



**CLACKAMAS COUNTY
NOTICE OF PUBLIC IMPROVEMENT CONTRACT OPPORTUNITY**

**INVITATION TO BID #2018-47
Amisigger Road-Deep Creek Revetment Construction Project
May 7, 2018, 2018**

Clackamas County ("County") through its Board of County Commissioners is accepting sealed bids for the **Amisigger Road-Deep Creek Revetment Construction Project** until **May 24 2018, 2:00 PM**, Pacific Time, ("Bid Closing") at the following location:

DELIVER BIDS TO: Clackamas County Procurement Division, Attention George Marlton, Director, Clackamas County Public Services Building, 2051 Kaen Road, Oregon City, OR 97045; or via email to procurement@clackamas.us.

Bid packets are available from 7:00 AM to 6:00 PM Monday through Thursday at the above address or may be obtained at the Clackamas County Procurement Website at <http://www.clackamas.us/bids/>.

Contact Information

Procurement Process and Technical Questions: Ryan Rice, 503-742-5446, rrice@clackamas.us

Bids will be opened and publicly read aloud at the above Delivery address after the Bid Closing. Bid results will also be posted to the Clackamas County Procurement Website shortly after the opening.

To be eligible for award under this Invitation to Bid, bidders (prime contractors) must submit a prequalification application to the County at least two business days prior to the Bid Closing. County will reject bids from bidders who are not prequalified for the class of work indicated prior to the Bid Closing.
Bidders must prequalified in Earthwork and Drainage (EART).

State Prevailing Wage

Prevailing Wage Rates requirements apply to this Project because the maximum compensation for all Owner-contracted Work is more than \$50,000. Contractor and all subcontractors shall comply with the provisions of ORS 279C.800 through 279C.870, relative to Prevailing Wage Rates. The Bureau of Labor and Industries (BOLI) wage rates and requirements set forth in the following BOLI booklet (and any listed amendments to that booklet), which are incorporated herein by reference, apply to the Work authorized under this Agreement:

PREVAILING WAGE RATES for Public Works Contracts in Oregon, January 1, 2018 and amended on April 1, 2018, which can be downloaded at the following web address: http://www.oregon.gov/boli/WHDPWR/Pages/pwr_state.aspx The Work will take place in Clackamas County, Oregon.

Clackamas County encourages bids from Minority, Women, and Emerging Small Businesses.



CLACKAMAS COUNTY PUBLIC IMPROVEMENT CONTRACT OPPORTUNITY

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CLACKAMAS COUNTY PUBLIC IMPROVEMENT CONTRACT

INSTRUCTIONS TO BIDDERS

Clackamas County Local Contract Review Board Rules ("LCRB Rules") govern this procurement process. LCRB Rules may be found at: <http://www.clackamas.us/code/documents/appendixc.pdf>. The Instructions to Bidders is applicable to the procurement process for Clackamas County, or any component unit thereof identified on the Notice of Public Improvement Contract Opportunity, herein after referred to as the "Owner."

Article 1. Scope of Work

The work contemplated under this contract with the Owner, includes all labor, materials, transportation, equipment and services necessary for, and reasonably incidental to, the completion of all construction work in connection with the project described in the Project Manual which includes, but is not necessarily limited to, the Notice of Public Improvement Contract Opportunity, Instructions to Bidders, Supplemental Instructions to Bidders, Bid Form, Bid Bond, Public Improvement Contract Form, Performance Bond, Payment Bond, Clackamas County General Conditions for Public Improvement Contracts (1/1/2017), Supplemental General Conditions, and Plans, Specifications and Drawings.

Article 2. Examination of Site and Conditions

Before making a Bid, the Bidder shall examine the site of the work and ascertain all the physical conditions in relation thereto. The Bidder shall also make a careful examination of the Project Manual including the plans, specifications, and drawings and other contract documents, and shall be fully informed as to the quality and quantity of materials and the sources of supply of the materials. Failure to take these steps will not release the successful Bidder from entering into the contract nor excuse the Bidder from performing the work in strict accordance with the terms of the contract at the price established by the Bid.

The Owner will not be responsible for any loss or for any unanticipated costs, which may be suffered by the successful Bidder, as a result of such Bidder's failure to be fully informed in advance with regard to all conditions pertaining to the work and the character of the work required, including site conditions. No statement made by an elected official, officer, agent, or employee of the Owner in relation to the physical or other conditions pertaining to the site of the work will be binding on the Owner, unless covered by the Project Manual or an Addendum.

Article 3. Interpretation of Project Manual and Approval of Materials Equal to Those Provided in the Specifications

If any Bidder contemplating submitting a Bid for the proposed contract is in doubt as to the true meaning of any part of the plans, specifications or forms of contract documents, or detects discrepancies or omissions, such Bidder may submit to the Architect (read "Engineer" throughout in lieu of Architect as appropriate) a written request for an interpretation thereof at least ten (10) calendar days prior to the date set for the Bid Closing.

When a prospective Bidder seeks approval of a particular manufacturer's material, process or item of equal value, utility or merit other than that designated by the Architect in the Project Manual, the Bidder may submit to the Architect a written request for approval of such substitute at least ten (10) calendar days prior to the date set for the Bid Closing. The prospective Bidder submitting the request will be responsible for its prompt delivery.

Requests of approval for a substitution from that specified shall be accompanied by samples, records of performance, certified copies of tests by impartial and recognized laboratories, and such

other information as the Architect may request.

To establish a basis of quality, certain processes, types of machinery and equipment or kinds of materials may be specified in the Project Manual either by description of process or by designating a manufacturer by name and referring to a brand or product designation or by specifying a kind of material. Whenever a process is designated or a manufacturer's name, brand or item designation is given, or whenever a process or material covered by patent is designated or described, it shall be understood that the words "or approved equal" follow such name, designation or description, whether in fact they do so or not.

Any interpretation of the Project Manual or approval of manufacturer's material will be made only by an Addendum duly issued. All Addenda will be posted to the Clackamas County Procurement Website (www.clackamas.us/bid) will become a part of the Project Manual. The Owner will not be responsible for any other explanation or interpretation of the Project Manual nor for any other approval of a particular manufacturer's process or item for any Bidder.

When the Architect approves a substitution by Addendum, it is with the understanding that the Contractor guarantees the substituted article or material to be equal or better than the one specified.

Article 4. Security to Be Furnished by Each Bidder

Each Bid must be accompanied by either 1) a cashier's check or a certified check drawn on a bank authorized to do business in the State of Oregon, or 2) a Bid bond described hereinafter, executed in favor of the Owner, for an amount equal to ten percent (10%) of the total amount Bid as a guarantee that, if awarded the contract, the Bidder will execute the contract and provide a performance bond and payment bond as required. The successful Bidder's check or Bid bond will be retained until the Bidder has entered into a contract satisfactory to Owner and furnished a one hundred percent (100%) performance bond and one hundred percent (100%) payment bond. The Owner

reserves the right to hold the Bid security as described in Article 10 hereof. Should the successful Bidder fail to execute and deliver the contract as provided for in Article 12 hereof, including a satisfactory performance bond and payment bond within twenty (20) calendar days after the Bid has been accepted by the Owner, then the contract award made to such Bidder may be considered canceled and the Bid security may be forfeited as liquidated damages at the option of the Owner. The date of the acceptance of the Bid and the award of the contract as contemplated by the Project Manual shall mean the date of acceptance specified in the Notice of Intent to Award.

Article 5. Execution of Bid Bond

Should the Bidder elect to utilize a Bid bond as described in Article 4 in order to satisfy the Bid security requirements, such form must be completed in the following manner:

- A. Bid bonds must be executed on the County forms, which will be provided to all prospective Bidders by the Owner.
- B. The Bid bond shall be executed on behalf of a bonding company licensed to do business in the State of Oregon.
- C. In the case of a sole individual, the bond need only be executed as principal by the sole individual. In the case of a partnership, the bond must be executed by at least one of the partners. In the case of a corporation, the bond must be executed by stating the official name of the corporation under which is placed the signature of an officer authorized to sign on behalf of the corporation followed by such person's official capacity, such as president, etc. The corporation seal should then be affixed to the bond.
- D. The name of the surety must be stated in the execution over the signature of its duly authorized attorney-in-fact and accompanied by the seal of the surety corporation.

Article 6. Execution of the Bid Form

Each Bid shall be made in accordance with: (i) the sample Bid Form accompanying these instructions; (ii) the appropriate signatures for a sole individual, partnership, corporation or limited liability corporation shall be added as noted in Article 5C above; (iii) numbers pertaining to base Bids shall be stated both in writing and in figures; and (iv) the Bidder's address shall be typed or printed.

The Bid Form relates to Bids on a specific Project Manual. Only the amounts and information asked for on the Bid Form furnished will be considered as the Bid. Each Bidder shall Bid upon the work exactly as specified and provided in the Bid Form. The Bidder shall include in the Bid a sum to cover the cost of all items contemplated by the Contract. The Bidder shall Bid upon all alternates that may be indicated on the Bid Form. When Bidding on an alternate for which there is no charge, the Bidder shall write the words "No Charge" in the space provided on the Bid Form. If one or more alternates are shown on the Bid Form, the Bidder shall indicate whether each is "add" or "deduct."

Article 7. Prohibition of Alterations to Bid

Bids that are incomplete, or contain ambiguities or have differing conditions required by the Bidder, including requested changes or exceptions to the Public Improvement Contract form or other portions of the Project Manual, may be rejected in Owner's sole and absolute discretion.

Article 8. Submission of Bid

Each Bid shall be sealed in an envelope, properly addressed to the Owner, showing on the outside of the envelope the name of the Bidder and the name of the project. Bids will be received at the time and place stated in the Notice of Public Improvement Contract Opportunity.

Article 9. Bid Closing and Opening of Bids

All Bids must be received by the Owner at the place and time set for the Bid Closing. Any Bids received after the scheduled Bid Closing time for receipt of Bids will be rejected.

At the time of opening and reading of Bids, each Bid received will be publicly opened and read aloud, irrespective of any irregularities or informalities in such Bids.

Generally, Bid results will be posted to the Procurement Website within a couple hours of the opening.

Article 10. Acceptance or Rejection of Bids by Owner

Unless all Bids are rejected, the Owner will award a contract based on the lowest responsive Bid from a responsible Bidder. If that Bidder does not execute the contract, it will be awarded to the next lowest responsible Bidder or Bidders in succession.

The Owner reserves the right to reject all Bids and to waive minor informalities. The procedures for contract awards shall be in compliance with the provisions of the LCRB Rules in effect at that time.

The Owner reserves the right to hold the Bid and Bid security of the three lowest Bidders for a period of thirty (30) calendar days from and after the time of Bid opening pending award of the contract. Following award of the contract the Bid security of the three lowest Bidders may be held twenty (20) calendar days pending execution of the contract. All other Bids will be rejected and Bid security will be returned.

In determining the lowest Bidder, the Owner reserves the right to take into consideration any or all authorized base Bids as well as alternates or combinations indicated in the Bid Form.

If no Bid has been accepted within thirty (30) calendar days after the opening of the Bids, each of the three lowest Bidders may withdraw the Bid submitted and request the return of the Bid security.

Article 11. Withdrawal of Bid

At any time prior to the Bid Closing, a Bidder may withdraw its Bid. This will not preclude the submission of another Bid by such Bidder prior to the time set for the Bid Closing.

After the time set for the Bid Closing, no Bidder will be permitted to withdraw its Bid within the time frames specified in Article 10 for award and execution, except as provided for in that Article.

Article 12. Execution of Contract, Performance Bond and Payment Bond

The Owner will provide the successful Bidder with contract forms within seven (7) calendar days after the completion of the award protest period. The Bidder is required to execute the contract forms as provided, including a performance bond and a payment bond from a surety company licensed to do surety business in the State of Oregon, within seven (7) calendar days after receipt of the contract forms. The contract forms shall be delivered to the Owner in the number called for and to the location as instructed by the Owner.

Article 13. Recyclable Products

Contractors will use recyclable products to the maximum extent economically feasible in the performance of the Contract.

Article 14. Clarification or Protest of the Solicitation Document or Specifications

Any request for clarification or protest of the solicitation document or specifications must be submitted in the manner provided for in the applicable section of the LCRB Rules to the Procurement Representative referenced in the Notice of Public

Clackamas Contract Form B-2 (1/2017)

Improvement Contract Opportunity.

A protest of the Solicitation Document must be received within seven (7) business days of the issuance of the Bid or within three (3) business days of issuance of an addendum.

Requests for clarification may be submitted no less than five (5) business days prior to the Bid Closing Date.

Article 15. Protest of Intent to Award

Owner will name the apparent successful Bidder in a "Notice of Intent to Award" letter. Identification of the apparent successful Bidder is procedural only and creates no right in the named Bidder to the award of the contract. Competing Bidders will be notified by publication of the Notice of Intent to Award on the Clackamas County Procurement Website of the selection of the apparent successful Bidder(s) and Bidders shall be given seven (7) calendar days from the date on the "Notice of Intent to Award" letter to review the file at the Procurement Division office and file a written protest of award, pursuant to C-049-0450. Any award protest must be in writing and must be delivered by hand delivery or mail to the Procurement Division Director at: Procurement Division, 2051 Kaen Road, Oregon City, OR 97045.

Article 16. Disclosure of First-Tier Subcontractors

Within two (2) working hours after the Bid Closing, all Bidders shall submit to the County a disclosure form identifying any first-tier subcontractors (those entities that would be contracting directly with the prime contractor) that will be furnishing labor and materials on the contract, if awarded, whose subcontract value would be equal to or greater than: (a) Five percent (5%) of the total contract price, but at least \$15,000; or (b) \$350,000, regardless of the percentage of the total contract price.

Disclosures may be submitted with the Bid or may be hand delivered to the Bid Closing address or emailed to procurement@clackamas.us.



**CLACKAMAS COUNTY
PUBLIC IMPROVEMENT CONTRACT**

SUPPLEMENTAL INSTRUCTIONS TO BIDDERS

**Project Name: # 2018-47 Amisigger Road-Deep Creek Revetment
Construction Project**

The following modify the Clackamas County “Instructions to Bidders” for this Project. Where a portion of the Instructions to Bidders has been modified by these Supplemental Instructions to Bidders, the unaltered portions shall remain in effect.

- 1. Submission of Bids by email:** Complete Bids (including all attachments) may be emailed and must be electronically received by the closing time and date **2:00 p.m. Pacific Time, May 24, 2018**. If emailed, the Bid must be emailed to the following address: Procurement@clackamas.us. The email subject line must be **“Bid for # 2018-47 Amisigger Road-Deep Creek Revetment Construction Project”** Bidders are ***strongly encouraged*** to telephone and confirm electronic receipt of the complete emailed document(s) before the above time and date deadline. Bids delayed or lost by email system filtering or failures may be considered at Clackamas County’s sole and absolute discretion.
- 2. Good Faith Effort:** Clackamas County encourages participation in contracts by Historically Underrepresented Businesses. “Historically Underrepresented Businesses” are State of Oregon-certified and self-identified minority, women and emerging small business as well as firms that are certified federally or by another state or entity with substantially similar requirements as the State of Oregon.

