, NATURAL, UNDULATING HUMMOCKS.
6. EXCAVATED MATERIAL FROM MARSH PLAIN LOWERING TO BE PLACED IN HABITAT ENHANCEMENT AREAS PER PLAN ON THIS SHEET AND PER SECTION ON SHEET C2.2.
7. WETLAND ENHANCEMENT AREAS, WHICH ARE BELOW OHW EL 20, MAX FG ELEVATION SHALL BE EL 18.5.
8. CONSTRUCT WOOD STRUCTURES AS SHOWN ON SHEETS C3.1 THROUGH C3.4.
9. DOWNED LOGS ENCOUNTERED DURING EXCAVATION TO BE SALVAGED, STOCKPILED AND PLACED ON OR EMBEDDED IN THE FINISHED GRADE MARSH PLAIN ACCORDING TO THE SPECIFICATIONS.
10. EQUIPMENT SHALL NOT BE DRIVEN OUTSIDE THE WORK AREA AND ACCESS BOUNDARY.
11. REVEGETATE WORK AREAS PER THIS SHEET AND SCHEDULE ON SHEET L1.1. NORTHERN UPLAND HABITAT ENHANCEMENT ON THIS SHEET (APPX 0.7 ACRES) TO BE SEEDED WITH EXPERIMENTAL UPLAND SEED MIX AS INDICATED ON THIS SHEET AND PER TABLE 3 ON SHEET L1.1.





PROFILE: SEDGE SWALE #4

SCALE: HORIZONTAL 1" = 30'
VERTICAL EXAGGERATION 4:1

LEGEND

- WORK AREA AND ACCESS BOUNDARY
- SILT FENCE
- STRAW WATTLES
- MARSH PLAIN LOWERING (MPL)
- UPLAND HABITAT ENHANCEMENT
- WETLAND HABITAT ENHANCEMENT

ODFW IN-WATER WORK WINDOW
JULY 15TH TO SEPTEMBER 30TH

REGISTERED PROFESSIONAL ENGINEER 84779PE OREGON MAR. 8, 2016 AMANDA L. JONES
RENEWS: 6/30/2021

WOLF WATER RESOURCES, INC.
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crest
COLUMBIA RIVER ESTUARY STUDY TASKFORCE
818 COMMERCIAL ST., SUITE 203
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503.325.0459

NO.	DATE	DESCRIPTION	REVISION

DESIGNED BY AJ/RCC
DRAWN BY RW/BS
CHECKED BY AJ/RCC
APPROVED BY CJL

COLUMBIA RIVER ESTUARY STUDY TASKFORCE
PALENSKY RESTORATION PROJECT
PORTLAND, OR

PLAN & PROFILE
SEDGE WETLAND

JOB NO. 20160007.2
SHEET NO. C1.5

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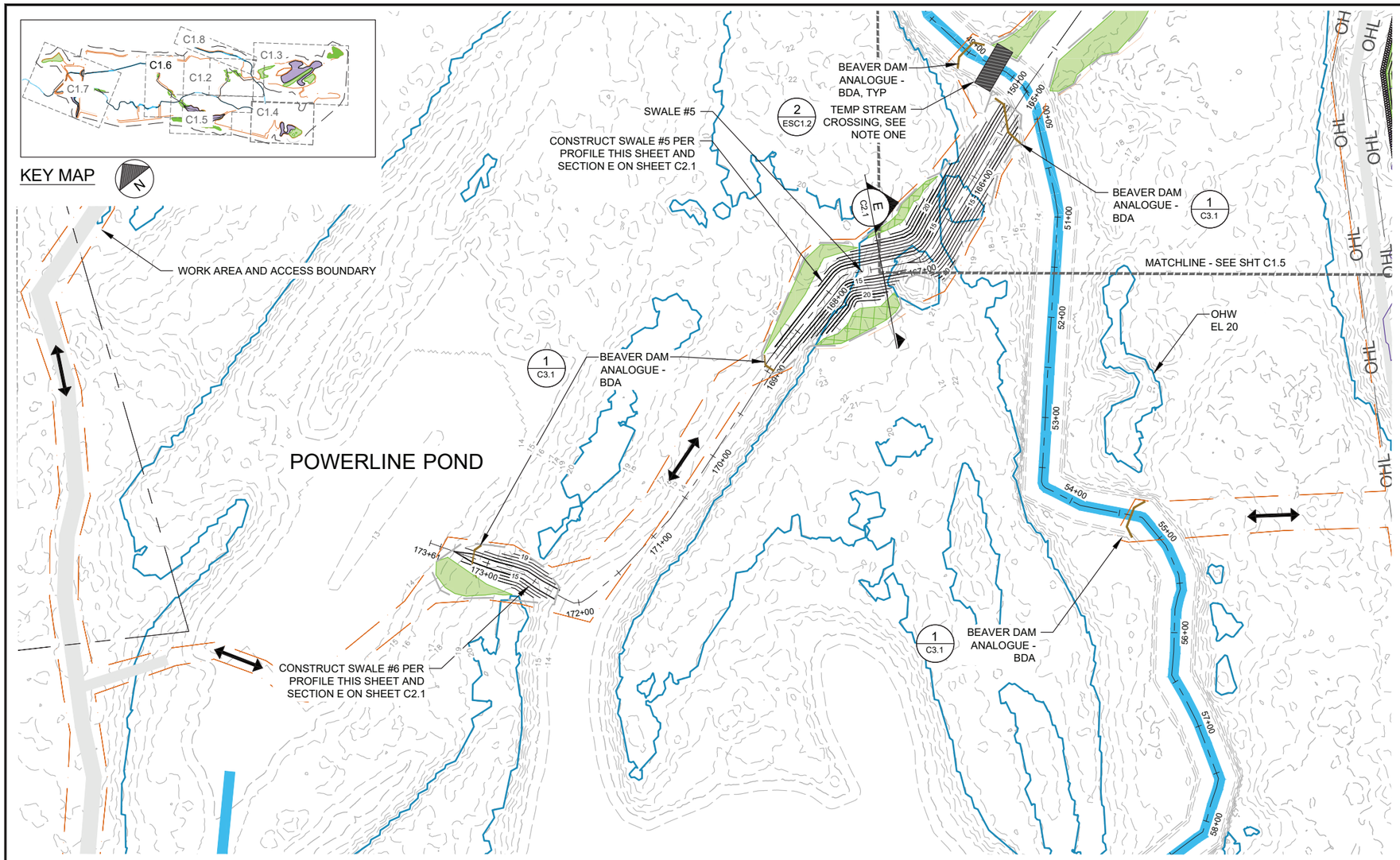
FINAL DESIGN
MARCH 2021



NOTES:

1. TEMPORARY STREAM CROSSINGS ARE NOT PERMITTED UNLESS APPROVED BY DSL AND CAR PRIOR TO IMPLEMENTATION.
2. FLAG AREAS TO BE CLEARED AND GRUBBED. CREST SHALL REVIEW AND APPROVE MARKED AREAS BEFORE CLEARING.
3. EXCAVATE SWALES PER PLAN AND PROFILE ON THIS SHEET AND SECTIONS ON C2.1.
4. EXCAVATED MATERIAL FROM SWALES SHALL BE SIDE CAST ALONG THE SWALES AND GRADED IN LOW, NATURAL, UNDULATING HUMMOCKS.
5. WETLAND ENHANCEMENT AREAS WHICH ARE BELOW OHW EL 20, MAX FG ELEVATION SHALL BE EL 18.5.
6. CONSTRUCT WOOD STRUCTURES AS SHOWN ON SHEETS C3.1 THROUGH C3.4.
7. DOWNED LOGS ENCOUNTERED DURING EXCAVATION TO BE SALVAGED, STOCKPILED AND PLACED ON OR EMBEDDED IN THE FINISHED GRADE MARSH PLAIN ACCORDING TO THE SPECIFICATIONS.
8. EQUIPMENT SHALL NOT BE DRIVEN OUTSIDE THE WORK AREA AND ACCESS BOUNDARY.
9. REVEGETATE WORK AREAS PER THIS SHEET AND SCHEDULE ON SHEET L1.1.

LEGEND

- WORK AREA AND ACCESS BOUNDARY
- SILT FENCE
- STRAW WATTLES
- MARSH PLAIN LOWERING (MPL)
- UPLAND HABITAT ENHANCEMENT
- WETLAND HABITAT ENHANCEMENT

PLAN: POWERLINE WETLAND

SCALE
60 0 30 60 120
SCALE FEET

PROFILE: POWERLINE WETLAND (SWALE #5 & #6)

SCALE: HORIZONTAL 1" = 30'
VERTICAL EXAGGERATION 4:1

ODFW IN-WATER WORK WINDOW
JULY 15TH TO SEPTEMBER 30TH

REGISTERED PROFESSIONAL ENGINEER 84779PE OREGON MAR. 8, 2016 AMANDA L. JONES
RENEWS: 6/30/2021

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DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
AJ/RCC	RW/BS	AJ/RCC	CJL

NO.	DATE	REVISION	DESCRIPTION

COLUMBIA RIVER ESTUARY STUDY TASKFORCE

PALENSKY RESTORATION PROJECT
PORTLAND, OR

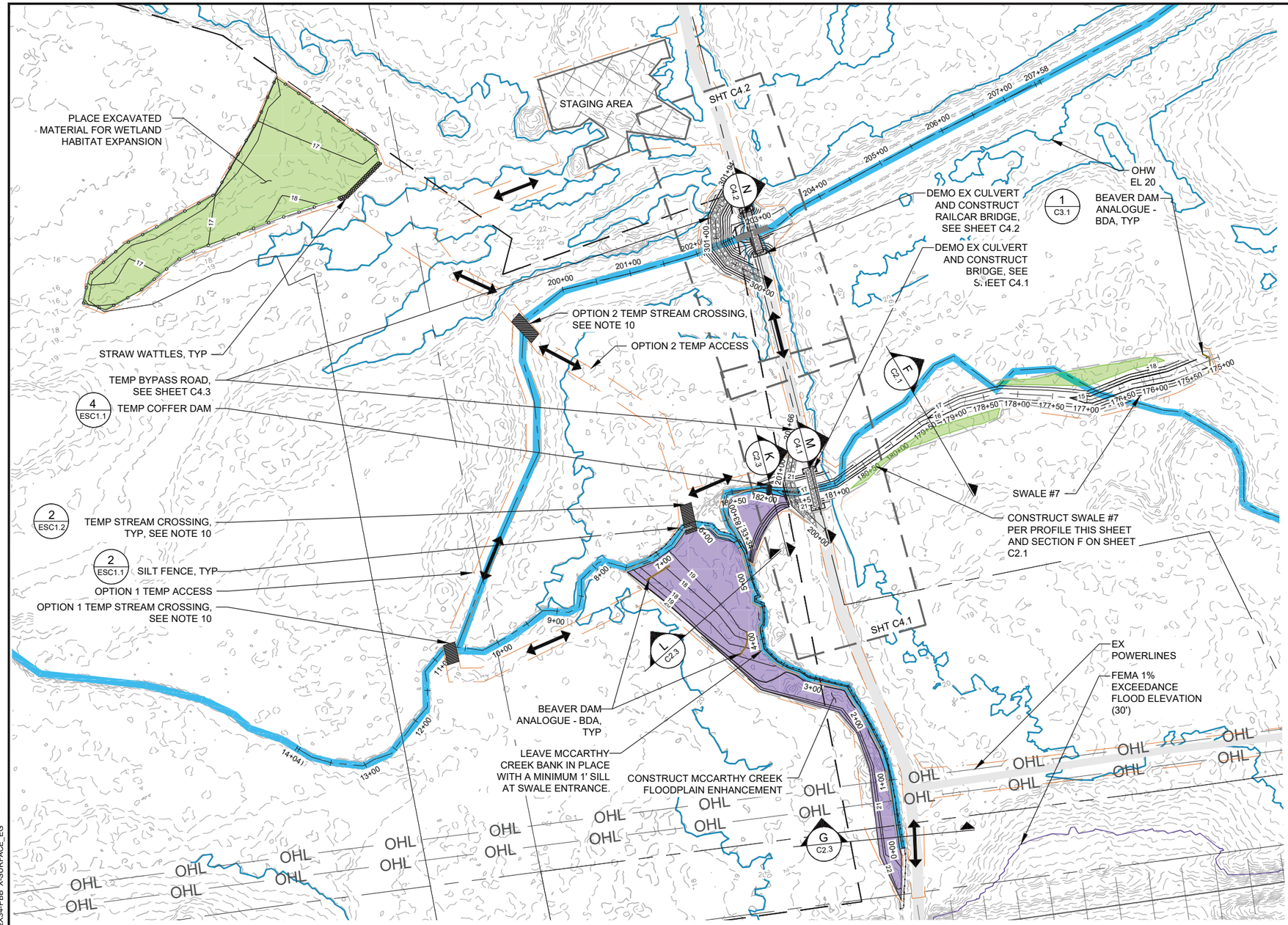
PLAN & PROFILE
POWERLINE CONNECTION

JOB NO. 20160007.2

SHEET NO. C1.6

DWG: Z:\Share\W2\CAD\20160007.2-Palensky-Burlington Bottoms\DWG\SHEETS\C1.5-1.7-PRB.dwg USER: bschoner
DATE: Mar 15, 2021 4:47pm XREFS:X-DESIGN X-AERIAL X-TB-22X34-PBB X-SURFACE_EG