Bidders must perform Good Faith Effort (defined below) and submit **Form 1 and Form 2** for the Bidders Bid to be considered responsive. **Form 1 and Form 2** must be submitted within **two (2) hours** after the Closing Date and Time. Form 1 and Form 2 may be submitted by hand delivery to the location the Bid was due or may email the completed Forms to Procurement@clackamas.us. “Good Faith Effort” is a requirement of a prime contractor to reach out to at least three Historically Underrepresented Business Subcontractors for each division of work that will be subcontracted out and to complete the required forms. If fewer than three Historically Underrepresented Business Subcontractors are reasonably available for a particular division of work, the Bidder must specifically note the reason for there being fewer than three contacts. The outreach should be performed with sufficient time to give the subcontractors at least 5 calendar days to respond to the opportunity. Form 3, which documents the actual amount of subcontractors on the project, must be submitted with the project final pay application. Compliance with the Good Faith Effort and submission of Forms 1, 2 and 3 is a contractual requirement for final payment.

The sufficiency of the documentation or the performance of Good Faith Effort shall be in the sole and absolute determination of Clackamas County. Only those Bidders that Clackamas County has determined have not sufficiently performed Good Faith Effort shall have protest rights of the determination for such Bidder. No Bidder shall have protest rights of the sufficiency of any other Bidder completing Good Faith Effort.

**CLACKAMAS COUNTY
GOOD FAITH EFFORT
SUBCONTRACTOR AND SELF-PERFORMED WORK LIST
(FORM 1)**

Prime Contractor Name:

Total Contract Amount:

Project Name: # 2018-47 Amisiggar Road-Deep Creek Revetment Construction Project

PRIME SELF-PERFORMING: Identify below ALL GFE Divisions of Work (DOW) to be self-performed. Good Faith Efforts are otherwise required.	
<u>DOW BIDDER WILL SELF-PERFORM (GFE not required)</u>	

PRIME CONTRACTOR SHALL DISCLOSE AND LIST ALL SUBCONTRACTORS, including those Minority-owned, Woman-owned, and Emerging Small Businesses ("M/W/ESB") that you intend to use on the project. Hand delivery to Procurement, 2051 Kaen Road, Oregon City, OR 97045 or email to procurement@clackamas.us within 2 hours of the BID/Quote Closing Date/Time


<u>LIST ALL SUBCONTRACTORS BELOW</u> Use <u>correct legal name</u> of Subcontractor (No Assumed Business Names)	Division of Work (Painting, electrical, landscaping, etc.) List ALL DOW performed by Subcontractors	DOLLAR AMOUNT OF SUBCONTRACT	If Certified or self-reporting MBE/WBE/ESB Subcontractor Check box		
			MBE	WBE	ESB
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

GFE SUBCONTRACTOR AND SELF-PERFORMED WORK LIST (FORM 1) cont'd

Prime Contractor Name:

Total Contract Amount:

Project Name: # 2018-47 Amisigger-Deep Creek
Revetment Construction Project

LIST ALL SUBCONTRACTORS BELOW Use <u>correct legal name</u> of Subcontractor (No Assumed Business Names)	Division of Work (Painting, electrical, landscaping, etc.) List ALL DOW performed by Subcontractors	DOLLAR AMOUNT OF SUBCONTRACT	If Certified or self-reporting MBE/WBE/ESB Subcontractor Check box 		
			MBE	WBE	ESB
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CLACKAMAS COUNTY
GOOD FAITH EFFORT
M/W/ESB CONTACT / BIDS RECEIVED LOG
(FORM 2)

Prime Contractor:
Project: # 2018-47 Amisigger-Deep Creek Revetment Construction Project

Prime Contractor must contact or endeavor to contact at least 3 M/W/ESB Subcontractors for each Division of Work. Prime Contractor shall record its contacts with M/W/ESB Subcontractors through use of this log (or equivalent) entering all required information. All columns shall be completed where applicable. Additional forms may be copied if needed.

NAME OF M/W/ESB SUBCONTRACTOR	Divisions of Work (Painting, electrical, landscaping, etc.)	Date Solicitation Letter / Fax Sent	PHONE CONTACT		BID ACTIVITY Check Yes or No			REJECTED BIDS (if bid received & not used)		Notes
					Will Bid	Bid Received	Bid Used	Bid Amount	Reason Not Used (Price, Scope or Other. If Other, explain in Notes>>)	
			Date of Call	Person Receiving Call						
					<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes			
					<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No			
					<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes			
					<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No			
					<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes			
					<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No			
					<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes			
					<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No			
					<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes			
					<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No			
					<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes			
					<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No			
					<input type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes			
					<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No			

**CLACKAMAS COUNTY
GOOD FAITH EFFORT
PROJECT COMPLETION REPORT
(FORM 3)**

Prime Contractor Name:

Total Contract Amount:

Project Name: # 2018-47 Amisigger-Deep Creek Revetment Construction Project

Complete this form and submit with your request for final payment upon the project completion. Please list all subcontractors used for the project. Use additional sheets as necessary.

LIST ALL SUBCONTRACTORS BELOW Use <u>correct legal name</u> of Subcontractor (No Assumed Business Names)	Division of Work (Painting, electrical, landscaping, etc.) List ALL DOW performed by Subcontractors	FINAL DOLLAR AMOUNT OF SUBCONTRACT	If Certified or self-reported MBE/WBE/ESB Subcontractor Check box <input checked="checked" type="checkbox"/>		
			MBE	WBE	ESB
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

BY SIGNING BELOW, I HEREBY CERTIFY THAT THE ABOVE LISTED FIRMS HAVE BEEN UTILIZED BY OUR COMPANY IN THE AMOUNTS REPRESENTED ABOVE AND THAT THE INFORMATION CONTAINED HEREIN IS COMPLETE AND ACCURATE. .

Authorized Signature of Contractor Representative

Date



**CLACKAMAS COUNTY
PUBLIC IMPROVEMENT CONTRACT**

BID BOND

Project Name: # 2018-47 Amisigger Road-Deep Creek Revetment Construction Project

We, _____, as "Principal,"
(Name of Principal)

and _____, an _____ Corporation,
(Name of Surety)

authorized to transact Surety business in Oregon, as "Surety," hereby jointly and severally bind ourselves, our respective heirs, executors, administrators, successors and assigns to pay unto Clackamas County ("Obligee") the sum of (\$_____)

_____ dollars.

WHEREAS, the condition of the obligation of this bond is that Principal has submitted its proposal or bid to an agency of the Obligee in response to Obligee's procurement document (No. _____) for the project identified above which proposal or bid is made a part of this bond by reference, and Principal is required to furnish bid security in an amount equal to ten (10%) percent of the total amount of the bid pursuant to the procurement document.

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

IN WITNESS WHEREOF, we have caused this instrument to be executed and sealed by our duly authorized legal representatives this _____ day of _____, 20____.

Principal: _____ Surety: _____

By: _____
Signature

By: Attorney-In-Fact

Official Capacity

Name

Attest: _____
Corporation Secretary

Address

City State Zip

Phone Fax



CLACKAMAS COUNTY
PUBLIC IMPROVEMENT CONTRACT

BID FORM

PROJECT: # **2018-47 Deep Creek Revetment Construction Project**

BID CLOSING: May 24, 2018, 2:00 PM, Pacific Time

BID OPENING: May 24, 2018, 2:05 PM, Pacific Time

FROM: _____
Bidder's Name (must be full legal name, not ABN/DBA)

TO: Clackamas County
Procurement Division – Attention George Marlton, Director
2051 Kaen Road
Oregon City, OR 97045

1. Bidder is (*check one of the following and insert information requested*):

- ____ a. An individual; or
- ____ b. A partnership registered under the laws of the State of _____; or
- ____ c. A corporation organized under the laws of the State of _____; or
- ____ d. A limited liability corporation organized under the laws
of the State of _____;

and authorized to do business in the State of Oregon hereby proposes to furnish all material and labor and perform all work hereinafter indicated for the above project in strict accordance with the Contract Documents for the Basic Bid as follows:

_____ Dollars (\$_____)

and the Undersigned agrees to be bound by the following documents:

- Notice of Public Improvement Contract Opportunity
- Instructions to Bidders
- Bid Bond
- Performance Bond and Payment Bond
- Payroll and Certified Statement Form
- Supplemental Instructions to Bidders
- Public Improvement Contract Form
- Prevailing Wage Rates
- Plans, Specifications and Drawings

• ADDENDA numbered _____ through _____, inclusive (*fill in blanks*)

2. The Undersigned proposes to add to or deduct from the Base Bid indicated above the items of work relating to the following Alternate(s) as designated in the Specifications: **N/A**

3. The Undersigned proposes to add to or deduct from the Base Bid indicated above the items or work relating to the following Unit Price(s) as designated in the Specifications, for which any adjustments in the Contract amount will be made in accordance with the project specifications: **Provide the attached Bid Schedules with Bid.**

4. The work shall be completed within the time stipulated and specified in 00180.50(h) of the Special Provisions for **ROADWAY AND HIGHWAY CONSTRUCTION Grading and Landscaping AMISIGGER ROAD- DEPP CREEK REVETMENT, dated April 2018.**

5. Accompanying herewith is Bid Security which is equal to ten percent (10%) of the total amount of the Basic Bid.

6. The Undersigned agrees, if awarded the Contract, to execute and deliver to Clackamas County, within twenty (20) calendar days after receiving the Contract forms, a Contract Form, and a satisfactory Performance Bond and Payment Bond each in an amount equal to one hundred percent (100%) of the Contract sum, using forms provided by the Owner. The surety requested to issue the Performance Bond and Payment Bond will be:

(name of surety company - not insurance agency)

The Undersigned hereby authorizes said surety company to disclose any information to the Owner concerning the Undersigned's ability to supply a Performance Bond and Payment Bond each in the amount of the Contract.

7. The Undersigned further agrees that the Bid Security accompanying the Bid is left in escrow with Clackamas County; that the amount thereof is the measure of liquidated damages which the Owner will sustain by the failure of the Undersigned to execute and deliver the above-named Contract Form, Performance Bond and Payment Bond, each as published, and that if the Undersigned defaults in either executing the Contract Form or providing the Performance Bond and Payment Bond within twenty (20) calendar days after receiving the Contract forms, then the Bid Security shall become the property of the Owner at the Owner's option; but if the Bid is not accepted within thirty (30) calendar days of the time set for the opening of the Bids, or if the Undersigned executes and timely delivers said Contract Form, Performance Bond and Payment Bond, the Bid Security shall be returned.

8. The Undersigned certifies that: (i) This Bid has been arrived at independently and is being submitted without collusion with and without any agreement, understanding, or planned common course of action with any other vendor of materials, supplies, equipment or services described in the invitation to bid designed to limit independent bidding or competition; and (ii) the contents of the Bid have not been communicated by the Undersigned or its employees or agents to any person not an employee or agent of the Undersigned or its surety on any Bond furnished with the Bid and will not be communicated to such person prior to the official opening of the Bid.

9. The undersigned ☐ **HAS**, ☐ **HAS NOT** (*check one*) paid unemployment or income taxes in Oregon within the past 12 months and ☐ **DOES**, ☐ **DOES NOT** (*check one*) a business address in Oregon. The undersigned acknowledges that, if the selected bidder, that the undersigned will have to pay all applicable taxes and register to do business in the State of Oregon before executing the Contract Form.

10. The Undersigned agrees, if awarded a contract, to comply with the provisions of ORS 279C.800 through 279C.870 pertaining to the payment of the prevailing rates of wage.

11. Contractor's CCB registration number is _____. As a condition to submitting a bid, a Contractor must be registered with the Oregon Construction Contractors Board in accordance with ORS 701.035 to 701.055, and disclose the registration number. Failure to register and disclose the number will make the bid unresponsive and it will be rejected, unless contrary to federal law.

12. The successful Bidder hereby certifies that all subcontractors who will perform construction work as described in ORS 701.005(2) were registered with the Construction Contractors Board in accordance with ORS 701.035 to 701.055 at the time the subcontractor(s) made a bid to work under the contract.

13. The successful Bidder hereby certifies that, in compliance with the Worker's Compensation Law of the State of Oregon, its Worker's Compensation Insurance provider is _____, Policy No. _____, and that Contractor shall submit Certificates of Insurance as required.

14. Contractor's Key Individuals for this project (supply information as applicable):

Project Executive: _____,	Cell Phone: _____,
Project Manager: _____,	Cell Phone: _____,
Job Superintendent: _____,	Cell Phone: _____,
Project Engineer: _____,	Cell Phone: _____.

15. The Undersigned certifies that it has not discriminated against minority, women, or emerging small businesses in obtaining any subcontracts for this project.

REMINDER: Bidder must submit the below First-Tier Subcontractor Disclosure Form.

By signature below, Contractor agrees to be bound by this Bid.

NAME OF FIRM _____

ADDRESS _____

TELEPHONE NO _____

EMAIL _____

SIGNATURE 1) _____
Sole Individual

or 2) _____
Partner

or 3) _____
Authorized Officer or Employee of Corporation

***** **END OF BID** *****

Amisigger Road - Deep Creek Revetment Project Bid Schedule

Item #	Spec Section	Description	Unit	Quantity	Unit Price	Total Price
1	196	Extra Work As Authorized	Lump Sum	1	-	\$ 25,000.00
2	210	Mobilization	Lump Sum	1		
3	225	Temporary Work Zone Traffic Control, Complete	Lump Sum	1		
4	225	Flaggers	Hour	100		
4	245	Temporary Water Management	Lump Sum	1		
5	280	Erosion Control	0	1		
6	280	Construction Entrance, Type 1	Each	1		
7	280	Compost Filter Sock	Ft.	450		
8	280	Sediment Fence	Ft.	275		
9	280	Sediment Barrier, Type 8	Ft.	25		
10	290	Pollution Control Plan	Lump Sum	1		
11	290	Turbidity Monitoring	Lump Sum	1		
12	305	Construction Survey Work	Lump Sum	1		
13	320	Clearing and Grubbing	Lump Sum	1		
14	320	Orange Construction Fence	Ft.	110		
15	330	General Excavation	CY	150		
16	330	Extra for Selected Native Backfill Material	CY	150		
17	399	Log Crib Structure	Each	1		
18	399	Log Matrix Structure	Each	1		
19	399	Log Bolt Connections	Each	15		
20	1030	Permanent Native Seeding	Acre	0.20		
21	1030	Compost Mulch	CY	15		
22	1040	Wood Fiber Mulch	CY	8		
23	1040	Soil Testing	Each	2		
24	1040	Imported Topsoil	CY	20		
25	1040	Shrubs, No. 1 Container	Each	225		

Total Bid Price (Number) =

TOTAL BID PRICE: _____
(In Words)

CONTRACTOR: _____

FIRST-TIER SUBCONTRACTOR DISCLOSURE FORM
PROJECT: #2018-47 Deep Creek Revetment Construction Project

BID OPENING: May 24, 2018, 2:00 PM, Pacific Time

Failure to submit this Form by the disclosure deadline will result in a nonresponsive bid.

INSTRUCTIONS:

This First-Tier Subcontractor Disclosure Form ("Form") must be submitted and received at the location specified in the Notice of Public Improvement Contract Opportunity on the advertised Bid Closing, and within two working hours after the advertised Bid Closing Time.

The Form may be mailed, hand-delivered or emailed to: Procurement@clackamas.us. It is the responsibility of Bidders to submit this Form and any additional sheets with the Project name clearly marked on the envelope or the subject line of the email.

Subcontractor lists may be submitted with the bid in the same envelope or email at the Bid Closing date and time. Subcontractor lists **MUST** be submitted within **two (2) hours** of the Bid Closing date and time.

List below the name of each subcontractor that will be furnishing labor, or labor and materials, for which disclosure is required, the category of work that the subcontractor will be performing, and the dollar value of the subcontract. Enter **"NONE"** if the value of the project bid is less than \$100,000 or there are no subcontractors that need to be disclosed. ATTACH ADDITIONAL SHEETS IF NECESSARY.

	SUBCONTRACTOR NAME	DOLLAR VALUE	CATEGORY OF WORK
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____

The above listed first-tier subcontractor(s) are providing labor, or labor and material, with a Dollar Value equal to or greater than:

- a) 5% of the total Contract Price, but at least \$15,000. If the Dollar Value is less than \$15,000 do not list the subcontractor above; or
- b) \$350,000 regardless of the percentage of the total Contract Price.

Firm Name: _____

Bidder Signature: _____ Phone # _____



CLACKAMAS COUNTY PUBLIC IMPROVEMENT CONTRACT

This Public Improvement Contract (the "Contract"), is made by and between the Clackamas County, a political subdivision of the State of Oregon, hereinafter called "Owner," and Contractor Name (No DBA/ABN), hereinafter called the "Contractor" (collectively the "Parties"), shall become effective on the date this Contract has been signed by all the Parties and all County approvals have been obtained, whichever is later.

Project Name: #2018-47 Amisigger Road-Deep Creek Revetment Construction Project

1. Contract Price, Contract Documents and Work.

The Contractor, in consideration of the sum of _____ Dollars (\$) (the "Contract Price"), to be paid to the Contractor by Owner in the manner and at the time hereinafter provided, and subject to the terms and conditions provided for in the Instructions to Bidders and other Contract Documents (as defined in the project specifications) referenced within the Instructions to Bidders), all of which are incorporated herein by reference, hereby agrees to perform all Work described and reasonably inferred from the Contract Documents. The Contract Price is the amount contemplated by the Base Bid adjusted for Alternates **Identify accepted Alternates**, as indicated in the accepted Bid.

Also, the following documents are incorporated by reference in this Contract and made a part hereof:

- Notice of Contract Opportunity
- Supplemental Instructions to Bidders
- Public Improvement Contract Form
- Prevailing Wage Rates
- Plans, Specifications and Drawings
- Instructions to Bidders
- Bid Bond
- Performance Bond and Payment Bond
- Payroll and Certified Statement Form

2. Representatives.

Contractor has named _____ as its' Authorized Representative to act on its behalf. Owner designates, or shall designate, its Authorized Representative as indicted below (check one):

☒ Unless otherwise specified in the Contract Documents, the Owner designates _____ as its Authorized Representative in the administration of this Contract. The above-named individual shall be the initial point of contact for matters related to Contract performance, payment, authorization, and to carry out the responsibilities of the Owner.

☐ Name of Owner's Authorized Representative shall be submitted by Owner in a separate writing.

3. Key Persons.

The Contractor's personnel identified below shall be considered Key Persons and shall not be replaced during the project without the written permission of Owner, which shall not be unreasonably withheld. If the Contractor intends to substitute personnel, a request must be given to Owner at least 30 days prior to the intended time of substitution. When replacements have been approved by Owner, the Contractor shall provide a transition period of at least 10 working days during which the original and replacement personnel shall be working on the project concurrently. Once a replacement for any of these staff members is authorized, further replacement shall not occur without the written permission of Owner. The Contractor's project staff shall consist of the following personnel:

Project Executive: shall be the Contractor's project executive, and will provide oversight and guidance throughout the project term.

Project Manager: shall be the Contractor's project manager and will participate in all meetings throughout the project term.

Job Superintendent: shall be the Contractor's on-site job superintendent throughout the project term.

Project Engineer: shall be the Contractor's project engineer, providing assistance to the project manager, and subcontractor and supplier coordination throughout the project term.

4. Contract Dates.

COMMENCEMENT DATE: Upon Issuance of Notice to Proceed ("NTP")

SUBSTANTIAL COMPLETION DATE: August 31, 2018 except for seeding, planting, seeding establishment and plant establishment.

FINAL COMPLETION DATE: October 12, 2018 except for seeding establishment, and plant establishment

Time is of the essence for this Contract. It is imperative that the Work in this Contract reach Substantial Completion and Final Completion by the above specified dates.

5. Insurance Certificates and Required Performance and Payment Bonds.

5.1 In accordance with Section 00170.70 of the Specifications, Contractor shall furnish proof of the required insurance naming Clackamas County as an additional insured. Insurance certificates may be returned with the signed Contract or may be emailed to Procurement@clackamas.us.

5.2 Primary Coverage: Insurance carried by Contractor under the Contract shall be the primary coverage. The coverages indicated are minimums unless otherwise specified in the Contract Documents.

5.2.1 Workers' Compensation: All employers, including Contractor, that employ subject workers who work under the Contract in the State of Oregon shall comply with ORS 656.017 and provide the required Workers' Compensation coverage, unless such employers are exempt under ORS 656.126. This shall include Employer's Liability Insurance with coverage limits of not less than the minimum amount required by statute for each accident. Contractors who perform the Work without the assistance or labor of any employee need not obtain such coverage if the Contractor certifies so in writing. Contractor shall ensure that each of its Subcontractors complies with these requirements. The Contractor shall require proof of such Workers' Compensation coverage by receiving and keeping on file a certificate of insurance from each Subcontractor or anyone else directly employed by either the Contractor or its Subcontractors.

5.3 Builder's Risk Insurance: During the term of the Contract, for new construction the Contractor shall obtain and keep in effect Builder's Risk insurance on an all risk forms, including earthquake and flood, for an amount equal to the full amount of the Contract, plus any changes in values due to modifications, Change Orders and loss of materials added. Such Builder's Risk shall include, in addition to earthquake and flood, theft, vandalism, mischief, collapse, transit, debris removal, and architect's fees "soft costs" associated with delay of Project due to insured peril. Any deductible shall not exceed \$50,000 for each loss, except the earthquake and flood deductible which shall not exceed 2 percent of each loss or \$50,000, whichever is greater. The deductible shall be paid by Contractor. The policy will include as loss payees Owner, the Contractor and its Subcontractors as their interests may appear.

5.4 Builder's Risk Installation Floater: For Work other than new construction, Contractor shall obtain and keep in effect during the term of the Contract, a Builder's Risk Installation Floater for coverage of the Contractor's labor, materials and equipment to be used for completion of the Work performed under the Contract. The minimum amount of coverage to be carried shall be equal to the full amount of the Contract. The policy will include as loss payees Owner, the Contractor and its Subcontractors as their interests may appear. Owner may waive this requirement at its sole and absolute discretion.

5.4.1 Such insurance shall be maintained until Owner has occupied the facility.

5.4.2 A loss insured under the Builder's Risk insurance shall be adjusted by the Owner and made payable to the Owner as loss payee. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner. The Owner shall have power to adjust and settle a loss with insurers.

5.5 "Tail" Coverage: If any of the required liability insurance is arranged on a "claims made" basis, "tail" coverage will be required at the completion of the Contract for a duration of 36 months or the maximum time period available in the marketplace if less than 36 months. Contractor shall furnish certification of "tail" coverage as described or continuous "claims made" liability coverage for 36 months following Final Completion. Continuous "claims made" coverage will be acceptable in lieu of "tail" coverage, provided its retroactive date is on or before the effective date of the Contract. Owner's receipt of the policy endorsement evidencing such coverage shall be a condition precedent to Owner's obligation to make final payment and to Owner's final acceptance of Work or services and related warranty (if any).

5.6 Notice of Cancellation or Change: If the Contractor receives a non-renewal or cancellation notice from an insurance carrier affording coverage required herein, or receives notice that coverage no longer complies with the insurance requirements herein, Contractor agrees to notify Owner by fax within five (5) business days with a copy of the non-renewal or cancellation notice, or written specifics as to which coverage is no longer in compliance. When notified by Owner, the Contractor agrees to stop Work pursuant to the Contract at Contractor's expense, unless all required insurance remain in effect. Any failure to comply with the reporting provisions of this insurance, except for the potential exhaustion of aggregate limits, shall not affect the coverages provided to the Owner and its institutions, divisions, officers, and employees.

Owner shall have the right, but not the obligation, of prohibiting Contractor from entering the Project Site until a new certificate(s) of insurance is provided to Owner evidencing the replacement coverage. The Contractor agrees that Owner reserves the right to withhold payment to Contractor until evidence of reinstated or replacement coverage is provided to Owner.

5.7 Before execution of the Contract, the Contractor shall file with the Construction Contractors Board, and maintain in full force and effect, the separate public works bond required by Oregon Revised Statutes, Chapter 279C.830 and 279C.836, unless otherwise exempt under those provisions. The Contractor shall also include in every subcontract a provision requiring the Subcontractor to have a public works bond filed with the Construction Contractors Board before starting Work, unless otherwise exempt, and shall verify that the Subcontractor has filed a public works bond before permitting any Subcontractor to start Work.

5.8 When the Contract Price is \$50,000 or more, the Contractor shall furnish and maintain in effect at all times during the Contract Period a performance bond in a sum equal to the Contract Price and

a separate payment bond also in a sum equal to the Contract Price. Contractor shall furnish such bonds even if the Contract Price is less than the above thresholds if otherwise required by the Contract Documents.

5.9 Bond forms furnished by the Owner and notarized by Contractor's surety company authorized to do business in Oregon are the only acceptable forms of performance and payment security, unless otherwise specified in the Contract Documents.

6. Responsibility for Damages/Indemnity.

6.1 Contractor shall be responsible for all damage to property, injury to persons, and loss, expense, inconvenience, and delay that may be caused by, or result from, the carrying out of the Work to be done under the Contract, or from any act, omission or neglect of the Contractor, its Subcontractors, employees, guests, visitors, invitees and agents.

6.2 To the fullest extent permitted by law, Contractor shall indemnify, defend (with counsel approved by Owner) and hold harmless the Owner and its elected officials, officers, directors, agents, and employees (collectively "Indemnitees") from and against all liabilities, damages, losses, claims, expenses, demands and actions of any nature whatsoever which arise out of, result from or are related to: (a) any damage, injury, loss, expense, inconvenience or delay described in this Section 6.1; (b) any accident or occurrence which happens or is alleged to have happened in or about the Project Site or any place where the Work is being performed, or in the vicinity of either, at any time prior to the time the Work is fully completed in all respects; (c) any failure of the Contractor to observe or perform any duty or obligation under the Contract Documents which is to be observed or performed by the Contractor, or any breach of any agreement, representation or warranty of the Contractor contained in the Contract Documents or in any subcontract; (d) the negligent acts or omissions of the Contractor, a Subcontractor or anyone directly or indirectly employed by them or any one of them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder (except to the extent otherwise void under ORS 30.140); and (e) any lien filed upon the Project or bond claim in connection with the Work. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Section 6.2.

6.3 In claims against any person or entity indemnified under Section 6.2 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Section 6.2 shall not be limited on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

7. Tax Compliance.

Contractor must, throughout the duration of this Contract and any extensions, comply with all tax laws of this state and all applicable tax laws of any political subdivision of this state. Any violation of this section shall constitute a material breach of this Contract. Further, any violation of Contractor's warranty in this Contract that Contractor has complied with the tax laws of this state and the applicable tax laws of any political subdivision of this state also shall constitute a material breach of this Contract. Any violation shall entitle County to terminate this Contract, to pursue and recover any and all damages that arise from the breach and the termination of this Contract, and to pursue any or all of the remedies available under this Contract, at law, or in equity, including but not limited to: (A) Termination of this Contract, in whole or in part; (B) Exercise of the right of setoff, and withholding of amounts otherwise due and owing to Contractor, in an amount equal to County's setoff right, without penalty; and (C) Initiation of an action or proceeding for damages, specific performance, declaratory or injunctive relief. County shall be entitled to recover any and all damages suffered as the result of Contractor's breach of this Contract, including but not limited to direct, indirect, incidental and consequential damages, costs of cure, and costs incurred in securing replacement

performance. These remedies are cumulative to the extent the remedies are not inconsistent, and County may pursue any remedy or remedies singly, collectively, successively, or in any order whatsoever.

The Contractor represents and warrants that, for a period of no fewer than six calendar years preceding the effective date of this Contract, has faithfully complied with: (A) All tax laws of this state, including but not limited to ORS 305.620 and ORS chapters 316, 317, and 318; (B) Any tax provisions imposed by a political subdivision of this state that applied to Contractor, to Contractor's property, operations, receipts, or income, or to Contractor's performance of or compensation for any work performed by Contractor; (C) Any tax provisions imposed by a political subdivision of this state that applied to Contractor, or to goods, services, or property, whether tangible or intangible, provided by Contractor; and (D) Any rules, regulations, charter provisions, or ordinances that implemented or enforced any of the foregoing tax laws or provisions.

8. Confidential Information.

Contractor acknowledges that it and its employees or agents may, in the course of performing their responsibilities under this Contract, be exposed to or acquire information that is confidential to Owner. Any and all information of any form obtained by Contractor or its employees or agents in the performance of this Contract shall be deemed confidential information of Owner ("Confidential Information"). Contractor agrees to hold Confidential Information in strict confidence, using at least the same degree of care that Contractor uses in maintaining the confidentiality of its own confidential information, and not to copy, reproduce, sell, assign, license, market, transfer or otherwise dispose of, give, or disclose Confidential Information to third parties or use Confidential Information for any purpose unless specifically authorized in writing under this Contract.

9. Counterparts.

This Contract may be executed in several counterparts, all of which when taken together shall constitute an agreement binding on all Parties, notwithstanding that all Parties are not signatories to the same counterpart. Each copy of the Contract so executed shall constitute an original.

10. Integration.

All provisions of state law required to be part of this Contract, whether listed in the General or Special Conditions or otherwise, are hereby integrated and adopted herein. Contractor acknowledges the obligations thereunder and that failure to comply with such terms is a material breach of this Contract.

The Contract Documents constitute the entire agreement between the parties. There are no other understandings, agreements or representations, oral or written, not specified herein regarding this Contract. Contractor, by the signature below of its authorized representative, hereby acknowledges that it has read this Contract, understands it, and agrees to be bound by its terms and conditions.