FINAL DESIGN
MARCH 2021

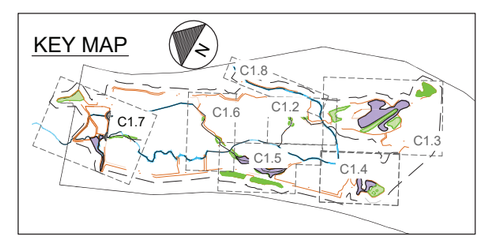


LEGEND

- WORK AREA AND ACCESS BOUNDARY
- SILT FENCE
- STRAW WATTLES
- MARSH PLAIN LOWERING (MPL)
- UPLAND HABITAT ENHANCEMENT
- WETLAND HABITAT ENHANCEMENT

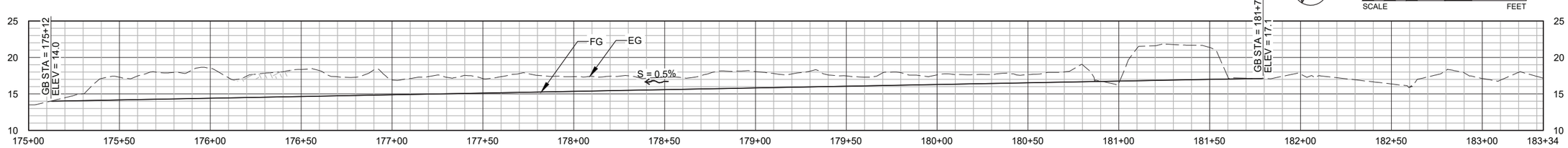
NOTES:

1. TEMPORARY STREAM CROSSINGS ARE NOT PERMITTED UNLESS APPROVED BY DSL AND CAR PRIOR TO IMPLEMENTATION.
2. FLAG AREAS TO BE CLEARED AND GRUBBED. CREST SHALL REVIEW AND APPROVE MARKED AREAS BEFORE CLEARING.
3. EXCAVATE SWALES PER PLAN AND PROFILE ON THIS SHEET AND SECTIONS ON C2.1.
4. EXCAVATED MATERIAL FROM SWALES SHALL BE SIDE CAST ALONG THE SWALES AND GRADED IN LOW, NATURAL, UNDULATING HUMMOCKS.
5. WETLAND ENHANCEMENT AREAS WHICH ARE BELOW OHW EL 20, MAX FG ELEVATION SHALL BE EL 18.5.
6. CONSTRUCT WOOD STRUCTURES AS SHOWN ON SHEETS C3.1 THROUGH C3.4.
7. DOWNED LOGS ENCOUNTERED DURING EXCAVATION TO BE SALVAGED, STOCKPILED AND PLACED ON OR EMBEDDED IN THE FINISHED GRADE MARSH PLAIN ACCORDING TO THE SPECIFICATIONS.
8. EQUIPMENT SHALL NOT BE DRIVEN OUTSIDE THE WORK AREA AND ACCESS BOUNDARY.
9. REVEGETATE WORK AREAS PER THIS SHEET AND SCHEDULE ON SHEET L1.1. SEED BUT DO NOT PLANT AREAS NORTH OF THE GRAVEL ROAD. PLANTING NORTH OF THE GRAVEL ROAD IS NOT INCLUDED IN THIS CONTRACT AND IS TO BE PERFORMED BY OTHERS.
10. COORDINATE WITH CREST PRIOR TO INSTALLATION OF TEMPORARY STREAM CROSSING FOR ROUTE SELECTION AND AQUATIC SPECIES SALVAGE.
11. TEMP CROSSING CONSISTS OF MIN 24 IN DIA PIPE CULVERT, WOVEN GEOTEXTILE UNDERLINER BELOW CULVERT AND FILL, GRAVEL/BALLAST ROCK FILL OVER CULVERT. SUMMER CREEK FLOWS ARE APPROX. 2 TO 10 CFS, INSTALL FISH BLOCK NETS ON u/s SIDE OF CROSSING; TEMP CROSSING SHALL BE IN PLACE NO LONGER THAN 5 WORKING DATS UNLESS OTHERWISE APPROVED BY ODFW.



PLAN: MCCARTHY CREEK CONNECTIONS

SCALE
80 0 40 80 160
SCALE FEET



PROFILE: MCCARTHY CREEK CONNECTION (SWALE #7)

SCALE: 1" = 10'
VERTICAL EXAGGERATION 4:1

ODFW IN-WATER WORK WINDOW
JULY 15TH TO SEPTEMBER 30TH

REGISTERED PROFESSIONAL ENGINEER
84779PE
OREGON
MAR. 8, 2016
AMANDA L. JONES
RENEWS: 6/30/2021

WOLF WATER RESOURCES, INC.
1001 SE WATER AVE. SUITE #160
PORTLAND, OR 97214
503.207.6888

crest
COLUMBIA RIVER ESTUARY STUDY TASKFORCE
818 COMMERCIAL ST., SUITE 203
ASTORIA, OR 97103
503.325.0459

DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
AJ/RCC	RW/BS	AJ/RCC	CJL

NO.	DATE	DESCRIPTION
		REVISION

COLUMBIA RIVER ESTUARY STUDY TASKFORCE

PALENSKY RESTORATION PROJECT
PORTLAND, OR

PLAN & PROFILE
MCCARTHY CONNECTIONS

JOB NO. 20160007.2

SHEET NO. C1.7

DWG: Z:\Share4\W2\CAD\20160007.2-Palensky-Burlington Bottoms\DWG\SHEETS\C1.5-1.7-PBB.dwg USER: bschoner
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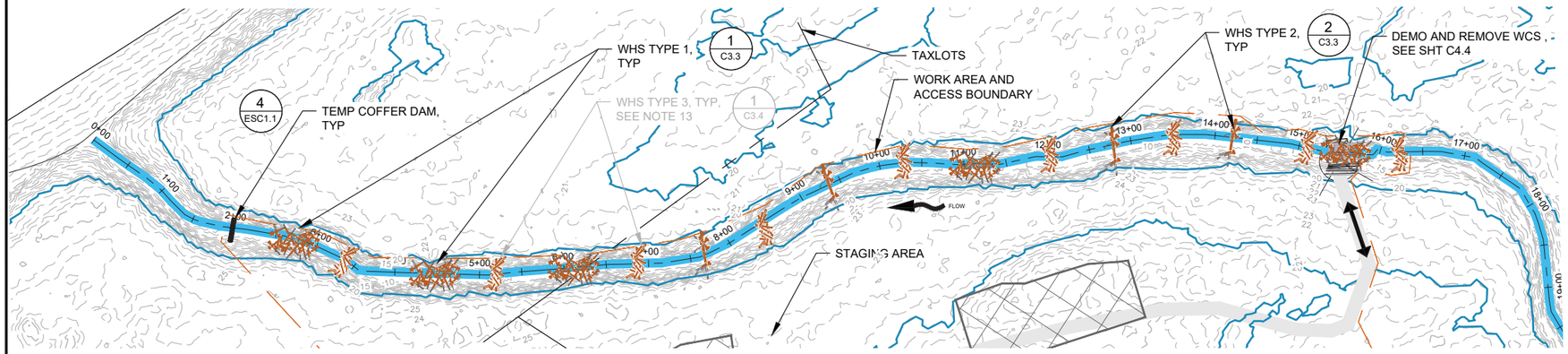
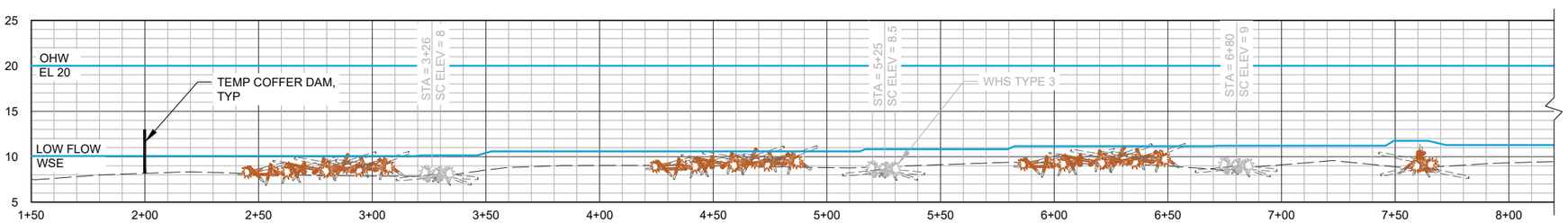
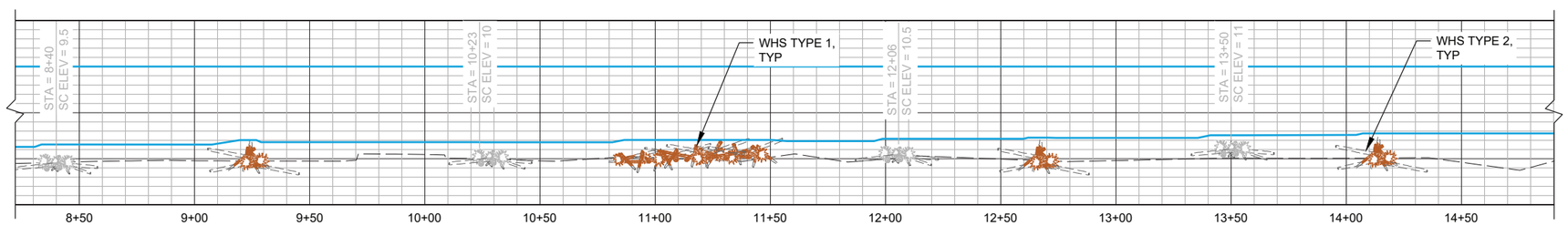
FINAL DESIGN
MARCH 2021

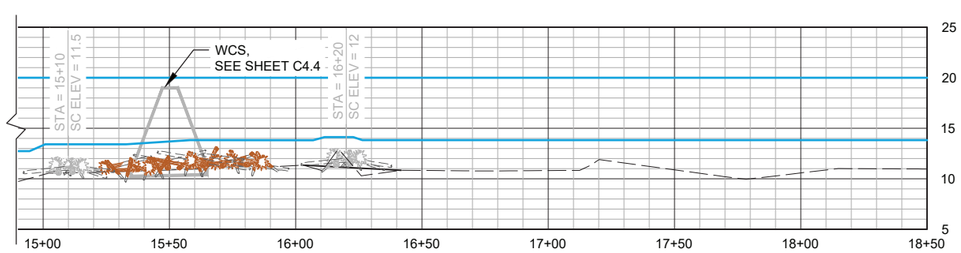


PLAN: SLOUGH

SCALE
80 0 40 80 160
SCALE FEET







PROFILE: SLOUGH

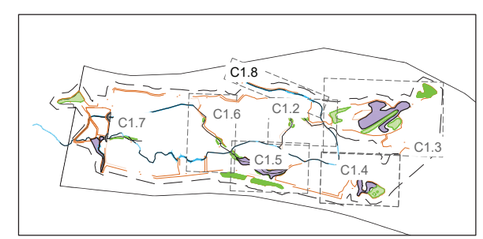
SCALE: 1" = 30'
VERTICAL EXAGGERATION 4:1

NOTES:

1. TEMPORARY STREAM CROSSINGS ARE NOT PERMITTED UNLESS APPROVED BY DSL AND CAR PRIOR TO IMPLEMENTATION.
2. FLAG AREAS TO BE CLEARED AND GRUBBED. CREST SHALL REVIEW AND APPROVE MARKED AREAS BEFORE CLEARING.
3. EXCAVATE SWALES PER PLAN AND PROFILE ON THIS SHEET AND SECTIONS ON C2.1.
4. EXCAVATED MATERIAL FROM SWALES SHALL BE SIDE CAST ALONG THE SWALES AND GRADED IN LOW, NATURAL, UNDULATING HUMMOCKS.
5. WETLAND ENHANCEMENT AREAS, WHICH ARE BELOW EL 20, MAX FG ELEVATION SHALL BE EL 18.5.
6. CONSTRUCT WOOD STRUCTURES AS SHOWN ON SHEETS C3.1 THROUGH C3.4.
7. DOWNED LOGS ENCOUNTERED DURING EXCAVATION TO BE SALVAGED, STOCKPILED AND PLACED ON OR EMBEDDED IN THE FINISHED GRADE MARSH PLAIN ACCORDING TO THE SPECIFICATIONS.
8. EQUIPMENT SHALL NOT BE DRIVEN OUTSIDE THE WORK AREA AND ACCESS BOUNDARY.
9. REVEGETATE WORK AREAS PER THIS SHEET AND SCHEDULE ON SHEET L1.1.
10. COORDINATE WITH CREST PRIOR TO ROUTE SELECTION AND AQUATIC SPECIES SALVAGE.
11. COORDINATE WITH CREST PRIOR TO ACCESSING WOODED AREA NORTH EAST OF THE ROAD FOR WHS PLACEMENT. LIMIT DISTURBANCE AS MUCH AS IS PRACTICAL.
12. CONSTRUCT WHS TYPE 3'S AT THE STATIONS SHOWN IN THE MCCARTHY CREEK SLOUGH PROFILE, STRUCTURE CONTROL ELEVATIONS SHOWN IN THE DETAIL ON SHEET C3.4 ARE INDICATED BY SC ELEVATIONS IN PROFILE.
13. WHS 3 NOT INCLUDED IN THIS CONTRACT.