11. Liquidated Damages

The Contractor acknowledges that the Owner will sustain damages as a result of the Contractor's failure to substantially complete the Project in accordance with the Contract Documents. These damages may include, but are not limited to delays in completion, use of the Project, and costs associated with Contract administration and use of temporary facilities.

11.1 Liquidated Damages shall be as follows if the actual Substantial Completion exceeds the required date of Substantial Completion:

11.1.1. \$ 600 per Calendar day past the Substantial Completion date as identified in section 00180.85 (b).

Signature page to follow.

In witness whereof, Clackamas County executes this Contract and the Contractor does execute the same as of the day and year first above written.

Contractor DATA:

(Insert Contractor Name & Address)

Contractor CCB # Expiration Date:

Oregon Business Registry #

Entity Type:

State of Formation:

Payment information will be reported to the IRS under the name and taxpayer ID# provided by the Contractor. Information must be provided prior to contract approval. Information not matching IRS records could subject Contractor to 28 percent backup withholding.

Contractor Name (No DBA/ABN)

Clackamas County Board of County Commissioners

Authorized Signature

Date

Chair

Date

Name / Title Printed

Recording Secretary

APPROVED AS TO FORM

County Counsel

Date



**CLACKAMAS COUNTY
PUBLIC IMPROVEMENT CONTRACT
PERFORMANCE BOND**

Bond No.: _____

Solicitation: #2018-47

Project Name: Amisigger Road-Deep Creek Revetment Construction Project

_____ (Surety #1)	Bond Amount No. 1:	\$ _____
_____ (Surety #2)*	Bond Amount No. 2:*	\$ _____
	Total Penal Sum of Bond:	\$ _____

** If using multiple sureties*

We, _____ as Principal, and the above identified Surety(ies), authorized to transact surety business in Oregon, as Surety, hereby jointly and severally bind ourselves, our respective heirs, executors, administrators, successors and assigns firmly by these presents to pay unto Clackamas County, the sum of (Total Penal Sum of Bond) _____ (Provided, that we the Sureties bind ourselves in such sum “jointly and severally” as well as “severally” only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety); and

WHEREAS, the Principal has entered into a contract with Clackamas County, along with the plans, specifications, terms and conditions of which are contained in the above-referenced Solicitation; and

WHEREAS, the terms and conditions of the contract, together with applicable plans, standard specifications, special provisions, schedule of performance, and schedule of contract prices, are made a part of this Performance Bond by reference, whether or not attached to the contract (all hereafter called “Contract”); and

WHEREAS, the Principal has agreed to perform the Contract in accordance with the terms, conditions, requirements, plans and specifications, and all authorized modifications of the Contract which increase the amount of the work, the amount of the Contract, or constitute an authorized extension of the time for performance, notice of any such modifications hereby being waived by the Surety:

NOW, THEREFORE, THE CONDITION OF THIS BOND IS SUCH that if the Principal herein shall faithfully and truly observe and comply with the terms, conditions and provisions of the Contract, in all respects, and shall well and truly and fully do and perform all matters and things undertaken by Contractor to be performed under the Contract, upon the terms set forth therein, and within the time prescribed therein, or as extended as provided in the Contract, with or without notice to the Sureties, and shall defend, indemnify, and save harmless Clackamas County and its elected officials, officers, employees and agents, against any direct or indirect damages or claim of every kind and description that shall be suffered or claimed to be suffered in connection with or arising out of the performance of the Contract by the Principal or its subcontractors, and shall in

all respects perform said contract according to law, then this obligation is to be void; otherwise, it shall remain in full force and effect for so long as any term of the Contract remains in effect.

If the County determines that any of the above conditions have not been met, the County may require payment under this bond at its sole and absolute discretion and Surety shall issue prompt payment of the full value of this bond without set-off or dispute or requirement for an opportunity to cure.

Nonpayment of the bond premium will not invalidate this bond nor shall Clackamas County, be obligated for the payment of any premiums.

This bond is given and received under authority of Oregon Revised Statutes Chapter 279C and the Clackamas County Local Contractor Review Board Rules, the provisions of which hereby are incorporated into this bond and made a part hereof.

IN WITNESS WHEREOF, WE HAVE CAUSED THIS INSTRUMENT TO BE EXECUTED AND SEALED BY OUR DULY AUTHORIZED LEGAL REPRESENTATIVES.

Dated this _____ day of _____, 20____.

PRINCIPAL: _____

By: _____

Signature

Official Capacity

Attest: _____

Corporation Secretary

SURETY: _____

[Add signatures for each if using multiple bonds]

BY ATTORNEY-IN-FACT:

[Power-of-Attorney must accompany each bond]

Name

Signature

Address

City State Zip

Phone Fax



**CLACKAMAS COUNTY
PUBLIC IMPROVEMENT CONTRACT**

PAYMENT BOND

Bond No.: _____

Solicitation: #2018-47

Project Name: Amisigger Road-Deep Creek Revetment Construction Project

_____ (Surety #1)	Bond Amount No. 1:	\$ _____
_____ (Surety #2)*	Bond Amount No. 2:*	\$ _____
* <i>If using multiple sureties</i>	Total Penal Sum of Bond:	\$ _____

We, _____, as Principal, and the above identified Surety(ies), authorized to transact surety business in Oregon, as Surety, hereby jointly and severally bind ourselves, our respective heirs, executors, administrators, successors and assigns firmly by these presents to pay unto Clackamas County, the sum of (Total Penal Sum of Bond) _____ (Provided, that we the Sureties bind ourselves in such sum "jointly and severally" as well as "severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety); and

WHEREAS, the Principal has entered into a contract with Clackamas County, along with the plans, specifications, terms and conditions of which are contained in above-referenced Solicitation; and

WHEREAS, the terms and conditions of the contract, together with applicable plans, standard specifications, special provisions, schedule of performance, and schedule of contract prices, are made a part of this Payment Bond by reference, whether or not attached to the contract (all hereafter called "Contract"); and

WHEREAS, the Principal has agreed to perform the Contract in accordance with the terms, conditions, requirements, plans and specifications, and schedule of contract prices which are set forth in the Contract and any attachments, and all authorized modifications of the Contract which increase the amount of the work, or the cost of the Contract, or constitute authorized extensions of time for performance of the Contract, notice of any such modifications hereby being waived by the Surety:

NOW, THEREFORE, THE CONDITION OF THIS BOND IS SUCH that if the Principal shall faithfully and truly observe and comply with the terms, conditions and provisions of the Contract, in all respects, and shall well and truly and fully do and perform all matters and things by it undertaken to be performed under said Contract and any duly authorized modifications that are made, upon the terms set forth therein, and within the time prescribed therein, or as extended therein as provided in the Contract, with or without notice to the Sureties, and shall defend, indemnify, and save harmless Clackamas County and its elected officials, officers, employees and agents, against any claim for direct or indirect damages of every kind and description that shall be suffered or claimed to be suffered in connection with or arising out of the performance of the Contract by the Contractor or its subcontractors, and shall promptly pay all persons supplying labor, materials or both to the Principal or its subcontractors for prosecution of the work provided in the Contract; and shall promptly pay all contributions due the State Industrial Accident Fund and the State Unemployment Compensation Fund from the Principal or its subcontractors in connection with the performance of the Contract; and shall pay over to the Oregon Department of Revenue all sums required to be deducted and retained from the wages of employees of the Principal and its subcontractors pursuant to ORS 316.167, and

shall permit no lien nor claim to be filed or prosecuted against Clackamas County on account of any labor or materials furnished; and shall do all things required of the Principal by the laws of this State, then this obligation shall be void; otherwise, it shall remain in full force and effect for so long as any term of the Contract remains in effect.

If the County determines that any of the above conditions have not been met, the County may require payment under this bond at its sole and absolute discretion and Surety shall issue prompt payment of the full value of this bond without set-off or dispute or requirement for an opportunity to cure.

Nonpayment of the bond premium will not invalidate this bond nor shall Clackamas County be obligated for the payment of any premiums.

This bond is given and received under authority of Oregon Revised Statutes Chapter 279C and the Clackamas County Local Contractor Review Board Rules, the provisions of which hereby are incorporated into this bond and made a part hereof.

IN WITNESS WHEREOF, WE HAVE CAUSED THIS INSTRUMENT TO BE EXECUTED AND SEALED BY OUR DULY AUTHORIZED LEGAL REPRESENTATIVES:

Dated this _____ day of _____, 20____.

PRINCIPAL: _____

By: _____
Signature

Official Capacity
Attest: _____
Corporation Secretary

SURETY: _____
[Add signatures for each if using multiple bonds]

BY ATTORNEY-IN-FACT:
[Power-of-Attorney must accompany each bond]

Name

Signature

Address

City State Zip

Phone Fax



CLACKAMAS COUNTY
PUBLIC IMPROVEMENT CONTRACT
PROJECT INFORMATION, PLANS, SPECIFICATIONS AND DRAWINGS

PROJECT: # 2018-47 Amisigger Road-Deep Creek Revetment Construction Project

Project Background:

The Clackamas County Department Transportation Development is seeking bids to construct a large wood revetment structure to prevent scour to Amisigger Road Bridge. The project is located on Amisigger Road over Deep Creek near Barton, Clackamas County, Oregon.

The project involves the placement of up to 225 cubic yards (cy) of fill in 0.05 acre below the ordinary high water mark of Deep Creek to construct a large wood revetment. The site will be isolated using a cofferdam constructed of sandbags, plastic sheeting and a bypass system that provides fish-passage during construction. Water will be directed through a constructed channel measuring approximately 10 feet wide and 190 feet long. The water will also flow through approximately 40 feet of appropriately sized piping through a portion of the bypass channel during construction.

A log crib structure and a log matrix structure will be constructed using 41 pieces of large wood, 35 cubic yards of slash material, and 15 log bolt connections. The large wood and slash for this project have been harvested and are located at Clackamas County's Barton Stockpile. The entire structure will be approximately 120 feet long by 15 feet wide. The structure will be backfilled with native alluvial sediment from within Deep Creek. Native alluvium will be excavated from within the creek channel, immediately across from the proposed location of the revetment structure. The excavation of alluvium will help redirect the thalweg away from the existing bridge bent by providing additional capacity to allow the creek channel to migrate slightly to the north following installation of the new revetment structure.

Engineers Estimate: \$209,000.00

Key Dates:

All Basic Bid Work may begin as soon as the Notice to Proceed ("NTP") is issued

Substantial Completion: August 31, 2018 except for seeding, planting, seed establishment and plant establishment

Final Completion: October 12, 2018 except for seeding establishment, and plant establishment

Time is of the essence for this Project. Note the Liquidated Damages requirements as described in the project Specifications.

The Scope further includes the following Plans, Specifications and Drawings:

- SPECIAL PROVISIONS FOR ROADWAY AND HIGHWAY CONSTRUCTION- Grading and Landscaping AMISIGGER ROAD – DEEP CREEK REVETMENT, CLACKAMAS COUNTY, dated April 2018
- AMISIGGER ROAD – DEEP CREEK REVETMENT Drawing Set, Sheets No.'s 00-10;
- Geotechnical Explorations Memo – Dated November 3, 2015;

- DEQ Nationwide 401 Water Quality Certification Approval for 2017-00168, Amisigger Road Bridge, dated November 3, 2017;
- US Army Corps of Engineers Nationwide Permit 14 (Pages 1 to 23), Drawings Figure 1 to 4, Figure 4A, Figure 4B, and Figure 5; and
- Department of State Lands 60122-RF Authorization, Permit No. 60122-RF.

SPECIAL PROVISIONS
FOR ROADWAY AND HIGHWAY CONSTRUCTION

**CLACKAMAS COUNTY DEPARTMENT OF
TRANSPORTATION AND DEVELOPMENT, CLACKAMAS
COUNTY, OREGON**

Grading and Landscaping

AMISIGGER ROAD - DEEP CREEK REVETMENT

CLACKAMAS COUNTY

April 2018

**Deep Creek - Amisigger Road Revetment Project
Grading and Landscaping**

**Deep Creek - Amisigger Road Revetment Project
Grading and Landscaping**

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CLACKAMAS COUNTY DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

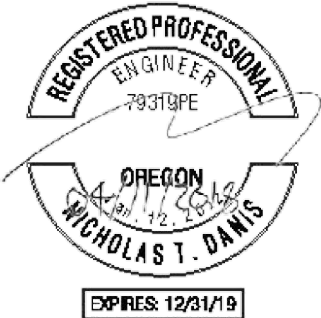
SPECIAL PROVISIONS

FOR

Earthwork and Drainage and Landscaping

Deep Creek – Amisigger Road Revetment Project

PROFESSIONAL OF RECORD CERTIFICATION(s):

	<p>I certify the Special Provision Sections listed below are applicable to the design for the subject project for the Deep Creek – Amisigger Road Revetment Construction. Modified Special Provisions were prepared by me or under my supervision.</p> <p>Section 00210, 00220, 00225, 00245, 00280, 00290, 00305, 00320, 00330, 00399, 01030, and 01040</p>
<p>Date Signed: <u>04/11/2018</u></p>	

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**SECTION 00110 – ORGANIZATION, CONVENTIONS, ABBREVIATIONS AND
DEFINITIONS**

Comply with Section 00110 of the Standard Specifications supplemented and/or modified as follows:

00110.05(d) References to Laws, Acts, Regulations, Rules, Ordinances, Statutes, Orders, and Permits

Add the following to the first bullet (Statutes and Rules):

Clackamas County's Local Contract Review Board (LCRB) Rules are accessible online on the County's website (<http://www.clackamas.us/code/documents/appendixc.pdf>).

00110.10 Abbreviations

Add the following:

CCDA - Clackamas County Development Agency
DTD - Clackamas County Department of Transportation and Development
LCRB - Local Contract Review Board
ODFW - Oregon Department of Fish and Wildlife
UNS - Utility Notification System
WES - Water Environment Services of Clackamas County

00110.20 Definitions

Add or modify definitions as follows:

Agreement Form – The written agreement between the Owner and Contractor covering the work to be performed under the contract.

Amendment – A contract modification for Additional Work, Changed Work, Extra Work, Field Directives, or other changes. An Amendment changes the contract value, scope, and/or time. Amendments require formal approval by the Board of County Commissioners, pursuant to LCRB Rule Division C-049-160, prior to approval of such work.

Approved Equal - Materials or services proposed by the contractor and approved by the County as equal substitutes for those materials or services specified.

Award – Same as "Notice to Intent to Award".

BCC – The Clackamas County Board of County Commissioners

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Bid - A written offer by a bidder on forms furnished by the County to do work stated in the bid documents at the prices quoted. "Bid" is synonymous with "proposal" in these bid documents.

Bid Closing - The date and time for Bid Closing is the same as the date and time for Bid Opening.

Bid Documents- The following documents together comprise the Bid Documents:

- Invitation to Bid, Instructions to Bidders, Bid Form, Bid Proposal, Schedule of Prices, Bid
- Bond, Performance Bond
- Certificate of Insurance, Prevailing Wage Rates
- The "Oregon Standard Specifications for Construction" by ODOT and APWA, 2015 edition.
- Plans and drawings
- Other bid documents included or referenced in the bid documents
- Addenda, if any
- The Agreement Form and Special Provisions

Bonds - The bond or surety bond is a written document given by the surety and principal to the obligee to guarantee a specific obligation.

Change Order - A price agreement for Extra Work, Changed Work, field directives, or other changes. A Change Order does not change the contract value, scope, or time until it is incorporated into an Amendment. Change Orders will be agreed upon, in writing, by the County Project Manager and the Contractor's designated representative.

Contract - The written contract agreement, including amendments, signed by the Contractor and Clackamas County, which describes the work to be done, the contract amount, and defines the relationships and obligations of the Contractor and the County.

Contract Documents - The Invitation to Bid, the Instructions to Bidders, the accepted Bid Proposal and Schedule of Prices, the Subcontractor List, the Bid Bond, the Performance and Payment Bond, the Certificate of Insurance, the Prevailing Wage Rates, the Standard Specifications and Special Provisions, Amendments, the Plans and Drawings, the Agreement, as well as all documents incorporated by reference therein, and any and all addenda prepared by or at the direction of and adopted by the County and further identified by the signature of the parties and all modifications thereof incorporated in the documents before their execution.

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County - The term "County" shall mean Clackamas County, including the Board of County Commissioners, employees and agents of the County authorized to administer the conditions of these contract documents.

Department – A subdivision of the Agency.

Engineer - The County's Project Manager either acting directly or through an authorized representative(s). When referring to approval of extra work or other Contract modifications, "Engineer" also refers to the County's legal authority according to the LCRB rules.

Invitation to Bid - The public announcement (Notice to Contractors) inviting bids for work to be performed or materials to be furnished.

Legal Holiday - As defined in ORS 279C.540.

Lump Sum - A method of payment providing for one all-inclusive cost for the work or for a particular portion of the work.

Notice of Intent to Award - A written notice from the County notifying bidders that the County intends to award to the responsible bidder submitting lowest responsive bid.

ODOT Procurement Office – Clackamas County Purchasing Department.

Owner – Synonymous with Agency.

Plan Holder's List – A list of contractor's names, contact names, phone and fax numbers that the County's Purchasing Department creates during bidding of the Project.

Project Manager – The Owner's representative who directly supervises the engineering and administration of the contract.

Shop Drawings – Synonymous with Working Drawings.

Solicitation Document – Synonymous with Bid Documents.

Standard Drawings – The Agency-prepared detailed drawings for Work or methods of construction that normally do not change from project to project. The Standard Drawings include the ODOT Standard Drawings.

Standard Specifications - "Oregon Standard Specifications for Construction", current edition, published by the Oregon Department of Transportation and as amended by **the Agency**.

State - Where the term "State" or "State of Oregon" or "ODOT" appears in the contract documents it shall mean "Clackamas County", "State of Oregon", or "ODOT" as applicable because of context.

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Work Day - Any and every calendar day from January 1 to December 31 of every year, excluding Saturdays, Sundays and Legal Holidays.

END OF SECTION

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SECTION 00120 – BIDDING REQUIREMENTS AND PROCEDURES

Comply with Section 00120 of the Standard Specifications supplemented and/or modified as follows:

00120.00 Prequalification of Bidders - Delete and replace with the following:

See Instructions to Bidders.

00120.01 General Bidding Requirements – Delete and replace with the following:

See Instructions to Bidders.

00120.05 Request for Plans, Special Provisions, and Bid Booklets: – Delete and replace with the following:

See Notice of Public Improvement Contract and Instructions to Bidders.

Copies of the 2015 Oregon Standard Specifications for Construction and Supplements might be found on the Oregon Department of Transportation website at:

http://www.oregon.gov/ODOT/Business/Pages/Standard_Specifications.aspx

00120.15 Examination of Work Site and Solicitation Documents; Consideration of Conditions to be Encountered – Delete the third paragraph.

00120.17 Use of Agency-Owned Land for Staging or Storage Areas – Add the following:

Staging areas shall be limited to those shown on plans unless otherwise approved by the Project Manager.

00120.25 Subsurface Investigations - Replace the first two sentences of the first paragraph with the following:

The Agency or its consultant has conducted subsurface or geologic investigations of the Project Site, and the results of these investigations are included in the Bid Documents and available at the Engineer's office.

00120.30 Changes to Plans, Specifications, or Quantities before Opening of Bids - Delete and replace with the following:

See Instructions to Bidders.

00120.40 Preparation of Bids – Delete and replace this section with the following:

See Instructions to Bidders.

00120.45 Submittal of Bids - Delete and replace with:

See Instructions to Bidders.

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00120.50 Submitting Bids for More than One Contract – Delete this subsection.

00120.60 Revision or Withdrawal of Bids - Delete and replace with the following:

See Instructions to Bidders.

00120.68 Mistakes in Bids – Delete and replace with the following:

See Instructions to Bidders.

00120.70 Rejection of Nonresponsive Bids – Delete and replace with the following:

See Instructions to Bidders.

00120.95 Opportunity for Cooperative Arrangement – Delete this section.

END OF SECTION

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SECTION 00130 – AWARD AND EXECUTION OF CONTRACT

Comply with Section 00130 of the Standard Specifications supplemented and/or modified as follows:

00130.00 Consideration of Bids - Delete third paragraph.

00130.10 Award of Contract - Delete and replace with the following:

See Instructions to Bidders.

00130.15 Right to Protest Award – Delete and replace with the following:

See Instructions to Bidders.

00130.30 Contract Booklet – Add the following:

Other documents are part of the contract documents by reference. These include, but are not limited to:

- The "Oregon Standard Specifications for Construction", 2015 Edition, as published by the Oregon Department of Transportation (ODOT).
- "Oregon Standard Drawings" latest edition, as published by ODOT.
- Clackamas County Service District No. 1 "Surface Water Standard Specifications", latest edition.

00130.40 Contract Submittals - Delete and replace with the following:

See Instructions to Bidders.

00130.70 Release of Bid Guaranties – Delete and replace with the following:

See Instructions to Bidders.

00130.80 Project Site Restriction- Replace the paragraph that begins "Until the Agency sends...", with the following paragraph:

Until the Agency sends the Contractor written Notice to Proceed with the Work, and the Contractor has filed the public works bonds required in 00170.20, the Contractor shall not go onto the Project Site on which the Work is to be done, nor move Materials, Equipment or workers onto the Project Site.

END OF SECTION

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SECTION 00140 – SCOPE OF WORK

Comply with Section 00140 of the Standard Specifications supplemented and/or modified as follows:

00140.30 Agency-Required Changes in the Work – Replace the last paragraph with the following:

Upon receipt of an Engineer's written order modifying the Work, the Contractor shall perform the Work as modified via Change Order, which may be subject to approval as an Amendment.

If an Amendment incorporating changes to the Work increases the Contract amount, the Contractor shall notify its Surety of the increase and shall provide the Agency with a copy of any resulting modification to bond documents. The Contractor's performance of Work pursuant to Amendments shall neither invalidate the Contract nor release the Surety. Payment for changes in the Work shall be made in accordance with 00195.20. Contract Time adjustments shall be made in accordance with 00180.80.

00140.31 "As-Built" Records - Add the following section:

Maintain a current and accurate record of the work completed during the course of this contract. This may be in the form of "as-built" drawings kept by accurately marking a designated set of the contract plans with the specified information as the Work proceeds. Accurate, complete and current "as-built" drawings are a specified requirement for full partial payment of the work completed. At project completion and as a condition of final payment, the Contractor shall deliver to the Project Manager a complete and legible set of "as-built" drawings.

The "as-built" drawings must show the information listed below. Where the term "locate" or "location" is used, it shall mean record of position with respect to both the construction vertical datum and either construction horizontal datum or a nearby permanent improvement.

- 1) Record location of underground services and utilities as installed.
- 2) Record location of existing underground utilities and services that are to remain and that are encountered during the course of the work.
- 3) Record changes in dimension, location, grade or detail to that shown on the plans.
- 4) Record changes made by change order.
- 5) Record details not in the original plans.
- 6) Provide fully completed shop drawings reflecting all revisions.

END OF SECTION

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SECTION 00150 – CONTROL OF WORK

Comply with Section 00150 of the Standard Specifications modified as follows:

00150.00 Authority of the Engineer – Delete and replace the first sentence with the following:

Except as indicated elsewhere in the Contract (e.g. Amendment approval by the BCC), the Engineer has full authority over the Work and its suspension.

00150.05 Cooperative Arrangements – Delete this section.

00150.10 Coordination of Contract Documents

(a) Order of Precedence – Delete this section and replace with the following:

The Engineer will resolve any discrepancies between these documents in the following order of precedence:

- Approved Amendments;
- Approved Change Orders
- Bid Schedule with Schedule of Prices;
- Permits from governmental agencies
- Special Provisions;
- Agency-prepared drawings specifically applicable to the Project and bearing the Project title;
- Reviewed and accepted, stamped Working Drawings;
- Agreement Form;
- Standard Drawings;
- Approved Unstamped Working Drawings;
- Standard Specifications;
- All other Contract Documents not listed above.

Notes on a drawing shall take precedence over drawing details.

Dimensions shown on the drawings, or that can be computed, shall take precedence over scaled dimensions.

00150.15(c) Contractor Responsibilities - Replace this subsection, except for the subsection number and title, with the following:

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The Contractor shall perform the Contractor responsibilities described in the ODOT Construction Surveying Manual for Contractors, Chapter 1.6 (see Section 00305) and the following:

- Perform earthwork slope staking including matchlines and set stakes defining limits for clearing which approximate right-of-way and easements.
- Inform the Engineer of staking requirements at least 5 Calendar Days before the staking needs to begin;
- Coordinate construction to provide sufficient area for the Engineer to perform surveying work efficiently and safely;
- Accurately measure detailed dimensions, elevations, and Slopes from the Engineer's stakes and marks;
- Perform the Work in such a manner as to preserve stakes and marks;
- Set any reference lines for automatic control from the control stakes provided by the Engineer.
- Inform the Engineer of any property corners monuments and/or survey markers that are not shown on the plans and are found during construction activities prior to disturbing the monuments. Allow the Agency 2 Work days for referencing all found markers before they are removed. Monuments that are noted on the plans to be protected and are disturbed by the Contractor's activities shall be replaced by the Contractor's surveyor at the Contractor's expense.

00150.50 Cooperation with Utilities: Add the following to the end of Paragraph (a):

There may be other utility servers who are not specifically listed in these Special Provisions or on the Plans that may be adjusting or inspecting their facilities within the project limits.

00150.50(c) Contractor Responsibilities – Add the following to the bulleted list:

- Hold a utility scheduling meeting and monthly utility coordination meetings (see also 00180.42);
- Maintain and re-establish utility location marks according to OAR 952-001-0090(2)(a). Coordinate re-establishment of the location marks with the associated Utility;
- Determine the exact location before excavating within the reasonable accuracy zone according to OAR 952-001-0090(2)(c);
- Backfill any exposed utilities as recommended and approved by the Utility representative. Obtain utility locate warning tape from the Utility and replace damaged or removed warning tape. Utility locate warning tape may not be present at all existing utilities;
- Stake, place warning tape, and maintain no work limits around critical Utility facilities as shown or directed by the Engineer and the Utility; and

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- In addition to the notification required in OAR 952-001-0090(5), notify the Engineer and the Utility as soon as the Contractor discovers any previously unknown Utility conflicts or issues. Contrary to the OAR, stop excavating until directed by the Engineer and allow the Utility a minimum of two weeks to relocate or resolve the previously unknown utility issues.

The existing underground utilities shown on the Plans have been determined by as-built records and field surveys, but are not guaranteed to be complete or accurate. The Contractor shall be responsible for contacting the individual utility companies to mark locations, and arranging with them for any relocation work that should be required.

The Contractor shall make excavations and borings ahead of the work where necessary to determine the exact location of underground pipes or other features, which might interfere with construction. The Contractor shall support and protect pipes or other services where they cross the trench and shall be responsible for all damages incidental in interruptions of service that may be caused by Contractor operations. Where a new utility line crosses an existing pipeline or other conduit, the trench backfill shall be well compacted in a manner that provides for the required backfill and compaction standards while protecting the utility in question.

00150.50 Cooperation with Utilities - Add the following subsection:

(f) Utility Information:

There are no anticipated conflicts with the Utilities listed below. Contact those Utilities having buried facilities and request that they locate and mark them for their protection prior to construction.

Utility	Contact Person's Name and Phone Number
1. CASCADE CABLE	503-630-3545
2. CLACKAMAS CNTY D.O.T.	503-722-6301
3. CASCADE UTILITIES DBA RELIANCE	503-630-4202
4. PORTLAND GENERAL ELECTRIC	503-255-4634

Energized power lines overhang portions of the Work with a minimum vertical clearance of 18 feet. Contractor shall maintain at least 10 feet of safety clearance. Exceptions require written approval from the Portland General Electric and may require an On-Site safety watcher, at no cost to the Contractor. Provide the Engineer a copy of the written approval of exception before beginning work.

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00150.60(a) Load and Speed Restrictions for Construction Vehicles and Equipment - Add the following bullet to the end of the bullet list:

- The Contractor shall restrict the combined weights of construction vehicles, Equipment, and Materials on Bridges according to 00220.45.

00150.70 Detrimental Operations – Add the following:

Portions of this project might be constructed in close proximity to existing private improvements. All private improvements disturbed by the Contractor's operations shall be repaired or replaced to equal or better condition at the Contractor's expense. The Engineer may withhold from future payments to the Contractor, an amount equal to the costs reasonably estimated by the Engineer to repair or replace, as the case may be, those private improvements disturbed by the Contractor's operations. Engineer shall release the retained amount once Engineer has determined that the Contractor has completed the repair consistent with the requirements of this provision. In addition, prior to construction, the Contractor shall provide to the Engineer videotape showing private property, if any, which may be disturbed during construction.

END OF SECTION

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SECTION 00160 – SOURCE OF MATERIALS

Comply with Section 00160 of the Standard Specifications supplemented and/or modified as follows:

00160.05 Qualified Products List (QPL) - Replace this subsection, except for the subsection number and title, with the following:

The QPL is a listing of manufactured products available on the market (shelf items) that ODOT has evaluated and found suitable for a specified use in highway construction. The QPL is available from ODOT's Construction Section website at:

<http://www.oregon.gov/ODOT/Construction/Pages/Qualified-Products.aspx>

The most current published PDF version of the QPL on ODOT's Construction Section website at the time of Advertisement is the version in effect for the Project. The Engineer may approve for use a conditionally qualified product, or a product qualified for inclusion in a later edition of the QPL, if the Engineer finds the product acceptable for use on the Project.

Use of listed products shall be restricted to the category of use for which they are listed. The Contractor shall install all products as recommended by the manufacturer. The Contractor shall replace qualified products not conforming to Specifications or not properly handled or installed at no additional cost to the Agency.