LEGEND

WORK AREA AND ACCESS BOUNDARY
SILT FENCE



KEY MAP

ODFW IN-WATER WORK WINDOW
JULY 15TH TO SEPTEMBER 30TH

REGISTERED PROFESSIONAL ENGINEER 84779PE OREGON MAR. 8, 2016 AMANDA L. JONES
RENEWS: 6/30/2021

WOLF WATER RESOURCES, INC.
1001 SE WATER AVE. SUITE #160
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crest
COLUMBIA RIVER ESTUARY STUDY TASKFORCE
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ASTORIA, OR 97103
503.325.0459

DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
AJ/RCC	RW/BS	AJ/RCC	CJL

NO.	DATE	DESCRIPTION
		REVISION

COLUMBIA RIVER ESTUARY STUDY TASKFORCE

PALENSKY RESTORATION PROJECT
PORTLAND, OR

PLAN & PROFILE
MCCARTHY SLOUGH

JOB NO. 20160007.2
SHEET NO. C1.8

DWG: Z:\Shared\W2\CAD\20160007.2-Palensky-Burlington Bottoms\DWG\SHEETS\C1.8-PRB.dwg USER: bschoner
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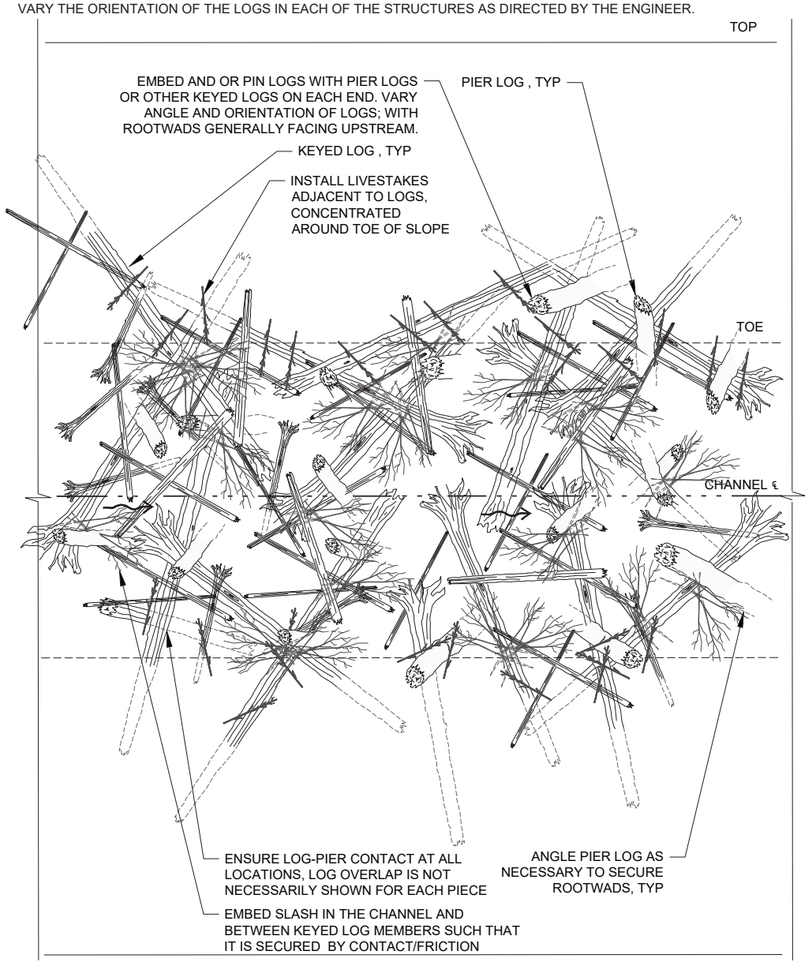
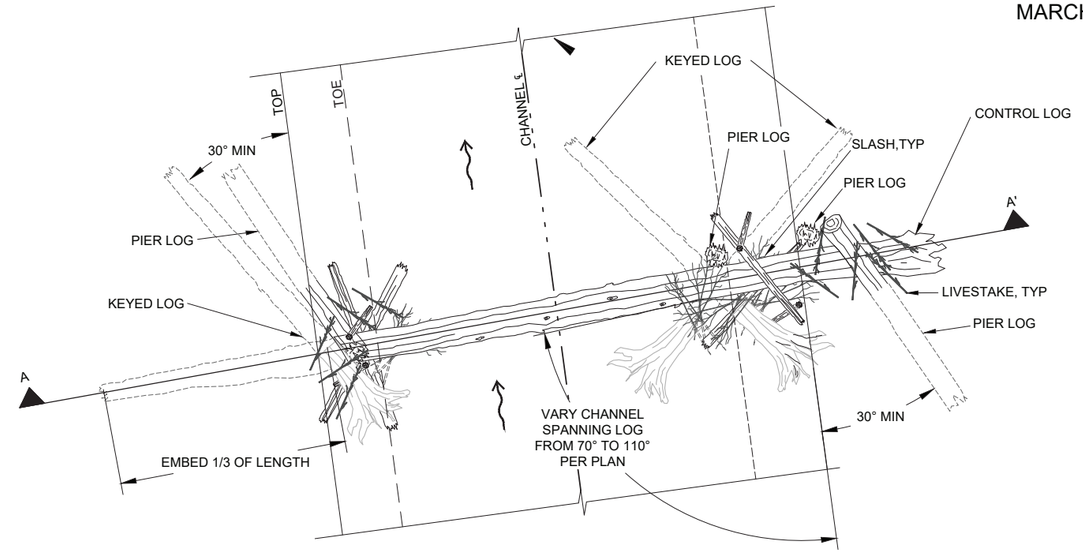
NOTES:

1. COORDINATE WITH ENGINEER ON SITE TO CONSTRUCT WHS TO ENSURE PROPER LOCATION, CONSTRUCTION METHODS, INTENT, AND FINAL INSTALLED CONDITION.
2. PIER LOGS SHALL BE EMBEDDED 2/3 OF LOG MINIMUM.
3. EMBED PIER LOGS INTERWOVEN BETWEEN THE CONSTRUCTED MEMBERS AS SHOWN BY SHARPENING ONE END WITH A CHAINSAW AND DRIVING THEM IN TO THE SOIL. ENSURE LOG TO LOG CONTACT FOR ALL LOG MEMBERS. DRIVE ADDITIONAL SLASH INTO HOLES IN THE STRUCTURE AND INTO THE SOIL UPSTREAM AND DOWNSTREAM OF THE STRUCTURE AS SHOWN AND AS DIRECTED BY THE ENGINEER.
4. ANY LARGE LOG WITHOUT ROOTWAD NOT KEYED 2/3 OR MORE OF IT'S LENGTH TO AN AVERAGE DEPTH OF 3 FEET SHALL BE SECURED IN PLACE BY A MINIMUM OF THREE OTHER LOGS CONSTRAINING ITS LATERAL AND VERTICAL MOVEMENT IN ANY DIRECTION NEAR BOTH ENDS. SECURING MEMBERS MAY BE PIER LOGS OR OTHER LOG MEMBERS THAT ARE KEYED 2/3 OR MORE OF THEIR LENGTH TO AN AVERAGE DEPTH OF 3 FT. LOGS KEYED ⅔ OF THE TOTAL LENGTH SHALL BE PLACED SUCH THAT ANOTHER LOG MEMBER OR PIER IS IN CONTACT WITH ITS DOWNSTREAM SIDE TO PREVENT ROTATING.
5. VARY THE ORIENTATION OF THE LOGS IN EACH OF THE STRUCTURES AS DIRECTED BY THE ENGINEER.

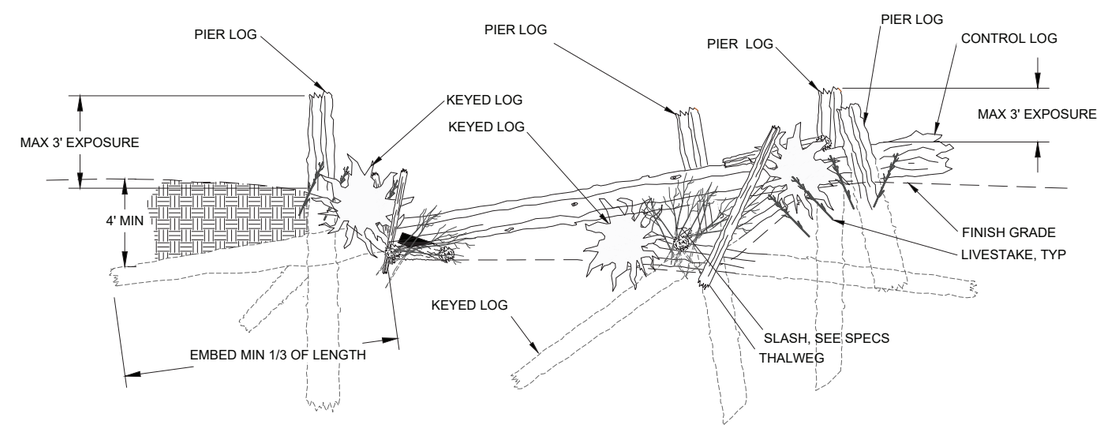


1 - WHS TYPE 1 - CONTINUOUS LOG COMPLEX
SCALE: NTS

WHS TYPE 1 - CONTINUOUS LOG COMPLEX STRUCTURE MATERIALS			
MATERIAL	MIN DIAMETER (IN)	MIN LENGTH (FT)	QUANTITY PER STRUCTURE
LARGE LOG WITH ROOTWAD	18	30	11
SMALL LOG WITH ROOTWAD	10	15	9
LARGE LOG WITHOUT ROOTWAD	18	30	4
SMALL LOG WITHOUT ROOTWAD	8	20	29
PIER LOG	8-12	20	19
LIVESTAKES	0.5	3	290
SLASH	4	15	15-20 CY



PLAN



SECTION (A - A')

2 - WHS TYPE 2 - CHANNEL SPANNING STRUCTURE
SCALE: NTS

WHS TYPE 2 - CHANNEL SPANNING STRUCTURE MATERIALS			
MATERIAL	MIN DIAMETER (IN)	MIN LENGTH (FT)	QUANTITY PER STRUCTURE
LARGE LOG WITH ROOTWAD	18	30	3
LARGE LOG WITHOUT ROOTWAD	24	40	1
PIER LOG	8-12	20	4
LIVESTAKES	0.5	3	30
SLASH	4	15	10

FINAL DESIGN
MARCH 2021

REGISTERED PROFESSIONAL ENGINEER 84779PE OREGON MAR. 8, 2016 AMANDA L. JONES
RENEWS: 6/30/2021

WOLF WATER RESOURCES, INC.
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503.325.0459

DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
AJ/RCC	RW/BS	AJ/RCC	CJL

NO.	DATE	DESCRIPTION
		REVISION

COLUMBIA RIVER ESTUARY STUDY TASKFORCE
PALENSKY RESTORATION PROJECT
PORTLAND, OR

HABITAT DETAILS 3

JOB NO. 20160007.2
SHEET NO. C3.3

DWG: Z:\Shared\W2\CAD\20160007.2-Palensky-Burlington Bottoms\DWG\SHEETS\C3.2-PBB - HABITAT DETAILS 2.dwg USER: bschoner
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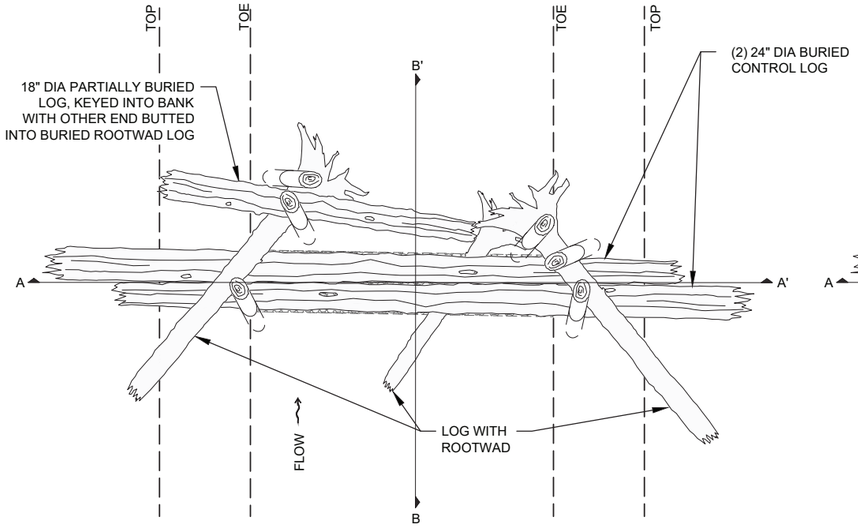
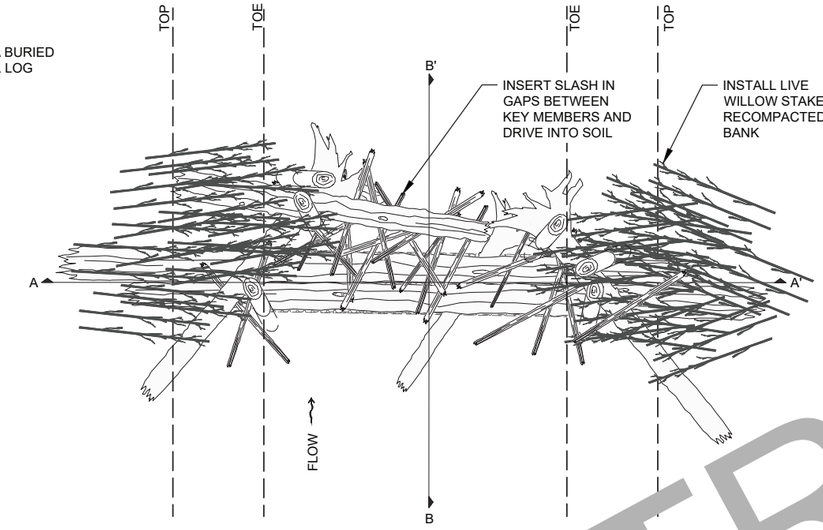
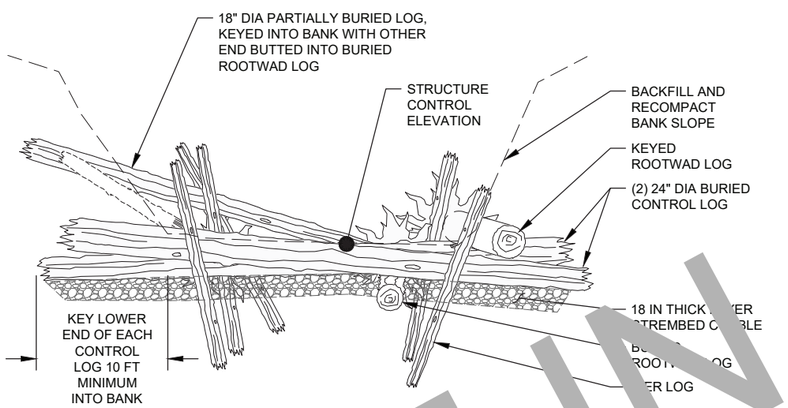
FINAL DESIGN
MARCH 2021



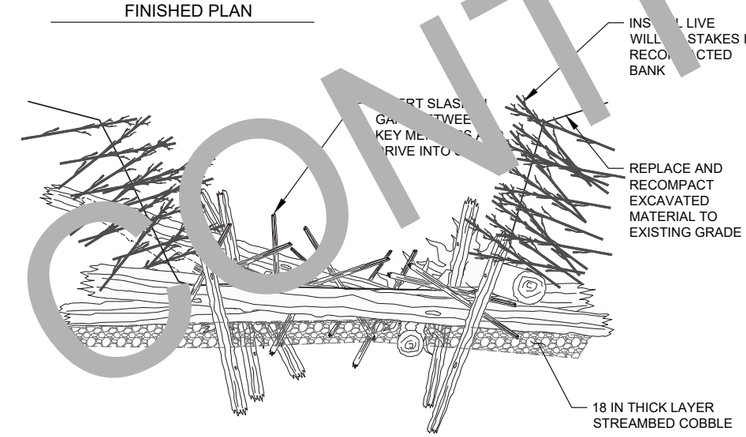
KEY MEMBER PLAN



FINISHED PLAN



KEY MEMBER SECTION (A - A')



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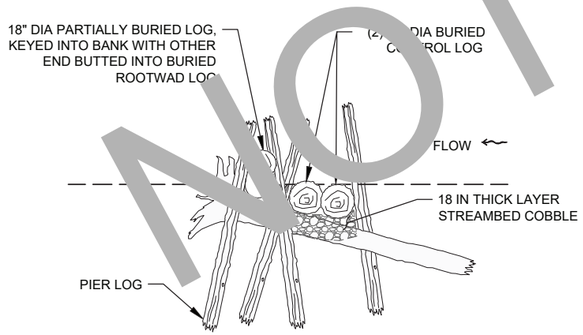
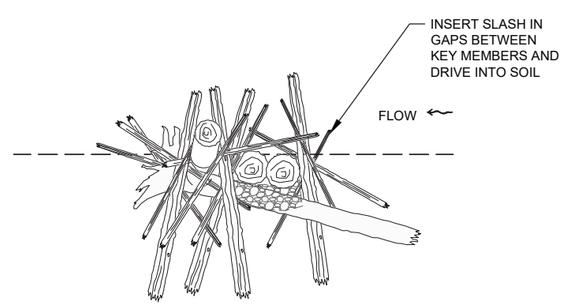


KEY MEMBER PROFILE (B - B')



FINISHED PROFILE (B- B')

NOTES:

1. COORDINATE WITH ENGINEER ON SITE TO CONSTRUCT WHS TYPE 3 TO ENSURE PROPER LOCATION, CONSTRUCTION METHODS, INTENT, AND FINAL INSTALLED CONDITION.
2. PIER LOGS SHALL BE BE EMBEDD[illegible] OF LOG MINIMUM.
3. OVEREXCAVATE 18 INCH POCKET BENE[illegible]H ENTIRE CONTROL LOG FOOTPRINT AND BACKFILL WITH 6 INCH [illegible] COBBLE MIX.
4. PRIOR TO C[illegible]ROL LOG INSTALLATION, BU[illegible] A ROOTWAD LOG IN CHANNEL [illegible]TOM WITH ONLY ITS ROOTWA[illegible] EXPOSED FACING DOWNSTR[illegible]M SUCH THAT THE CONTROL LO[illegible] CAN BE INSTALLED ON TOP OF IT[illegible]
5. BURIED CO[illegible]OL LOGS SHALL [illegible] AT LEAST 40' LONG 24" DIA FIR LOGS. [illegible]P ELEVAT[illegible] OF CONTROL [illegible]GS SHALL BE AS INDICATED. CONTROL [illegible]S SHALL B[illegible]IGHTLY A[illegible]ED TO CONCENTRATE WATER TO ONE SID[illegible] THE STR[illegible]
6. [illegible]TALL [illegible]D ROOTWAD LOGS WITH THE ROOTWADS IN THE CHANNEL C[illegible] THE TOP OF THE CONTROL LOG AT THE CHANNEL TOE. PIN DOWN THE INTERFACE OF THE CHANNEL SPANNING LOG AND KEYED ROOTWAD LOGS WITH A MINIMUM OF 4 PIER LOGS PER STRUCTURE SUCH THAT THE PIERS ARE EMBEDDED ⅔ OF THEIR LENGTH AND FIRMLY IN CONTACT WITH THE ROOTWAD LOGS HOLDING THEM ON TOP OF THE CONTROL LOG.
7. CONSTRUCT ADDITIONAL KEYED LOG DOWNSTREAM OF CONTROL LOG WITH END BUTTED INTO BURIED ROOTWAD LOG.
8. EMBED PIER LOGS INTERWOVEN BETWEEN THE CONSTRUCTED MEMBERS AS SHOWN BY SHARPENING ONE END WITH A CHAINSAW AND DRIVING THEM IN TO THE SOIL. ENSURE LOG TO LOG CONTACT FOR ALL LOG MEMBERS. DRIVE ADDITIONAL SLASH INTO HOLES IN THE STRUCTURE AND INTO THE SOIL UPSTREAM AND DOWNSTREAM OF THE STRUCTURE AS SHOWN AND AS DIRECTED BY THE ENGINEER.
9. VARY THE ORIENTATION OF THE LOGS IN EACH OF THE STRUCTURES AS DIRECTED BY THE ENGINEER.
10. EMBED SLASH IN THE STREAM THROUGH GAPS IN THE STRUCTURAL LOG MEMBERS.
11. REPLACE AND COMPACT BANK SOILS TO A FIRM CONDITION AND INSTALL LIVE WILLOW STAKES IN THE DISTURBED BANK SOILS.

WHS TYPE 3 - EMBEDDED CHANNEL SPANNING STRUCTURE

MATERIAL	MIN DIAMETER (IN)	MIN LENGTH (FT)	QUANTITY PER STRUCTURE
LARGE LOG WITH ROOTWAD	18	30	3
CONTROL LOG	24	40	2
LARGE LOG WITHOUT ROOTWAD	18	30	1
PIER LOG	8-12	20	6
SLASH	4	15	20
LIVE WILLOW STAKES	1/2	3	100

1 WHS TYPE 3 - EMBEDDED CHANNEL SPANNING STRUCTURE
SCALE: NTS

REGISTERED PROFESSIONAL ENGINEER 84779PE OREGON MAR. 8, 2016 AMANDA L. JONES
RENEWS: 6/30/2021

WOLF WATER RESOURCES, INC.
1001 SE WATER AVE. SUITE #160
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crest
COLUMBIA RIVER ESTUARY STUDY TASKFORCE
818 COMMERCIAL ST., SUITE 203
ASTORIA, OR 97103
503.325.0459

DESIGNED BY AJ/RCC
DRAWN BY RW/BS
CHECKED BY AJ/RCC
APPROVED BY CJL

NO.	DATE	DESCRIPTION
		REVISION

COLUMBIA RIVER ESTUARY STUDY TASKFORCE
PALENSKY RESTORATION PROJECT
PORTLAND, OR

HABITAT DETAILS 4

JOB NO. 20160007.2
SHEET NO. C3.4

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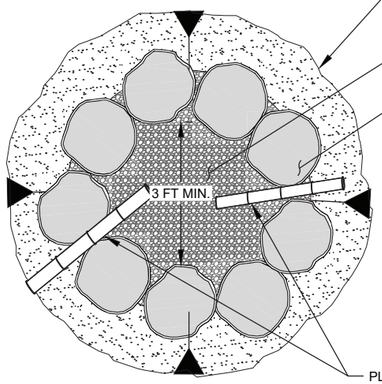
DATE: Mar 15, 2021 2:35pm XREFS:X-TB-22X3-4-PBB

FINAL DESIGN
MARCH 2021



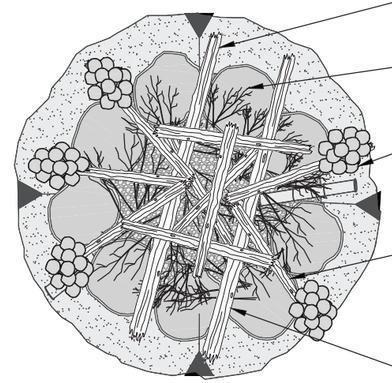
EXCAVATE PIT 12 FT DIAMETER 1.5 FT DEEP

PLACE 3 IN THICK LAYER $\frac{1}{4}$ IN MINUS GRAVEL ON FLOOR OF PIT

PLACE SALVAGED RIPRAP IN A CIRCLE AT TOE OF PIT

PLACE 3 IN DIAMETER, 5 FT LONG, KILN DRIED BAMBOO PIPE BETWEEN RIPRAP

PLAN: LAYER 1



PLACE LATTICE FRAME OF LOGS OVER LAYER 1 RIPRAP RING

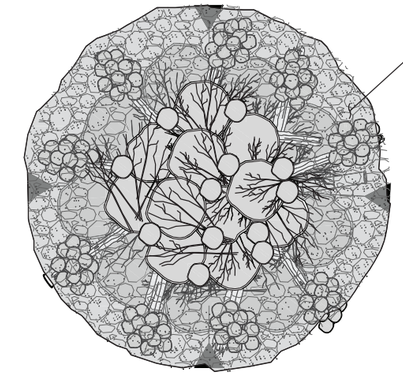
LAY/WEAVE SLASH INTO LOGS TO MINIMIZE SIZE OF HOLES IN FRAMEWORK

PLACE 6 IN D50 COBBLE AROUND BASE OF LEANTO MEMBERS TO BALLAST THEM IN PLACE

LEANTO FRAME MEMBER, TYP

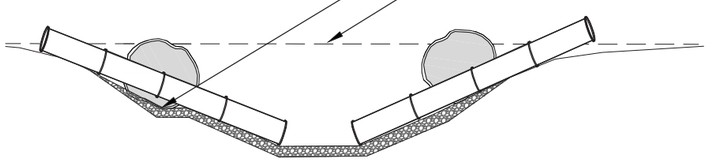
HORIZONTAL FRAME MEMBER,TYP

PLAN: LAYER 2



PLACE EXCAVATED MATERIAL AROUND PERIPHERY OF LAYER 1 TO PREVENT RIPRAP FROM ROLLING OFF TOP OF STRUCTURE

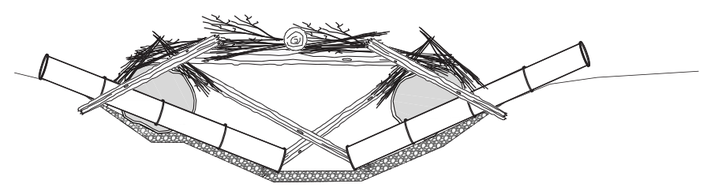
PLAN: LAYER 3



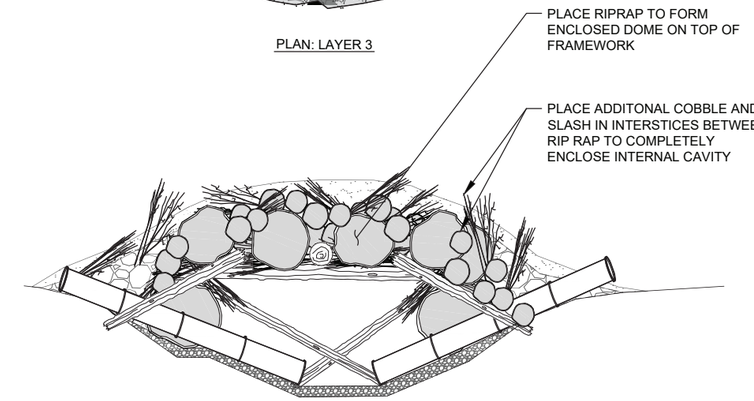
SEAT RIPRAP IN PIT SIDESLOPES TO LIMIT OVERTURNING/ROLLING

EG EL VARIES, SEE SHT C1.3

SECTION: LAYER 1



SECTION: LAYER 2



PLACE RIPRAP TO FORM ENCLOSED DOME ON TOP OF FRAMEWORK

PLACE ADDITONAL COBBLE AND SLASH IN INTERSTICES BETWEEN RIP RAP TO COMPLETELY ENCLOSE INTERNAL CAVITY

SECTION: LAYER 2

1 - HIBERNACULUM
SCALE: NTS

NOTES:

1. COORDINATE WITH ENGINEER ON SITE TO CONSTRUCT BASKING LOGS AND HIBERNACULA TO ENSURE PROPER LOCATION, CONSTRUCTION METHODS, INTENT, AND FINAL INSTALLED CONDITION.
2. SALVAGE RIP RAP FOR HIBERNACULA FROM WATER CONTROL STRUCTURE DEMOLITION.
3. IMPORTED COBBLE MATERIAL FOR PLACEMENT IN INTERSTITIAL SPACES OF HIBERNACULA SUBJECT TO APPROVAL BY ENGINEER.
4. HAND PLACE MATERIALS FOR ENCLOSURE OF HIBERNACULA CAREFULLY SUCH THAT MINIMAL MATERIAL FALLS INTO THE INTERIOR SPACE.
5. PLACE RIPRAP AND OTHER MATERIALS ADJACENT TO BAMBOO ACCESS PIPE CAREFULLY TO MAINTAIN STRUCTURAL INTEGRITY OF THE PIPE FOR SPECIES ACCESS TO INTERIOR SPACE.

REGISTERED PROFESSIONAL ENGINEER
84779PE
OREGON
MAR. 8, 2016
AMANDA L. JONES
RENEWS: 6/30/2021

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crest
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503.325.0459

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AJ/RCC	RW/BS	AJ/RCC	CJL

NO.	DATE	DESCRIPTION
		REVISION

COLUMBIA RIVER ESTUARY STUDY TASKFORCE

PALENSKY RESTORATION PROJECT

PORTLAND, OR

HABITAT DETAILS 5

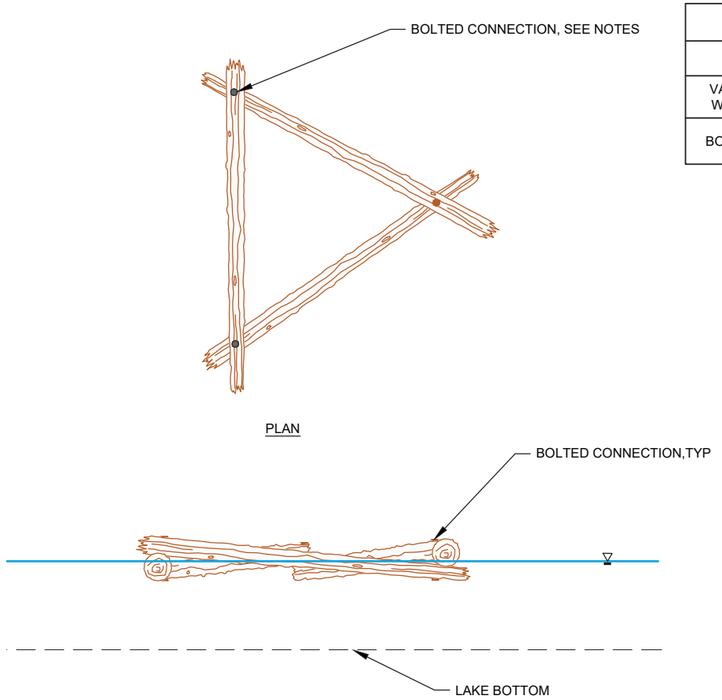
JOB NO. 20160007.2

SHEET NO. C3.5

DWG: Z:\Shared\W2\CAD\20160007.2-Palensky-Burlington Bottoms\DWG\SHEETS\C3.2-PBB - HABITAT DETAILS 2.dwg USER: bschoner
DATE: Mar 15, 2021 2:35pm XREFS:X-TB-22X34-PBB

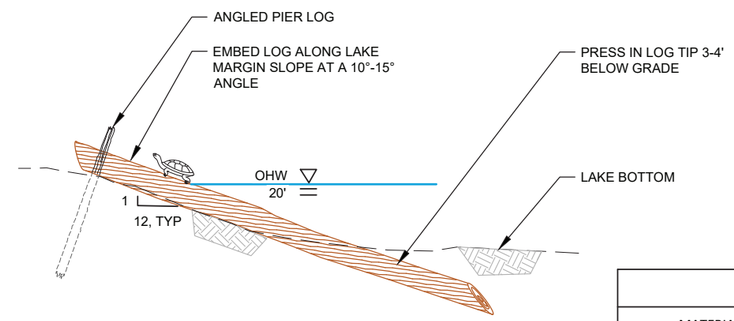
FINAL DESIGN
MARCH 2021

BASKING STRUCTURE			
MATERIAL	DIAMETER (IN)	MIN LENGTH (FT)	QUANTITY PER STRUCTURE
VARIABLE SIZE LOGS WITHOUT ROOTWAD	8-20	6	3
BOLTED CONNECTION	SEE NOTES	SEE NOTES	3



SECTION

1 BASKING STRUCTURE
SCALE: NTS



2 BASKING LOG
SCALE: NTS

BASKING LOG			
MATERIAL	MIN DIAMETER (IN)	MIN LENGTH (FT)	QUANTITY PER STRUCTURE
VARIABLE SIZE LOG WITHOUT ROOTWAD	10-20	20	1
PIER LOG	8-12	5	1

NOTES:

1. COORDINATE WITH ENGINEER ON SITE TO CONSTRUCT BASKING STRUCTURES, BASKING LOGS AND HIBERNACULA TO ENSURE PROPER LOCATION, CONSTRUCTION METHODS, INTENT, AND FINAL INSTALLED CONDITION.
2. FOR BOLTED CONNECTIONS IN THE BASKING STRUCTURE, SAWCUT NOTCH INTO LOGS CENTERED ON BOLTED CONNECTION. NOTCH SHALL BE LOG DIAMETER WIDE AND ONE THIRD LOG DIAMETER DEEP, IN LINE WITH THE DIRECTION OF OVERLAP BETWEEN EACH LOG SO THE NOTCHES FIT TIGHTLY TOGETHER.
3. EACH BOLTED CONNECTION WILL USE ONE 3' LONG, 3/4" THREADED STAINLESS STEEL ROD, 2 STAINLESS STEEL WASHERS, AND 2 STAINLESS STEEL NUTS.

REGISTERED PROFESSIONAL ENGINEER
84779PE
OREGON
MAR. 8, 2016
AMANDA L. JONES
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PORTLAND, OR

HABITAT DETAILS 6

JOB NO. 20160007.2

SHEET NO. C3.6

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DATE: Mar 15, 2021 2:35pm XREFS:X-TB-22-X-PBB

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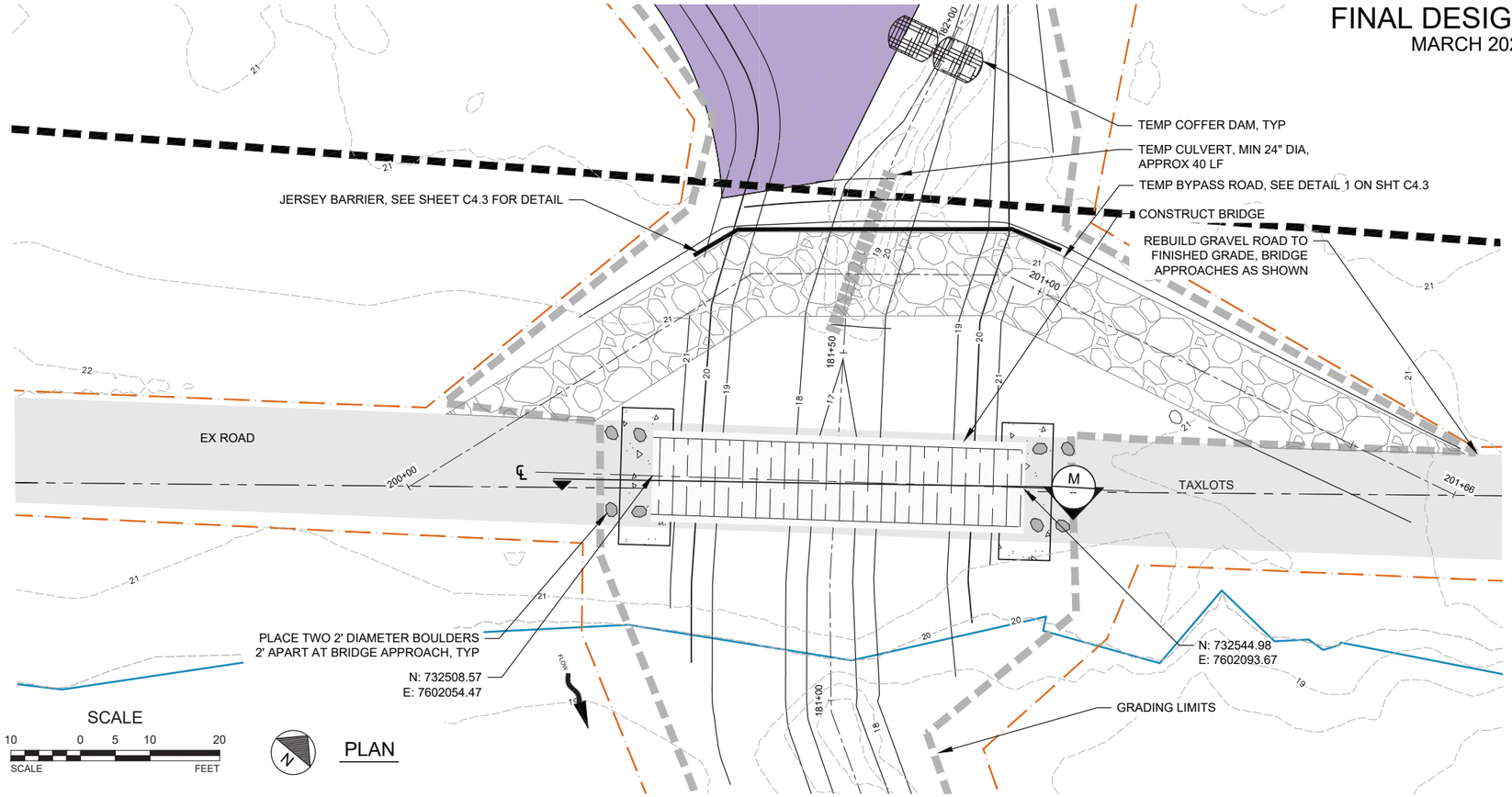
BRIDGE STRUCTURAL NOTES:

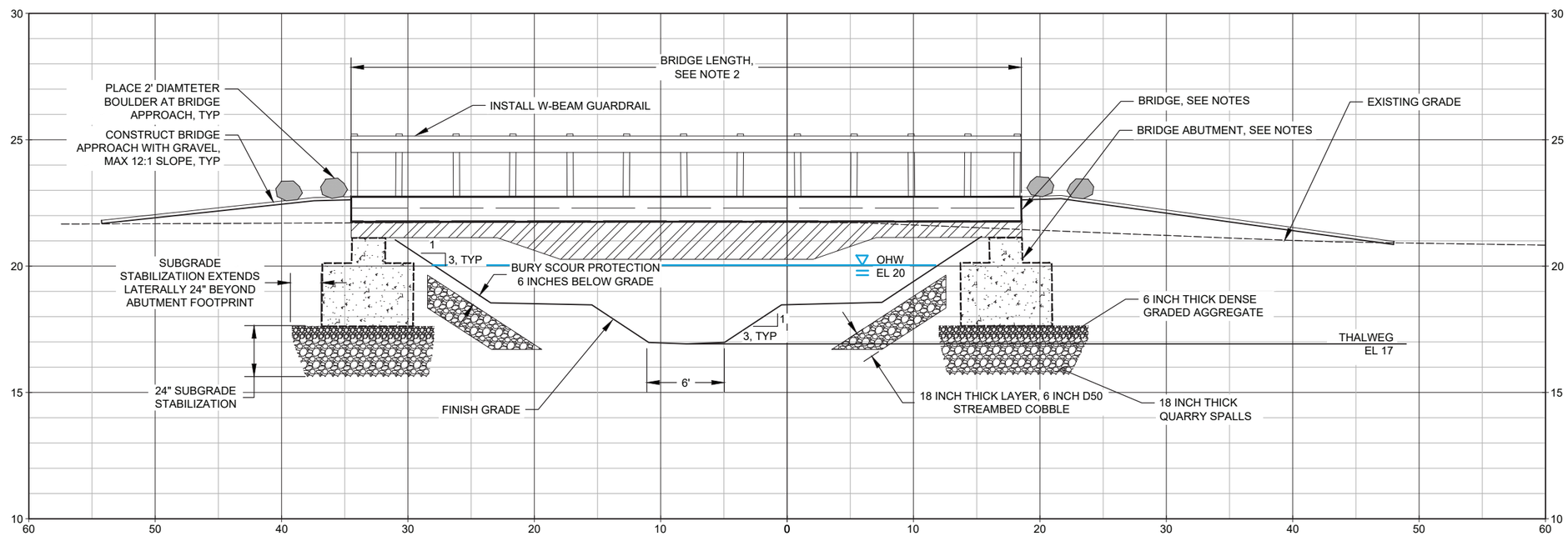
1. BRIDGE SHOWN IS CONCEPTUAL. CONTRACTOR TO SUBMIT BRIDGE PLAN FOR ENGINEER REVIEW AND APPROVAL.
2. PREFABRICATED BRIDGE AND ABUTMENT SYSTEM PERFORMANCE SPECIFICATIONS:
   - LENGTH: MIN 45', NO MAX LENGTH, AS PER SUPPLIER STOCK
   - WIDTH: APPROX 14'
   - USE: HEAVY VEHICLE
   - LOW CHORD: 20
   - DECK EL: 23
   - GUARDRAIL: W-BEAM GUARDRAIL
   - LOADING: HS-25; 2 FT/S FLOW DEBRIS LATERAL LOADING
3. BEARING PADS, ANCHOR BOLTS, AND ALL BRIDGE/ABUTMENT CONNECTION HARDWARE SHALL BE SUPPLIED WITH BRIDGE.
4. CERTIFIED TEST REPORTS SHALL BE FURNISHED FOR THE STRUCTURAL BRIDGE ELEMENTS, HIGH STRENGTH BOLTS, ELASTOMERIC BEARING PADS, AND ANCHOR BOLTS.
5. ABUTMENTS SHALL BE DESIGNED PER BRIDGE SUPPLIER. CONTRACTOR TO SUPPLY STAMPED PLANS FOR BRIDGE AND ABUTMENT SYSTEM TO CAR AND ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.
6. BRIDGE ABUTMENT SYSTEM SHALL COMPLY WITH REQUIREMENTS OF GEOTECHNICAL ENGINEERING REPORT AVAILABLE UPON REQUEST FROM CAR. ALLOWABLE SOIL BEARING CAPACITY FOR ABUTMENT DESIGN IS 2000 PSF.
7. TOP OF ABUTMENT FOOTING ELEVATIONS SHALL BE AS SHOWN. FOOTINGS TO BE PROTECTED FROM SCOUR AS SHOWN.
8. CAR AND ENGINEER TO REVIEW BRIDGE LOCATION BEFORE PLACEMENT. BRIDGE COORDINATES AT ENDS (ALONG MIDLINE):
   - WEST: N: 732508.57, E: 7602054.47
   - EAST: N: 732544.98, E: 7602093.67



PLAN

GENERAL NOTES:

1. SECTIONS ARE SHOWN LOOKING NORTH.
2. VERTICAL EXAGGERATION IS 2X THE HORIZONTAL.
3. VERTICAL DATUM IN NAVD88 IN FEET.



M SECTION: MCCARTHY BRIDGE

SCALE: HORIZONTAL 1" = 5'
VERTICAL EXAGGERATION 2:1

REGISTERED PROFESSIONAL ENGINEER 84779PE OREGON MAR. 8, 2016 AMANDA L. JONES

RENEWS: 6/30/2021

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MCCARTHY CREEK BRIDGE PLAN

JOB NO. 20160007.2

SHEET NO. C4.1

DWG: Z:\Share\W2\CAD\20160007.2-Palensky-Burlington Bottoms\DWG\SHEETS\C4.X-PBB -CROSSINGS.dwg USER: bschoner
DATE: Mar 15, 2021 4:49pm XREFS:X-TB-22X34-PBB X-DESIGN X-SURFACE_EG

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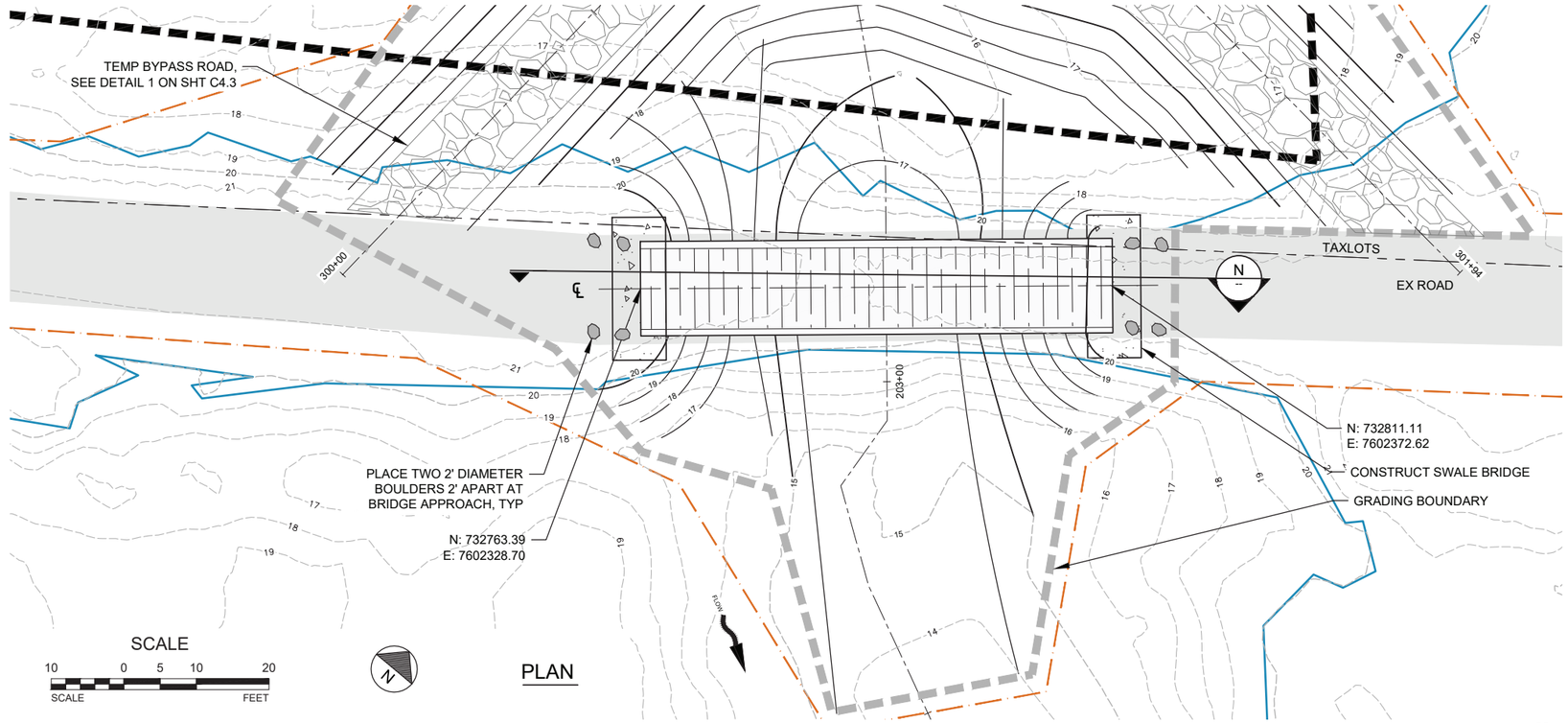
BRIDGE STRUCTURAL NOTES:

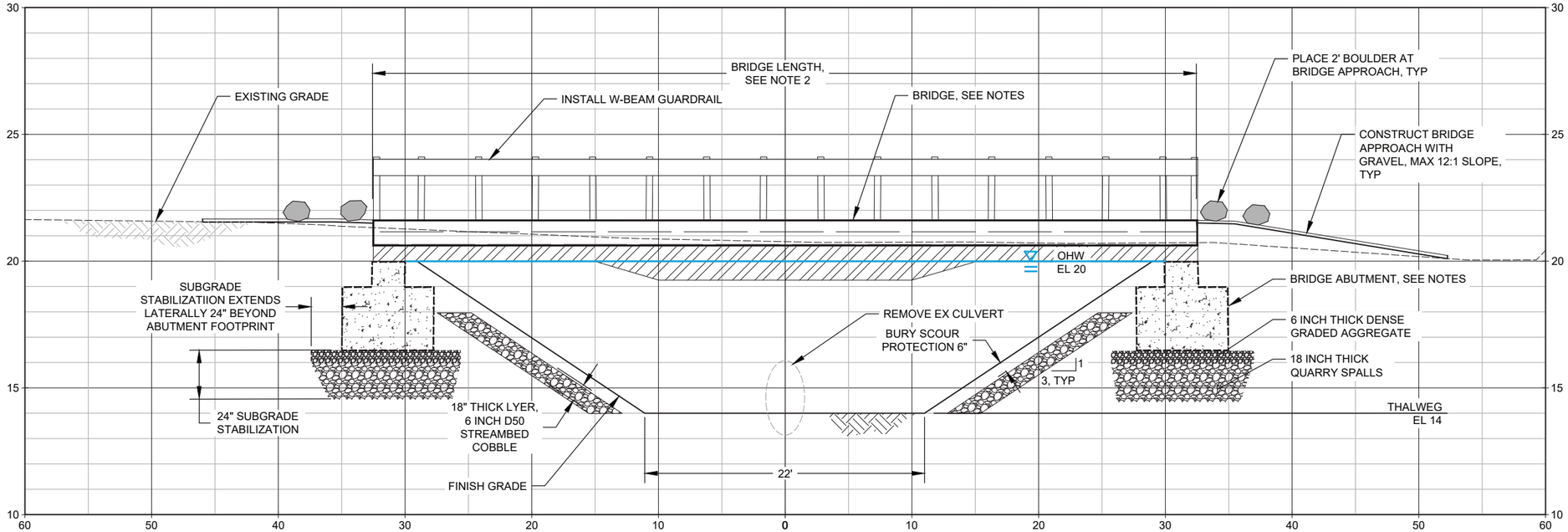
1. BRIDGE SHOWN IS CONCEPTUAL. CONTRACTOR TO SUBMIT BRIDGE PLAN FOR ENGINEER REVIEW AND APPROVAL.
2. PREFABRICATED BRIDGE AND ABUTMENT SYSTEM PERFORMANCE SPECIFICATIONS:
   - LENGTH: MIN 65', NO MAX LENGTH, AS PER SUPPLIER STOCK
   - WIDTH: APPROX 14'
   - USE: HEAVY VEHICLE
   - LOW CHORD: 19
   - DECK EL: 22
   - GUARDRAIL: W-BEAM GUARDRAIL
   - LOADING: HS-25; 2 FT/S FLOW DEBRIS LATERAL LOADING
3. BEARING PADS, ANCHOR BOLTS, AND ALL BRIDGE/ABUTMENT CONNECTION HARDWARE SHALL BE SUPPLIED WITH BRIDGE.
4. CERTIFIED TEST REPORTS SHALL BE FURNISHED FOR THE STRUCTURAL BRIDGE ELEMENTS, HIGH STRENGTH BOLTS, ELASTOMERIC BEARING PADS, AND ANCHOR BOLTS.
5. ABUTMENTS SHALL BE DESIGNED PER BRIDGE SUPPLIER. CONTRACTOR TO SUPPLY STAMPED PLANS FOR BRIDGE AND ABUTMENT SYSTEM TO CAR AND ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.
6. BRIDGE ABUTMENT SYSTEM SHALL COMPLY WITH REQUIREMENTS OF GEOTECHNICAL ENGINEERING REPORT AVAILABLE UPON REQUEST FROM CAR. ALLOWABLE SOIL BEARING CAPACITY FOR ABUTMENT DESIGN IS 2000 PSF.
7. TOP OF ABUTMENT FOOTING ELEVATIONS SHALL BE AS SHOWN. FOOTINGS TO BE PROTECTED FROM SCOUR AS SHOWN.
8. CAR AND ENGINEER TO REVIEW BRIDGE LOCATION BEFORE PLACEMENT. BRIDGE COORDINATES AT ENDS (ALONG MIDLINE):
   - WEST: N: 73276.39, E: 7602328.70
   - EAST: N: 732811.11, E: 7602372.60