00160.20(a) Buy America – Delete this section and replace with the following: Federal highway funds are NOT involved on this Project.

00160.30 Agency-Furnished Material – Add the following: “The Agency will furnish the listed items at the (Project Site:) (following locations:)”

The Agency will furnish the following listed items at Clackamas County’s Barton Stockpile, located on Barton Park Road, approximately 1,450 feet south of the Baker’s Ferry Road/State Highway 224 intersection. Approximate address is 19009 SE Barton Park Road.

- Ten, 16” to 18” diameter, 25’ long conifer logs with rootwads and without branches.
- Six, 16” to 18” diameter, 25’ long conifer logs without rootwads and without branches.
- Eleven, 16” to 18” diameter, 12’ to 15’ long conifer logs with rootwads and without branches.
- Four, 16” to 18” diameter, 12’ to 15’ long conifer logs without rootwads and without branches.
- Ten, 12” to 13” diameter, 20’ long conifer logs without rootwads and without branches.
- 35 cubic yards (approximately) of slash material consisting of primarily branches and trees, all from native, non-invasive tree and shrub species.

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The trees will be logged by the Agency and placed at the Barton Stockpile. Notify the Engineer 48-hours in advance of acquiring these materials.

00160.40 Agency-Furnished Sources - Replace this subsection, except for the subsection number and title, with the following:

Agency-Furnished Sources for this Project are listed in Section 00235 of these Special Provisions.

END OF SECTION

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SECTION 00165 – QUALITY OF MATERIALS

Comply with Section 00165 of the Standard Specifications modified as follows:

00165.04 Costs of Testing – Replace this section with the following sentence: All testing required to be performed by the Contractor will be at the Contractor's expense.

00165.10(a) Field-Tested Materials – Add the following sentence: The County follows the MFTP on its projects:

00165.10(b) Nonfield-Tested Materials - Add the following sentence:

The County follows the NTMAG on its projects.

00165.91 Fabrication Inspection Expense - In the paragraph that begins "Fabrication of certain items...", replace the sentence that begins "Therefore, each time that..." with the following sentence:

Therefore, each time that inspection by or on behalf of the Agency is necessary, payment to the Contractor will be reduced by an amount computed at the following rates:

In the paragraph that begins "This Subsection applies to all...", replace the first sentence, but not the bullet list, with the following sentence:

This Subsection applies to all fabricated items or manufactured Materials that are inspected by or on behalf of the Agency, which include, but are not limited to:

END OF SECTION

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SECTION 00170 – LEGAL RELATIONS AND RESPONSIBILITIES

Comply with Section 00170 of the Standard Specifications supplemented and/or modified as follows:

00170.00 General - Add the following two paragraphs after the paragraph that begins "In any litigation, the entire...":

The characterization of provisions of the Contract as material provisions or the failure to comply with certain provisions as a material breach of the Contract shall in no way be construed to mean that any other provisions of the Contract are not material or that failure to comply with any other provisions is not a material breach of the Contract.

All rights and remedies available to the Agency under applicable Laws are incorporated herein by reference and are cumulative with all rights and remedies under the Contract.

00170.01(a) Federal Agencies - Add the following to the list of Federal Agencies:

National Oceanic and Atmospheric Administration

00170.02 Permits, Licenses, and Taxes – Add the following:

This project is to be constructed in Clackamas County road right of way and streets. There are no separate road opening permits required from Clackamas County to perform the work required under this contract.

00170.30 Noise Control - Add this section as follows:

No construction shall be performed on Sundays, legal holidays, and between the hours of 9:00 p.m. and 7:00 a.m. on other days.

Clackamas County has adopted a noise control ordinance that may impact the Contractor's schedule. For a current copy, contact Clackamas County Sheriff's Department. Where these specifications are stricter than the noise ordinance, these specifications shall govern.

00170.61(a) Workers' Compensation - In the paragraph, replace "00170.70(d)" with "the Agreement".

00170.65(a) General - Add the following paragraph to the end of this subsection:

As required by ORS 279C.520, compliance by the Contractor with the prohibitions in ORS 652.220 is a material element of the Contract and failure to comply is a material breach that entitles the Agency to exercise any remedies available under the Contract, including but not limited to termination for default. The Contractor shall not prohibit any of the Contractor's employees from, or retaliate against an employee for, discussing the employee's rate of wage, salary, benefits or other compensation with another employee or another person.

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00170.67 Fees - The fee required by ORS 279C.825(1) will be paid by the Agency to the Commissioner of the Oregon Bureau of Labor and Industries under the administrative rules of the Commissioner.

00170.70(a) Insurance Coverages - Add the following to the end of this subsection:

The following insurance coverages and dollar amounts are required pursuant to this subsection:

Insurance Coverages	Combined Single Limit per Occurrence	Annual Aggregate Limit
Commercial General Liability	\$1,000,000	\$2,000,000
Commercial Automobile Liability	\$1,000,000	(aggregate limit not required)

00170.70(c) Additional Insured - Add the following as Additional Insureds under the contract

- Clackamas County and its officers, agents, and employees
- Clackamas County Board of Commissioners

00170.72 Indemnity/Hold Harmless – Delete and replace with the following:

Extend indemnity and hold harmless to the Agency and the following:

- Clackamas County and its officers, agents, and employees
- Clackamas County Board of Commissioners

00170.85(b-1) Contractor Warranty for Specific Items – This subsection does not apply:

END OF SECTION

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SECTION 00180 – PROSECUTION AND PROGRESS

Comply with Section 00180 of the Standard Specifications supplemented and/or modified as follows:

00180.06 Assignment of Funds Due Under the Contract - Delete first bulleted item.

00180.21 Subcontracting - Add the following to subsection (a):

All contracts with subcontractors or suppliers shall have provisions making the contract assignable to the County, at the option of the County, if the Contractor terminates, goes out of business, declares bankruptcy, or otherwise is unable to perform provided that the County gives the subcontractor notice of assignment within fourteen (14) days of learning of the inability of the Contractor to perform.

The Engineer may revoke consent to subcontract. If the Engineer revokes consent to subcontract, the subcontractor shall be immediately removed from the Project Site.

00180.22 Payments to Subcontractors and Agents of the Contractor - Replace the paragraph that begins "To the extent practicable..." with the following paragraph:

To the extent practicable, the Contractor shall pay in the same units and on the same basis of measurement as listed in the Schedule of Items for subcontracted Work or other Work not done by the Contractor's own organization. The Agency will not be responsible for any overpayment or losses resulting from overpayment by the Contractor to subcontractors and to its other agents, work providers, service providers, and trucking services providers.

00180.40 Limitation of Operations - Add the following to subsection (a):

The Contractor must provide, at a minimum, a 48-hour notice to the Clackamas County Project Manager in order to perform any work on Saturdays.

00180.40(b) On-Site Work - Add the following paragraph to the end of the subsection:

The Contractor shall not begin On-Site Work before July 15, 2018 unless approved by the Engineer.

Add the following subsection:

00180.40(c) Specific Limitations - Limitations of operations specified in these Special Provisions include, but are not limited to, the following:

Limitations	Subsection
Cooperation with Utilities	00150.50
On-Site Work	00180.40(b)
Contract Completion Time	00180.50(h)
In-water Work Restrictions	00290.34(a)

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Noise Control	00290.32
Maintenance Under Traffic	00620.43

Be aware of and subject to schedule limitations in the Standard Specifications that are not listed in this Subsection.

00180.41 Project Work Schedules – Add the following:

A Type “_” schedule as detailed in the Supplemental Specifications is required on this Contract. In addition, a three-week look ahead schedule shall be prepared by the Contractor on a weekly basis and submitted to the Engineer. It shall include all construction activities planned for the following three-week period. The three-week look ahead schedule can be hand-written and shall be in a format agreed upon by the Contractor and the Engineer.

00180.42 Preconstruction Conference - Add the following:

Before beginning On-Site Work and before meeting with the Engineer for the preconstruction conference, hold a group utilities scheduling meeting with representatives from the utility companies involved with this project. Incorporate the utilities time needs into the Contractor's schedule submitted prior to the preconstruction conference.

Submit the following during the preconstruction conference unless otherwise directed:

- The names, addresses, and telephone numbers of two or more persons employed by the Contractor who can be reached day or night to handle emergency matters.
- Subcontractor's list including contact list for each subcontractor with phone numbers and addresses and work to be performed.
- List of personnel authorized to sign change orders and receive progress payment warrants.
- Video recording of private properties affected by construction per 00150.70.

A representative of each subcontractor shall be required to attend the pre-construction conference.

00180.43 Commencement and Performance of Work - Add the following bullet item:

- Conduct the work at all times in a manner and sequence that will insure minimal interference with traffic. The Contractor shall not begin work that will interfere with work already started. If it is in the County's best interest to do so, the County may require the Contractor to finish a portion or unit of the project on which work is in progress or to finish a construction operation before work is started on an additional portion or unit of the project.

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00180.44 Critical Time Periods - Note the following critical time periods where only certain types of work can be performed throughout the project, and completion times for work items:

- All work below Ordinary High Water Elevation: July 15 to August 31.

00180.50(h) Contract Time – There are two contract completion times associated with this contract:

- 1) Complete all Work to be done under the Contract except seeding, planting, seeding establishment and planting establishment not later than August 31, 2018.
- 2) Complete all Work to be done under the Contract except for seeding establishment and planting establishment not later than October 12, 2018.

00180.70 Suspension of Work - Add the following to the first bullet item:

If the Inspector has reason to believe that any safety provisions are not being adhered to, the Inspector will immediately notify the Contractor's site foreman and/or the appropriate person and the County Project Manager. The purpose of this discussion is to determine the validity of the alleged violation. This will also allow the Contractor a reasonable amount of time to correct or improve any of the provisions for the safety on this project. If the County Project Manager finds the problem still unresolved or uncorrected, they will notify the Contractor's Project Manager and the County's Risk Management Safety Analyst. If the County's Risk Management Safety Analyst finds that the job site contains any unresolved safety issues they will take appropriate action up to and including suspension of the Contractor's operations on all or part of the Work.

00180.85(b) Liquidated Damages - Add the following paragraphs:

There are two daily amounts of liquidated damages on this Project as follows:

Liquidated damages for failure to complete the Work on time required by 00180.50(h-1) will be \$ 600 per Calendar Day. Liquidated damages for failure to complete the Work on time required by 00180.50(h-2) will be \$50 per Calendar Day. If liquidated damages should become payable concurrently under the combination of 00180.50(h-1) and (h-2), liquidated damages will be \$650 per Calendar Day *.

- * Calendar Day amounts are applicable when the Contract time is expressed on the Calendar Day or fixed date basis.

END OF SECTION

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SECTION 00190 – MEASUREMENT OF PAY QUANTITIES

Comply with Section 00190 of the Standard Specifications supplemented and/or modified as follows:

00190.20(g) Agency-Provided Weigh Technician: Delete and replace subsection (g) with the following:

The Contractor must provide a weigh technician. The Agency will not provide one for the Contractor.

END OF SECTION

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SECTION 00195 – PAYMENT

Comply with Section 00195 of the Standard Specifications supplemented and/or modified as follows:

00195.10 Payment for Changes in Material Costs - Delete and replace with the following:

No asphalt cement cost adjustment shall be used on this project.

00195.12 Steel Material Price Escalation/De-Escalation Clause – Add the following sentence:

No steel material price escalation/de-escalations shall be used on this project. There is no option for Contractor participation.

00195.20(b) Significant Changed Work - Replace the paragraph that begins “Any such adjustments...” with the following paragraph:

Any adjustments may be less than, but will not be more than the amount justified by the Engineer on the basis of the established procedures set out in Section 00197 for determining rates. This does not limit the application of Section 00199.

Significant is defined as:

- a) An increase or decrease of more than 25 percent of the total cost of the Work calculated from the original proposal quantities and the unit contract prices; or,
- b) An increase or decrease of more than 25 percent in the quantity of any one major contract item.

For condition b) above, a major item is defined as any item that amounts to 10 percent or more of the original total contract price.

00195.50 Progress Payments and Retained Amounts - Modify as follows:

00195.50(a) Progress Payments - Modify as follows:

(1) Progress Estimates - Delete the first sentence and replace with the following:

At a regular period each month to be determined at the Preconstruction Conference, the Contractor will make an estimate of the amount and value of pay item work completed and in place. This estimate will be submitted to the Project Manager for review and approval.

(2) Value of Material on Hand - Delete the section and replace with the following:

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(2) Value of Material on Hand - The Contractor will make an estimate of the amount and value of acceptable material to be incorporated in the completed work which has been delivered and stored as given in 00195.60(a) for review and approval.

(4) Limitations on Value of Work Accomplished - In the first sentence, change "Engineer's estimate" to "Contractor's reviewed estimate".

00195.50 (b) Retainage - Delete the first paragraph and replace with:

The amount to be retained from progress payments will be 5.0% of the value of payments made, and will be retained in one of the forms specified in Subsection (c) below. The County will withhold Retainage from all force account and change order work.

00195.50(c) Forms of Retainage – Delete first paragraph and replace with:

Forms of acceptable retainage are set forth below in Subsections (1) through (3). "Cash, Alternate A" or "Cash, Alternate B" (Retainage Surety Bond) are the Agency-preferred forms of retainage. Unless the Contractor notifies the County otherwise in writing, the County will automatically hold retainage per paragraph (2) "Cash, Alternate B (No Interest Earned)". If the Agency incurs additional costs as a result of the Contractor's election to use "Bonds and Securities", the Agency may recover such costs from the Contractor by a reduction of the final payment.

Delete and replace paragraph (2) with the following:

(2) Cash, Alternate B (No Interest Earned) – Retainage will be deducted from progress payments and held by the Agency until final payment is made in accordance with 00195.90, unless otherwise specified in the Contract.

00195.50(d) Release of Retainage – Delete this section and replace with the following:

(d) Release of Retainage - As the Work progresses, release of the amounts to be retained under (b) of this Subsection will only be considered for Pay Items that have been satisfactorily completed. For purposes of this Subsection, a Pay Item will be considered satisfactorily completed only if all of the Work for the Pay Item is complete and all contractual requirements pertaining to the Pay Item and Work have been satisfied. Work not included in a Pay Item, or which constitutes part of an uncompleted Pay Item, will not be regarded as satisfactorily completed Work for the purposes of this Subsection.

When the Work is 50% completed and upon written application of the Contractor and written approval of the Surety, the Engineer or Project Manager may reduce or eliminate retainage on remaining progress payments if the Work is progressing satisfactorily.

A determination of satisfactory completion of Pay Items or Work or release of retainage shall not be construed as acceptance or approval of the Work and shall not relieve the

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Contractor of responsibility for defective Materials or workmanship or for latent defects and warranty obligations.

END OF SECTION

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SECTION 00196 – PAYMENT FOR EXTRA WORK

00196.91 Extra Work Allowance – Add the following new section:

The Bid schedule of prices contains a bid item for a pre-determined amount of Engineer ordered extra work. All Bidders shall reflect this same amount in their total Bid. No Bidder shall presume in the preparation of the bid or in the course of contract work that there will be a certain payment under that item or a certain order for extra work.