PLAN

GENERAL NOTES:

1. SECTIONS ARE SHOWN LOOKING NORTH.
2. VERTICAL EXAGGERATION IS 2X THE HORIZONTAL.
3. VERTICAL DATUM IN NAVD88 IN FEET.



N

SECTION: SWALE BRIDGE

SCALE: HORIZONTAL 1" = 5'
VERTICAL EXAGGERATION 2:1

REGISTERED PROFESSIONAL ENGINEER 84779PE OREGON MAR. 8, 2016 AMANDA L. JONES
RENEWS: 6/30/2021

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PALENSKY RESTORATION PROJECT

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SWALE BRIDGE PLAN

JOB NO. 20160007.2

SHEET NO. C4.2

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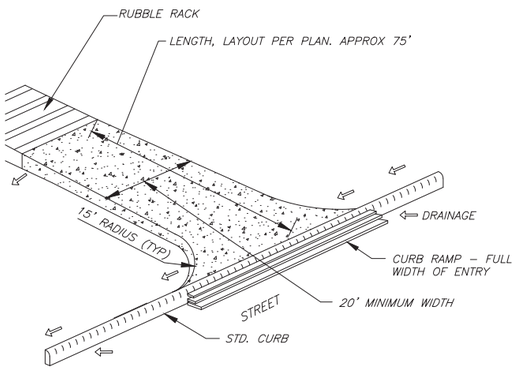
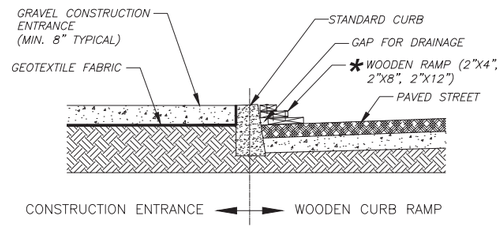
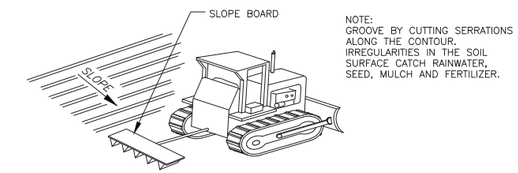


GRAVEL CONSTRUCTION ENTRANCE

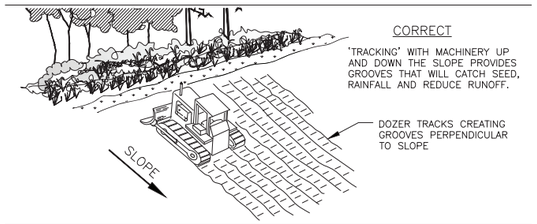


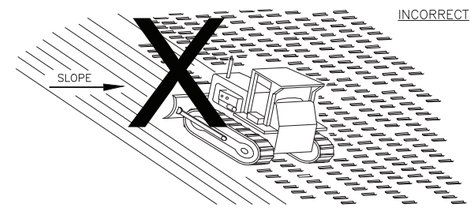
CURB RAMP

1 - TEMPORARY CONSTRUCTION ENTRANCE
NOT TO SCALE



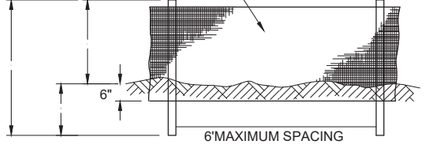
NOTE:
GROOVE BY CUTTING SERRATIONS ALONG THE CONTOUR. IRREGULARITIES IN THE SOIL SURFACE CATCH RAINWATER, SEED, MULCH AND FERTILIZER.



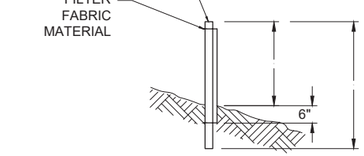


TRACKING
DRAWING NOT TO SCALE

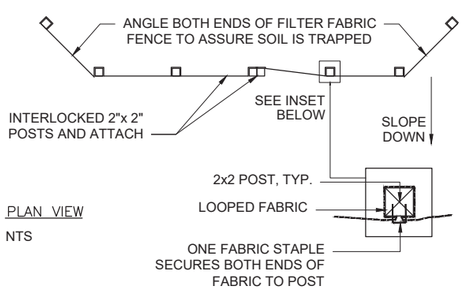
2 - SURFACE ROUGHENING
NOT TO SCALE



ELEVATION
NTS



SECTION
NTS

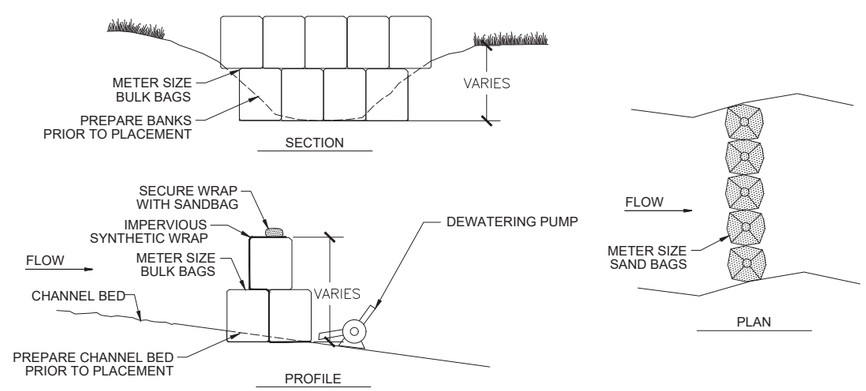


PLAN VIEW
NTS

NOTES:
1. THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6-INCH OVERLAP, AND BOTH ENDS SECURELY FASTENED TO THE POST, OR OVERLAP 2 INCH X 2 INCH POSTS AND ATTACH AS SHOWN.
2. BURY BOTTOM OF FILTER FABRIC 6" VERTICALLY BELOW FINISHED GRADE.
3. 2"x 2" FIR, PINE OR STEEL FENCE POSTS. INSTALL POSTS UPHILL OF FILTER FABRIC.
4. STITCHED LOOPS TO BE INSTALLED ON THE UPHILL SIDE OF FABRIC.
5. COMPACT ALL AREAS OF FILTER FABRIC TRENCH.
6. FILTER FABRIC FENCES SHALL BE INSPECTED BY CONTRACTOR IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.

FABRIC ATTACHMENT DETAIL
NTS

3 - SILT FENCE
NOT TO SCALE



NOTE:
1. CONSTRUCTION CREWS SHALL INSTALL BULK BAG COFFER DAMS AS SHOWN ON PLAN TO ISOLATE THE EXCAVATION AREAS.
2. IN ADDITION TO BULK BAGS, USE AN IMPERVIOUS SYNTHETIC LINER TO REDUCE PERMEABILITY OF BLUK BAG COFFER DAM.
3. HEIGHT OF THE BULK BAG COFFER DAMS SHALL BE HIGH ENOUGH TO PREVENT BYPASS FLOWS FROM ENTERING THE ISOLATED WORK AREA. DAM HEIGHTS AND MATERIALS SHALL BE INCLUDED IN THE CONTRACTOR'S WORK CONTAINMENT AND DEWATERING PLAN.

4 - TEMPORARY BULK BAG COFFER DAM
NOT TO SCALE

REGISTERED PROFESSIONAL ENGINEER 84779PE OREGON MAR. 8, 2016 AMANDA L. JONES
RENEWS: 6/30/2021

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PALENSKY RESTORATION PROJECT
PORTLAND, OR

ESC DETAILS 1

JOB NO. 20160007.2

SHEET NO. ESC1.1

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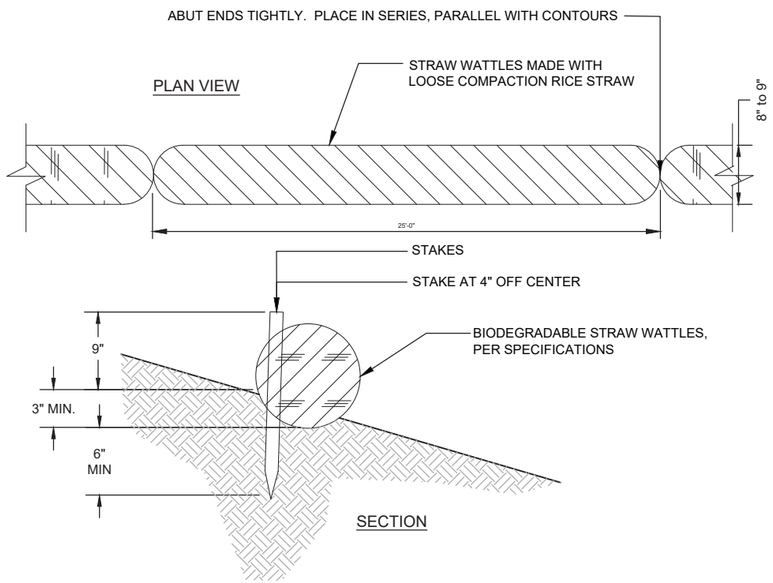
MARCH 2021

NOTES FOR STRAW WATTLES:

1. INSTALL STRAW WATTLES AROUND THE WETLAND HABITAT ENHANCEMENT AREAS AS SHOWN ON THE PLANS.



1 / - STRAW WATTLES
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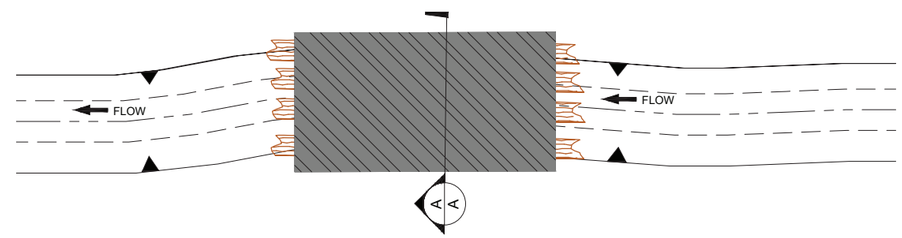
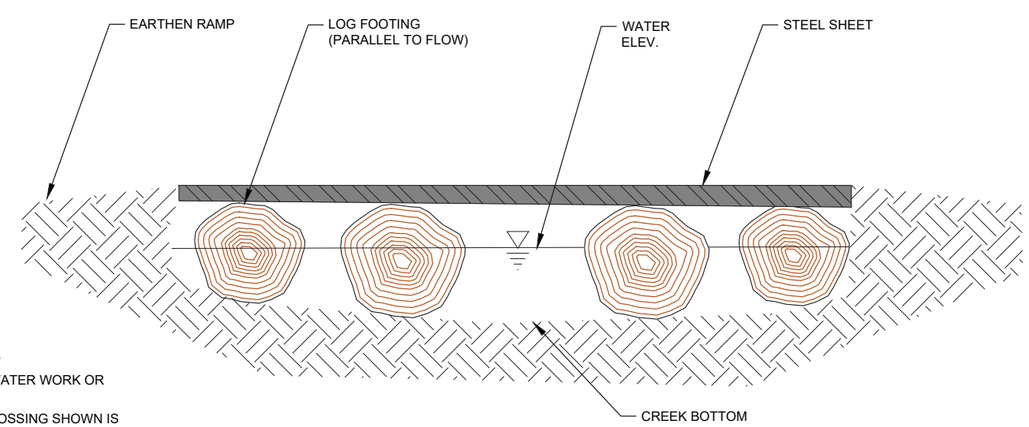


PLAN



A-A SECTION

2 / - TEMPORARY STREAM CROSSING
NOT TO SCALE

NOTES FOR TEMPORARY STREAM CROSSING:

1. CONTRACTOR SHALL COORDINATE WITH CREST PRIOR TO ANY IN-WATER WORK OR STREAM CROSSING ACTIVITY.
2. CONTRACTOR TO DESIGN TEMPORARY CROSSING. TEMPORARY CROSSING SHOWN IS AN EXAMPLE CONCEPT.
3. TEMPORARY CROSSING SHALL ALLOW FOR FLOWS BELOW STEEL SHEET TO PROVIDE PASSAGE.
4. TEMPORARY CROSSING SHALL BE LOCATED SUCH THAT ONLY ONE SPAN IS USED TO ELIMINATE IMPACTS TO SUBSTRATE OF CHANNEL.
5. END OF THE TEMPORARY CROSSING SHALL BEAR ON BANKS IN A MANNER THAT PREVENTS SLOUGHING OR COLLAPSE OF SIDE CHANNEL BANKS.
6. CONCRETE ECOLOGY BLOCKS OR WOOD ABUTMENTS MAY BE USED TO SUPPORT ENDS OF TEMPORARY CROSSING AS NEEDED.
7. TEMPORARY CROSSING MAY BE CONSTRUCTED FROM LOGS, OR APPROVED EQUAL, AND DECKED WITH STEEL SHEET, WOOD LAGGING OR APPROVED EQUAL.

REGISTERED PROFESSIONAL ENGINEER 84779PE OREGON MAR. 8, 2016 AMANDA L. JONES
RENEWS: 6/30/2021

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NO.	DATE	DESCRIPTION
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PALENSKY RESTORATION PROJECT
PORTLAND, OR

ESC DETAILS 2

JOB NO. 20160007.2
SHEET NO. ESC1.2

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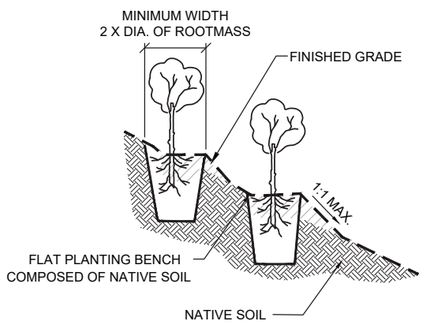
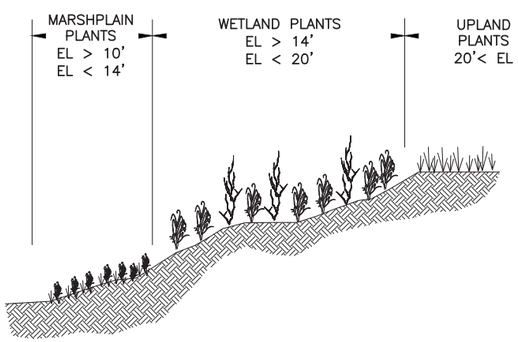
MARCH 2021

PLANT AND SEEDING NOTES

1. SEED AND PLANT AREAS PER PLAN SHEETS C1.1 TO C1.8 AND THE ELEVATION RANGES ON THIS SHEET. SEEDING AND PLANTING SCHEDULES ARE COLOR CODED TO MATCH GRADING AREA HATCHES. DISTURBANCE ALONG ACCESS ROUTES AND IN STAGING AREAS SHALL BE SEEDED WITH WETLAND SEED MIX AT THE RATES IN TABLE 2 BELOW.
2. SEED MARSH PLAIN LOWERING AREAS ABOVE ELEVATION 10 FEET NAVD88 AS SHOWN ON THE PLANS WITH MARSHPLAIN SEED MIX FROM TABLE 1 ON THIS SHEET.
3. PLANT THE 3000 MARSHPLAIN PLUGS IN CLUSTERS AS DIRECTED IN THE FIELD BY CREST.
4. SEED WETLAND AREAS BELOW ELEVATION 20 FEET NAVD88 AS SHOWN ON THE PLANS WITH WETLAND SEED MIX FROM TABLE 2 ON THIS SHEET.
5. SEED UPLAND HABITAT ENHANCEMENT AREAS ABOVE ELEVATION 20 NAVD88 WITH UPLAND SEED MIX FROM TABLE 3 ON THIS SHEET. USE EXPERIMENTAL UPLAND SEED MIX AS INDICATED ON SHEET C1.5 PER TABLE 3 FOOTNOTE.
6. PLANTING NORTH OF THE GRAVEL ROAD IS NOT INCLUDED IN THIS CONTRACT. SEED MIXES SHALL BE APPLIED ACROSS ENTIRE SITE.



1 - PLANTING



NOTE: SECTION SHOWN FOR CONCEPTUAL REFERENCE ACTUAL PLANTING AREAS NOT NECESSARILY CONTINUOUS/ADJACENT. SEED AND PLANT ENTIRE DISTURBANCE AREA FOR EACH COVERAGE (MARSHPLAIN, WETLAND, UPLAND) WITH THE SPECIFIED SEED AND PLANTS. ALONG WORK AREA MARGINS THIS MAY REQUIRE PLANTING/SEEDING MARSHPLAIN SPECIES ABOVE EL 14' AND PLANTING SEEDING WETLAND SPECIES BELOW EL 14'

2 - TYPICAL PLANTING SECTION

TABLE 1: MARSHPLAIN SEED MIX

AREA:8.8 AC, ELEVATION RANGE: >10FT NAVD88

COMMON NAME	BOTANICAL NAME	LBS PLS/ACRE
SHORTAWN FOXTAIL	*ALOPECURUS AEQUALIS*	1.00
SLOUGH GRASS	*BECKMANNIA SYZIGACHNE*	3.00
CREEPING SPIKERUSH	*ELEOCHARIS PALUSTRIS*	0.15
SLOUGH SEDGE	*CAREX OBNUPTA*	0.25
AWLFRUIT SEDGE	*CAREX STIPATA*	0.25
COMMON RUSH	*JUNCUS EFFUSUS*	0.1
RICE CUTGRASS	*LEERSIA ORYZOIDES*	2.00
DENSE SPIKE PRIMROSE	*EPILOBIUM DENSIFLORUM*	1.00
WAPATO	*SAGITTARIA LATIFOLIA*	1.00

TABLE 2: WETLAND SEED MIX

AREA:21.2 AC, ELEVATION RANGE: <20FT NAVD88

COMMON NAME	BOTANICAL NAME	LBS PLS/ACRES
SPIKE BENTGRASS	*AGROSTIS EXARATA*	0.25
MEADOW BARLEY	*HORDEUM BRACHYANTHERUM*	7.00
TUFTED HAIRGRASS	*DESCHAMPSIA CESPITOSA*	1.00
SLOUGH GRASS	*BECKMANNIA SYZIGACHNE*	1.25
PUGET SOUND GUMWEED	*GRINDELIA INTEGRIFOLIA*	1.00
CLUSTERED TARWEED	*MADIA GLOMERATA*	1.00
LARGE-LEAF LUPINE	*LUPINOUS POLYPHYLLUS*	1.00

TABLE 3: UPLAND SEED MIX

AREA:2.6 AC, ELEVATION RANGE: >20FT NAVD88

COMMON NAME	BOTANICAL NAME	LBS PLS/ACRE
BLUE WILDRYE***	*ELYMUS GLAUCUS*	5.00
CALIFORNIA BROME***	BROMUS CARINATUS	7.00
SHOWY TARWEED	*MADIA ELEGANS*	1.50
YARROW	*ACHILLEA MILLEFOLIUM*	0.125
WOOL OR/OR SUNSHINE	*ERIOPHYLLUM LANATUM*	0.25
RIVERBANK LUPINE	*LUPINUS RIVULARIS*	0.50
CINGUEFOIL	*POTENTILLA GRACILIS*	0.25
SELFHEAL; HEAL-ALL	*PRUNELLA VULGARIS VAR. LANCELOATA*	2.00
WESTERN BUTTERCUP	*SIDALCEA CAMPESTRIS*	2.00
MEADOW CHECKERMALLOW	*SIDALCEA CAMPESTRIS*	3.00
***	***	***
CALIFORNIA OATGRASS	*DANTHONIA CALIFORNICA*	4.00
ROMER'S FESCUE	*FESTUCA ROEMERI*	2.00

*** EXPERIMENTAL UPLAND SEED MIX: WHERE CALLED FOR IN THE UPLAND SEEDING AREA ON SHEET C1.5 SUBSTITUTE CALIFORNIA OATGRASS (*DANTHONIA CALIFORNICA)* FOR BLUE WIDRYE AND SUBSTITUTE ROMER'S FESCUE (*FESTUCA ROEMERI)* FOR CALIFORNIA BROME. DO NOT SEED OATGRASS OR FESCUE EXCEPT WHERE USE OF EXPERIMENTAL UPLAND SEED MIX IS INDICATED. EXPERIMENTAL UPLAND SEED MIX AREA IS APPROXIMATELY 0.7 ACRES. SEED SUBSTITUTIONS AT RATES SHOWN IN TABLE 3.

TABLE 4: MARSHPLAIN PLANTING SCHEDULE

AREA:7.6 AC, ELEVATION RANGE: >10FT NAVD88

COMMON NAME	BOTANICAL NAME	CONDITION	SPACING (FT ON-CENTER)	TOTAL PER SPECIES
NORTHERN WATER PLANTAIN	*ALISMA TRIVIALE*	PLUGS	3	750
COMMON SNEEZEWEED	*HELENIUM AUTUMNALE*	PLUGS	3	750
SLENDERBEAK SEDGE	*CAREX ATHROSTACHYA*	PLUGS	3	750
THICK-HEAD SEDGE	*CAREX PACHYSTACHYA*	PLUGS	3	750

TABLE 5: WETLAND PLANTING SCHEDULE

AREA:3.5 AC, ELEVATION RANGE: <20FT NAVD88

COMMON NAME	BOTANICAL NAME	CONDITION	SPACING (FT ON-CENTER)	TOTAL PER SPECIES
RED-OSIER DOGWOOD	*CORNUS STOLONIFERA*	1 GAL/BARE ROOT	4	900
DOUGLAS HAWTHORNE	*CRATAEGUS DOUGLASII*	1 GAL/BARE ROOT	4	900
OREGON ASH	*FRAXINUS LATIFOLIA*	BARE ROOT	4	850
OREGON ASH	*FRAXINUS LATIFOLIA*	1 GAL	4	50
BLACK TWINBERRY	*LONICERA INVOLUCRATA*	BARE ROOT	4	900
PACIFIC NINEBARK	*PHYSOCARPOS CAPITATUS*	BARE ROOT	4	900
SWAMP/CLUSTERED ROSE	*ROSA PISOCARPA*	BARE ROOT	4	900
PACIFIC WILLOW	*SALIX LASSIANDRA*	LIVESTAKES	4	2,500
SITKA WILLOW	*SALIX SITCHENSIS*	LIVESTAKES	4	2,500
HOOKER'S/PIPER'S WILLOW	*SALIX HOOKERIANA*	LIVESTAKES	4	2,500
DOUGLAS SPIREA	*SPIREA DOUGLASII*	BARE ROOT	4	1,200

TABLE 6: UPLAND PLANTING SCHEDULE

AREA:2.6 AC, ELEVATION RANGE: >20FT NAVD88

COMMON NAME	BOTANICAL NAME	CONDITION	SPACING (FT ON-CENTER)	TOTAL PER SPECIES
SCOULER WILLOW	*SALIX SCOULERIANA*	LIVE STAKE	8	150
OSOBERRY/INDIAN-PLUM	*OEMLERIA CERASIFORMIS*	1 GAL/BARE ROOT	8	150
TALL OREGON-GRAPE	*MAHONIA AQUIFOLIUM*	1 GAL/BARE ROOT	8	150
WESTERN CHOKECHERRY	*PRUNUS VIRGINIANA VAR.DEMISSA*	1 GAL/BARE ROOT	8	150
OREGON WHITE OAK	*QUERCUS GARRYANA*	1 GAL	8	150
RED FLOWERING CURRANT	*RIBES SANGUINEUM*	1 GAL/BARE ROOT	8	150
BLUE ELDERBERRY	*SAMBUCUS CAERULEA*	1 GAL/BARE ROOT	8	150
OCEANSPRAY	*HOLODISCUS DISCOLOR*	1 GAL/BARE ROOT	8	150
SASKATOON SERVICEBERRY	*AMERLANCHIER ALNIFOLIA*	1 GAL/BARE ROOT	8	150
BLACK HAWTHORN	*CRATAEGUS DOUGLASII*	BARE ROOT	8	125
BLACK HAWTHORN	*CRATAEGUS DOUGLASII*	1 GAL	8	25
CASCARA	RAMNUS PURSHIANA	1 GAL/BARE ROOT	8	150
MOCKORANGE	PHILADELPHUS LEWISII	1 GAL/BARE ROOT	8	150
NOOTKA ROSE OR BALDHIP	*ROSA NUTKANA* OR *R. GYMNOCARPA*	1 GAL/BARE ROOT	8	150
SNOWBERRY	SYMPHORICARPOS ALBA	1 GAL/BARE ROOT	8	150

REGISTERED PROFESSIONAL ENGINEER 84779PE OREGON MAR. 8, 2016 AMANDA L. JONES
RENEWS: 6/30/2021

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crest
COLUMBIA RIVER ESTUARY STUDY TASKFORCE
818 COMMERCIAL ST., SUITE 203
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DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY
AJ/RCC	RW/BS	AJ/RCC	CJL

NO.	DATE	DESCRIPTION
		REVISION

COLUMBIA RIVER ESTUARY STUDY TASKFORCE
PALENSKY RESTORATION PROJECT
PORTLAND, OR

PLANTING DETAILS

JOB NO. 20160007.2

SHEET NO. L1.1

DWG: Z:\Share\W2\CAD\20160007.2-Palensky-Burlington Bottoms\DWG\SHEETS\L1.1-PBB- PLANTING DETAILS_rev.dwg USER: bsohoner
DATE: Mar 15, 2021 2:50pm XREFS:X-TB-2X36-PBB