END OF SECTION

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SECTION 00197 – PAYMENT FOR FORCE ACCOUNT WORK

Comply with Section 00197 of the Standard Specifications modified as follows:

00197.20(a) General - Replace the paragraph that begins "Except as modified by these..." with the following paragraph:

Except as modified by these provisions, Equipment use approved by the Engineer will be paid at the rental rates given in the most current edition of the EquipmentWatch Cost Recovery (Blue Book) published by EquipmentWatch, a division of Penton Business Media, Inc., and available from EquipmentWatch (phone 1-800-669-3282) (<http://equipmentwatch.com>).

00197.20(c-3) Rate Adjustment Factor - Replace this subsection, except for the subsection number and title, with the following:

The rate adjustment factor used above will be determined by applying only the Model Year Adjustment to the Blue Book Rates. The Regional and User Defined Ownership/Operating Adjustments shall not apply.

00197.20(c-5) Limitations - Delete the paragraph that begins "The Blue Book..."

END OF SECTION

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SECTION 00199 – DISAGREEMENTS, PROTESTS AND CLAIMS

Comply with Section 00199 of the Standard Specifications supplemented and/or modified as follows:

00199.40 Claim Decision; Review; Exhaustion of Administrative Remedies - Delete the entire section and replace with the following:

The Contractor must properly submit a claim as detailed in 00199.30.

(a) Engineer Claim Review - The Engineer or Project Manager will, as soon as practicable, consider and investigate a Contractor's properly submitted claim for additional compensation, Contract Time, or for a combination of additional compensation and Contract Time. Once the Engineer or Project Manager determines the Agency is in receipt of a properly submitted claim, the Engineer or Project Manager will arrange a meeting, within 28 Calendar Days, or as otherwise agreed by the parties, with the Contractor in order to present the claim for formal review and discussion. A person authorized by the Contractor to execute Change Orders on behalf of the Contractor must be present and attend all claim meetings.

If the Engineer or Project Manager determines that the Contractor must furnish additional information, records, or documentation to allow proper evaluation of the claim, the Engineer will schedule a second meeting, to be held within 14 calendar days, or as otherwise agreed by the parties, at which the Contractor shall present the requested information, records and documentation.

The Engineer or Project Manager will advise the Contractor of the decision to accept or reject the claim. If the Engineer or Project Manager finds the claim has merit, an equitable adjustment will be offered. If the Engineer or Project Manager finds the claim has no merit, no offer of adjustment will be made and the claim will be denied. The County intends to resolve claims at the lowest possible level.

If, at any step in the claim decision or review process, the Contractor fails to promptly submit requested information or documentation that the Agency deems necessary to analyze the claim, the Contractor is deemed to have waived its right to further review, and the claim will not be considered properly filed and preserved.

If the Engineer or Project Manager has denied a claim, in full or in part, for Contract Time only according to 00180.80, or has denied a claim, in full or in part, for correction of final compensation according to 00195.95, those disputed claims may then be resolved, in full or in part, at either of the two progressive steps of claim review procedure as specified in this Subsection. For all claims, all of the actions and review under each step of the review process shall occur before the review can be advanced to the next higher step.

(b) Director Claim Review - Upon request by the Contractor, the Department Director will review the Engineer or Project Manager's decision on the claim and advise the Contractor of the decision in writing. If the Director finds the claim has merit, and

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equitable adjustment will be offered. If the Director finds the claim has no merit, no offer of adjustment will be made and the claim will be denied.

Once the Engineer determines the Agency is in receipt of a properly submitted claim, the Engineer will arrange a meeting, within 21 Calendar Days or as otherwise agreed by the parties, with the Contractor in order to present the claim for formal review and discussion.

If the Engineer determines that the Contractor must furnish additional information, records or documentation to allow proper evaluation of the claim, the Engineer will schedule a second meeting, to be held within 14 Calendar Days or as otherwise agreed by the parties, at which the Contractor shall present the requested information, records and documentation.

The Director shall evaluate the claim based on the information provided by the Contractor to the Engineer or Project Manager. However, if the Department Director (or designee) determines that the Contractor must furnish additional information, records or documentation to allow proper evaluation of the claim, the Department Director (or designee) will schedule a meeting, to be held within 14 Calendar Days, or as otherwise agreed by the parties, at which the Contractor shall present the requested information, records and documentation.

The claim is subject to records review, if not all of the records requested by the Department Director (or designee) were furnished. If applicable, advancement of the claim is subject to the provisions regarding waiver and dismissal of the claim or portions of the claim.

The decision of the Department Director shall be the final decision of the Agency.

(c) Commencement of Litigation - If the Contractor does not accept the Director's decision, then the Contractor shall commence any suit or action to collect or enforce any claim filed in accordance with 00199.30 within a period of one (1) year following the mailing of the decision or within one (1) year following the date of "Second Notification", whichever is later. If said suit or action is not commenced in said one (1) year period, the Contractor expressly waives any **and** all claims for additional compensation and any and all causes of suit or action for the enforcement thereof that he might have had.

The Contractor must follow each step in order, and exhaust all available administrative remedies before resorting to litigation. Litigation of a claim that cannot be resolved through the process described above shall be initiated by filing a complaint in the Clackamas County Circuit Court for the State of Oregon.

In any litigation, the entire text of any order or permit issued by the County or any other governmental or regulatory authority, as well as any documents referenced or incorporated therein by reference, shall be admissible for purposes of Contract interpretation.

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The Contract shall not be construed against either party regardless of which party drafted it. Other than as modified by the Contract, the applicable rules of contract construction and evidence shall apply. This Contract shall be governed by and construed according to the laws of the State of Oregon without regard to principles of conflict of laws.

The Contractor shall comply with 00170.00.

00199.50 Mediation - Delete the entire section.

00199.60 Review of Determination Regarding Records - Delete the entire section.

END OF SECTION

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SECTION 00210 - MOBILIZATION

Comply with Section 00210 of the Standard Specifications.

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SECTION 00220 - ACCOMMODATIONS FOR PUBLIC TRAFFIC

Comply with Section 00220 of the Standard Specifications.

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SECTION 00225 - WORK ZONE TRAFFIC CONTROL

Comply with Section 00225 of the Standard Specifications modified as follows:

00225.01(b) Definitions - Replace the "Traffic Control Plan" definition with the following definition:

Traffic Control Plan - A written and drawn plan used to describe traffic control measures for facilitating road users through or around a work zone area, while offering protection for workers and incident responders.

Add the following definition:

Protection Vehicle - A vehicle placed in advance of short-duration or mobile work activities for the protection of workers and equipment in the activity area. A protection vehicle is equipped with flashing warning lights, and vehicle-mounted warning signs or a changeable message sign. A protection vehicle may be fitted with a truck mounted impact attenuator.

00225.01(c) Standards - Replace the bullet list with the following bullet list:

- Oregon Department of Transportation's "Sign Policy and Guidelines for the State Highway System"
- The Manual on Uniform Traffic Control Devices (MUTCD)
- The latest versions of the 1990 Americans with Disabilities Act (ADA), and the Public Right of Way Accessibility Guidelines (PROWAG).
- FHWA "Standard Highway Signs" manual
- ODOT "Oregon Temporary Traffic Control Handbook for Operations of 3 Days or Less" when directed by the Engineer only for mobile pavement marking operations or surveying work, available on the ODOT Traffic Control Plans Unit Website
- ODOT "Oregon Portable Changeable Message Sign Handbook", available on the ODOT Traffic Control Plans Unit website
- ODOT "Traffic Control Plans Design Manual", available on the ODOT Traffic Control Plans Unit website.

Add the following to the end of this subsection:

Install "ROAD WORK AHEAD" (W20-1-48) signs with "FINES DOUBLE" (R2-6-36) rider on the Amisigger Road, according to the "TCD Spacing Table" shown on the standard drawings or as modified by the supplemental drawings except do not install the "FINES DOUBLE" rider on concrete barrier mounted signs.

Install beyond each end of the Project, facing outgoing traffic, an "END ROAD WORK" (CG20-2A-24) sign a distance of $(A \div 2)$ according to the "TCD Spacing Table" shown on the standard drawings or as modified by the supplemental drawings.

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00225.11(c-1) Temporary Signs - Replace the bullet that begins "Type 2 riprap geotextile..." with the following bullet:

- Geotextile fabric

00225.41(b-4) Temporary Sign Supports - Replace the bullet list with the following bullet list:

- When signs are needed at a single location for more than 48 consecutive hours.
- When not practicable to post mount due to location or when utility conflicts exists.
- Do not tip over any TSS that is exposed to traffic, unless approved by the Engineer or the TSS is protected from traffic by a barrier system.
- Position TSS as shown on the standard drawing or in the TCP.
- When not in use, locate TSS as far from public traffic as practicable and turn away from traffic, or cover the sign. Do not cover reflective sheeting on the TSS posts.

00225.41(e) Inconsistent Temporary Signs - Replace the paragraph that begins "Ensure that all temporary..." with the following paragraph:

Ensure that all temporary signs are properly used and consistent with the work zone. Cover all inconsistent temporary signing until the sign messages are applicable to the Work that is beginning. When signage is no longer required for staging or shift Work, remove all temporary signs, sign flag boards, supports, sign covers, and ballast associated with the staging or shift Work.

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SECTION 00245 - TEMPORARY WATER MANAGEMENT

Section 00245, which is not a Standard Specification, is included in this Project by Special Provision.

Description

00245.00 Scope - This work consists of furnishing, installing, operating, maintaining, and removing temporary water management facilities in regulated work areas.

00245.02 Definitions:

Temporary Water Management Facility - A facility that conveys water around work areas, removes water from work areas, and treats and discharges water at locations outside work areas.

00245.03 Temporary Water Management Plan - The Agency Temporary Water Management Plan (TWMP) is a concept plan. 28 Calendar Days before beginning work in regulated work areas, submit stamped working drawings of a Contractor-developed TWMP, according to 00150.35, based on either the Agency's concept plan or an independent plan that meets water quality and environmental guideline requirements and does not affect neighboring properties or water rights.

Include at least the following information:

- The sequence and schedule for dewatering and re-watering.
- How the work area will be isolated from the active stream flow upstream, through, and downstream.
- How the stream flow will be routed and conveyed around or through the isolated work area.
- How the isolated area will be de-watered.
- How the pumped water will be treated before it is discharged downstream.
- Discuss all construction stages.
- A list of on-site backup materials and equipment.
- Calculations of water withdraw pumps capacity.
- Protection of aquatic species and other wildlife.

Obtain the Engineer's written approval before beginning work in in-water work areas.

Materials

00245.10 Materials - Furnish materials meeting the following requirements:

Pipe 00445.11
Plastic Sheeting 00280.14(a)

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Sandbags 00280.15(a)
Water Intake Screening 00290.34(c)

Furnish pumps that are:

- Self priming.
- Equipped with a variable speed governor.
- Equipped with a power source.
- Able to pump water that contains soft and hard solid.
- Equipped with 3/32" pump intake screens.

Construction

00245.40 Fish Removal - The Agency, ODFW biologists, or ODOT consultant personnel will remove fish and aquatic life from the isolation work areas. Provide minimum 48-hour notice to Agency prior to installation of facilities. Allow them access into the isolation work areas before and after installation of the temporary water management facilities as follows:

- **Before Installation of Facilities** - Before installing temporary water management facilities they will remove fish and aquatic life within the proposed isolated work area.
- **After Installation of Facilities** - After installing temporary water management facilities begin reducing the water level through the isolated work area. They will remove all fish and aquatic life as the water level is reduced. Do not de-water the isolation area until all fish and aquatic life have been removed.

00245.41 Installation - During installation of the temporary water management facility, maintain a downstream water flow rate of at least 50 percent of the upstream water flow rate.

00245.42 Operation - Operate temporary water management as follows:

- Protect fish and fish habitat according to 00290.34.
- Maintain and control water flow downstream of the isolated work area for the duration of the diversion to prevent downstream de-watering.
- Clean and repair water intake screening to maintain adequate flow and protection of aquatic life.

00245.43 Maintenance - Monitor water turbidity according to 00290.30(a-8).

00245.44 Removal - Remove the temporary water management facility and rewater and restore the stream flow when approved by the Engineer. Maintain downstream water flow during removal of the facility.

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Measurement

00245.80 Measurement - No measurement of quantities will be made for temporary water management facilities.

Turbidity monitoring will be measured according to 00290.80.

Payment

00245.90 Payment - The accepted quantities of temporary water management facilities will be paid for at the Contract lump sum amount for the item "Temporary Water Management".

Payment will be payment in full for furnishing and placing all materials, and for furnishing all equipment, labor, and incidentals necessary to complete the work as specified.

Turbidity monitoring will be paid according to 00290.90.

No separate or additional payment will be made for designing, maintaining, operating, moving, and removing the facility.

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SECTION 00280 - EROSION AND SEDIMENT CONTROL

Comply with Section 00280 of the Standard Specifications modified as follows:

00280.00 Scope - Add the following:

The Agency's NPDES 1200-CA Permit is applicable to the Project.

The ESCP shown on the plans was developed for anticipated staging and site conditions. Prepare and submit a revised ESCP when staging or site conditions differ from that shown in the plans. Submit a revised ESCP for each proposed modification to the most current Engineer-approved ESCP, and obtain Engineer approval prior to beginning work. Engineer may require additional erosion and sediment control measures at no additional cost to the Agency in order to approve submitted methods of operations and scheduling.

00280.14(a) Plastic Sheeting – Replace “6 mil thick polyethylene plastic sheeting” with “8 mil thick polyethylene plastic sheeting”.

•
00280.15(a) Check Dams – Replace the bullet that begins “Type 4 – Sand Bags” with the following bullet:

- Type 4: Sand Bags - Durable, weather-resistant bags woven tightly enough to prevent leakage of filler material. Fill bags with at least 75 pounds of firmly-packed medium to fine grained sand.

00280.15(f) Compost Filter Sock - Replace this subsection, except for the subsection number and title, with the following:

Furnish filter sock material, compost, and stakes meeting the following requirements:

Filter Sock Material - 5 mil thick woven tubular mesh netting with 1/8 to 3/8 inch openings, and consisting of continuous HDPE filament or polypropylene material or 100 percent biodegradable mesh netting from the QPL. Furnish filter sock material with a diameter of 2 inches.

- **Compost** - Commercially manufactured coarse compost material meeting the requirements of Section 03020.
- **Stakes** - 2 inch by 2 inch (nominal) untreated wood stakes.

00280.16(a) Construction Entrances - Replace the bullet that begins "Aggregate - Clean, durable, open..." with the following bullet:

- **Aggregate** - Clean, durable, open graded angular aggregate sized according to the following grading requirements:

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Sieve Size	Percent Passing (by weight)
6"	100
4"	60 - 90
3"	40 - 70
2"	20 - 50
1"	0 - 20
#4	0 - 2

00280.40 Installation - Replace the paragraph that begins "Install erosion and sediment..." with the following paragraph:

Install erosion and sediment control BMP as shown and according to the most current edition of the Clackamas County Water Environment Services Erosion Prevention Planning and Design Manual. Install these BMP before performing clearing, grading, or other land alteration activities. Ensure that no visible and measurable sediment or pollutants leave the Project boundaries, enter drainage systems or waterways, or violate applicable water standards.

For purposes of this requirement, "visible and measurable" is defined as:

- Deposits or tracking of mud, dirt, sediment or similar material exceeding 1/2 cubic foot in volume on any private or public street or adjacent property, or into any storm or surface water drainage system, either by direct deposit, dropping or discharge, or as a result of erosion; or
- Evidence of concentrated flows of water over bare soils; turbid or sediment-laden flows; or evidence of on-site erosion, such as rivulets on bare slopes where the flow of water is not filtered or captured on the site; or
- Earth slides, mudflows, earth sloughing, or other earth movement off the Project site.

00280.41(c) Wet Season Work and Temporary Work Suspension - Replace the first sentence with the following:

Wet season work is defined as work between October 1 and May 31.

00280.41(d) Disturbance Restrictions - Add the following before the first sentence:

Limit each ground disturbing construction stage to the amount of disturbed area that can be effectively controlled for soil erosion and sediment resulting from construction activities.

00280.42(b) Temporary Stabilization - Replace the bulleted list with the following:

- At the end of each shift during the wet season

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- At the completion of each ground disturbing stage of construction when permanent erosion control BPMs are not practicable to construct.
- A minimum of one day before expected rain events.
- As an emergency measure when rain is falling on unprotected areas.
- When wind or vehicle traffic is visibly causing more than minor dust.
- At finish grade when working outside the permanent seeding dates.

00280.48 Emergency Materials - Add the following paragraphs after the paragraph that begins "Provide, stockpile, and protect...":

Provide and stockpile the following emergency materials on the Project site:

<u>Item</u>	<u>Quantity</u>
Sediment Barrier, Type 8	25 LF
Compost Filter Sock	20 LF

00280.90 Payment - Replace pay item(s) (e), (f), (h), (n), (o), (r), and (s) with the following pay item(s):

- (f) Matting, Type _____ Square Yard
- (n) Construction Entrance, Type _____ Each
- (s) Sediment Barrier, Type _____ Each or Foot

Add the following paragraph(s) after the paragraph that begins "Item (b) includes protecting...":

In item(s) (f), (h), (n), (o), (r), and (s), the type will be inserted in the blank.

Add the following paragraph to the end of this subsection:

No separate or additional payment will be made for constructing laps, seams, joints, wraps, overlaps, joint overlaps, or patches unless the Engineer orders additional amounts in excess of the minimum. For laps, wraps, or overlaps that have been ordered by the Engineer and exceed the minimum or specified length or width, payment will be made for the added lap, overlap, or wrap length or width at the Contract unit price.

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SECTION 00290 - ENVIRONMENTAL PROTECTION

Comply with Section 00290 of the Standard Specifications modified as follows:

00290.20(c-2) Clean Fill - In the paragraph, replace "OAR 340-093-0030(13)" with "OAR 340-093-0030".

00290.20(c-3-f) Off-Site Disposal - Add the following to the end of this subsection:

All mixed waste generated inside the Metro region must be delivered to a Metro-authorized facility whether it is intended to be recycled or disposed. This requirement applies to all haulers and generators in the Metro region regardless of whether they use disposal facilities inside or outside of the Metro boundary. Those who generate waste and haul waste are responsible for knowing where the waste originated.

A Metro non-system license is required for delivery of construction and demolition waste to a facility not licensed, franchised, or designated by Metro.

Submit the following items at least 10 calendar days prior to the preconstruction conference:

- List of anticipated disposal sites
- Projected haul routes
- Anticipated quantities
- Copy of Metro non-system license, if required.

00290.20(d) Hazardous Waste Management - In the paragraph that begins "In addition to current Laws...", replace the two bullets that begin "If the quantity of hazardous waste projected to be..." with the following three bullets:

- If the quantity of hazardous waste projected to be generated meets the requirements for a LQG, prepare a full Hazardous Waste Contingency Plan according to 40 CFR 265 Subpart D. Maintain a copy of the Contingency Plan on-site at all times during construction activities, readily available to employees and inspectors.
- If the quantity of hazardous waste projected to be generated meets the requirements for a SQG, prepare a modified Hazardous Waste Contingency Plan according to 40 CFR 262.34(d)(5) and 40 CFR 265 Subpart C. Maintain a copy of the modified Contingency Plan on-site at all times during construction activities, readily available to employees and inspectors.
- If the quantity of hazardous waste projected to be generated meets the requirements for a CEG, follow the contingency planning and storage requirements of the SQG unless the only potentially hazardous waste is aerosol cans smaller than 20 ounces. Limit storage to 180 days and 2,200 pounds. Prepare a modified Hazardous Waste

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Contingency Plan and keep a copy on-site with emergency response procedures and contact information.

00290.20(g) Spills and Releases - In the paragraph that begins "Obtain a response agreement...", replace the term "29 CFR 1920.120" with the term "29 CFR 1910.120".

Replace the lead-in paragraph that begins "In the event...", with the following lead-in paragraph:

In the event of a spill or release of a hazardous substance or hazardous waste or the release of any other material that has the potential to harm human health or the environment, do the following:

00290.30(a) Pollution Control Measures - Add the following subsections and bullets:

(7) Water Quality:

- Do not discharge contaminated or sediment-laden water, including drilling fluids and waste, or water contained within a work area isolation, directly into any waters of the State or U.S. until it has been satisfactorily treated (for example: bioswale, filter, settlement pond, pumping to vegetated upland location, bio-bags, dirt-bags). Treatment shall meet the turbidity requirements below.
- Do not cause turbidity in waters of the State or U.S. greater than 10% above background reading (up to 100 feet upstream of the Project), as measured 100 feet downstream of the Project.
- During construction, monitor in-stream turbidity, according to permit requirements, and inspect all erosion controls daily during the rainy season and weekly during the dry season, or more often as necessary, to ensure the erosion controls are working adequately meeting treatment requirements.
- If construction discharge water is released using an outfall or diffuser port, do not exceed velocities more than 4 feet per second, and do not exceed an aperture size of 1 inch.
- If monitoring or inspection shows that the erosion and sediment controls are ineffective, mobilize work crews immediately to make repairs, install replacements, or install additional controls as necessary.
- Underwater blasting is not allowed.
- Implement containment measures adequate to prevent pollutants or construction and demolition materials, such as waste spoils, fuel or petroleum products, concrete cured less than 24 hours, concrete cure water, silt, welding slag and grindings, concrete saw cutting by-products and sandblasting abrasives, from entering waters of the state or U.S.
- End-dumping of riprap within the waters of the state or U.S. is not allowed. Place riprap from above the bank line.

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- Cease project operations under high flow conditions that may result in inundation of the project area, except for efforts to avoid or minimize resource damage.
- The Project Manager retains the authority to temporarily halt or modify the Project in case of excessive turbidity or damage to natural resources.

(8) Visual Turbidity Monitoring - Perform visual turbidity monitoring each day when working in regulated work areas according to the following:

- Before beginning work, make in stream turbidity observation approximately 100 feet upstream and, based on the wetted stream width, at the compliance distance listed in Table 00290-1 downstream of the in-water work area.
- Make in stream turbidity observations upstream and downstream every four hours.
- If a turbidity plume is observed within the compliance distance downstream of the in-water work area, implement in-water best management practices (BMP). If a turbidity plume is still observed at the second four hour observation, stop all in-water work and implement additional BMP. Resume in-water work activity the next morning.
- If a turbidity plume is observed beyond the compliance distance downstream of the in-water work area at any observation interval, stop all in-water work and implement additional BMP. Resume in-water work activity the next morning.

Table 00290-1

Wetted Stream Width	Compliance Distance
≤ 30 feet	50 feet
> 30 feet to 100 feet	100 feet
> 100 feet to 200 feet	200 feet
> 200 feet	300 feet
Lakes, Ponds, and Reservoirs	Lesser of 100 feet or max. surface dimension

00290.30(b) Pollution Control Plan - Replace the bullet that begins "Include the waste determination..." with the following bullet:

- Include the waste determination results from 00290.20(c-1). Provide reuse, recycle, and disposal options and the reasons for selecting those alternatives.

00290.34 Protection of Fish and Fish Habitat - Add the following paragraph:

(a) General - Add the following paragraphs and bullets to the end of this subsection:

Meet with the Agency Biologist, Resource Representative, Engineer and inspector on site prior to moving equipment on-site or beginning any work, to ensure that all parties understand the locations of sensitive biological sites and the measures that shall be taken to protect them.

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The following measures apply to the Project:

- Maintain passage for adult and juvenile fish for the duration of the Project, including intermittent streams.
- When isolating a work area with temporary drainage facilities, remove fish with the approval of the Engineer and under the supervision of an Agency or ODFW biologist.

Add the following subsection:

00290.34(a) Regulated Work Areas - Add the following to the end of this subsection:

The regulated work area is the area within the ordinary high water (OHW) elevation that is shown on the plans.

- For this Project, the regulated work area is the area at or below 263 feet elevation and between stations 48+50 and 53+50.
- Perform work within the regulated work area only during the in-water work period. The in-water work period is from July 15th to August 31st.

Submit a schedule to complete all work within the regulated work area within the in-water work period at least 10 days prior to the preconstruction conference.

00290.34(b) Prohibited Operations - Replace this subsection, except for the subsection number and title, with the following:

Except where allowed by the Contract or by permit, do not:

- Blast underwater.
- Use water jetting.
- Release petroleum products or chemicals in the water.
- Disturb spawning beds.
- Obstruct stream channels.
- Cause silting or sedimentation of waters of the State or waters of the U.S.
- Use treated timbers within the regulated work area.
- Impede adult and juvenile fish passage, including intermittent streams.
- Allow entry within the Regulated Work Area or between stations 48+50 and 53+50.
- Allow equipment to enter or work in or on the water.

Add the following subsection:

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00290.34(c) Fish Protection Measures Required by Environmental Permits:

(1) General Equipment Requirements - Use heavy equipment as follows:

- Choice of equipment must have the least adverse effects on the environment (for example: minimally sized, low ground pressure).
- Before operations begin and as often as necessary during operation, steam clean all equipment that will be used below the regulated work area until all visible oil, grease, mud, and other visible contaminants are removed. Complete all cleaning in approved staging areas.
- Secure absorbent material around all stationary power equipment (for example: generators, cranes, drilling equipment) operated within 150 feet of wetlands, waters of the State and U. S., drainage ditches, or water quality facilities to prevent leaks, unless suitable containment is provided to prevent spills from entering waters of the state and U.S.
- Do not cross directly through a stream for construction access, unless shown or approved.
- Do not install fish ladders (for example: pool and weirs, vertical slots, fishways) or fish trapping systems.
- The volume of material filled or discharged into waters of the state or U.S. plus the volume excavated shall not exceed 150 cubic yards.
- Do not apply surface fertilizer within 50 feet of any stream channel.
- Use biodegradable hydraulic fluid in equipment operating within 150 feet of wetlands, waters of the State and U.S., drainage ditches, or water quality facilities.
- Store fuel and maintain all equipment in staging areas that are at least 150 feet away from any waters of the State, waters of the U.S., or storm inlet or on an impervious surface that is isolated from any waters of the State, waters of the U.S., or storm inlet.

(2) Work Area Isolation - Provide work isolation according to Section 00245.

(3) Water Intake Screening - Install, operate, and maintain fish screens on each water intake used for project construction, including pumps used to isolate an in-water work area. When drawing or pumping water from any stream, protect fish by equipping intakes with screens having a minimum 27% open area and meeting the following requirements:

- Perforated plate openings shall be 3/32 inch or smaller.
- Mesh or woven wire screen openings shall be 3/32 inch or smaller in the narrowest direction.
- Profile bar screen or wedge wire openings shall be 1/16 inch or smaller in the narrow direction.

Choose size and position of screens to meet the following criteria:

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Type	Approach Velocity ¹ (Ft./Sec.)	Sweeping Velocity ² (Ft./Sec.)	Wetted Area of Screen (Sq. Ft.)	Comments
Ditch Screen	≤ 0.4	Shall exceed approach velocity	Divide max. water flow rate (cfs) by 0.4 fps	If screen is longer than 4 feet, angle 45° or less to stream flow
Screen with proven self-cleaning system	≤ 0.4	—	Divide max. water flow rate (cfs) by 0.4 fps	—
Screen with no cleaning system other than manual	≤ 0.2	—	Divide max. water flow rate (cfs) by 0.2 fps	Pump rate 1 cfs or less
¹ Velocity perpendicular to screen face at a distance of approximately 3 inches ² Velocity parallel to screen				

Provide ditch screens with a bypass system to transport fish safely and rapidly back to the stream.

(4) Site Restoration - Restore damaged streambanks to a natural slope, pattern, and profile suitable for establishment of permanent woody vegetation unless precluded by pre-project conditions (for example: natural rock substrate):

- Replant all damaged streambanks before the first April 15 following construction.
- If use of large wood, native topsoil, or native channel material is required for the site restoration according to the roadside development plans, stockpile all large wood, native vegetation, weed-free topsoil, and native channel material displaced by construction. Cut trees or large wood and trees into pieces of no less than 20 feet in length, or as shown on the plans or as directed. Stockpiled native wood and vegetation remain the property of the Agency.
- Stabilize all disturbed soils, including obliteration of temporary access roads, following any break in work unless construction will resume in 4 Calendar Days.

(5) Surface Water Diversions - Surface water may be diverted to meet construction needs other than work area isolation, consistent with Oregon law, only if water from sources that are already developed, such as municipal supplies, small ponds, reservoirs, or tank trucks, is unavailable or inadequate, and meeting the following conditions:

- When alternative surface sources are available, divert from the stream with the greatest flow.
- Install, operate, and maintain a temporary fish screen.

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- Do not exceed a pumping rate and volume of 10% of the available flow. For streams with less than 5 cubic feet per second, do not exceed drafting of 18,000 gallons per day. Do not use more than one pump for each site.

(6) Treated Wood - Do not use lumber, pilings, or other wood products that are treated or preserved with pesticidal compounds below the ordinary high water (OHW) or as part of an in-water or over-water structure.

(7) Drilling, Boring, or Jacking - If drilling, boring, or jacking is used, the following conditions apply:

- Design, build, and maintain facilities to collect and treat all construction and drilling discharge water using the best available technology applicable to site conditions. Provide treatment to remove debris, nutrients, sediment, petroleum hydrocarbons, metals, and other pollutants likely to be present. An alternate to treatment is collection and proper disposal offsite.
- Isolate drilling operations from wetted stream to prevent drilling fluids from contacting waters of the state or waters of the U.S.
- Use casing to prevent loss of drilling fluid to the subsurface formation. Do not drill open hole.
- If drilling fluid or waste is released to surface water, wetland or other sensitive environment, cease all drilling pending written approval from appropriate regulatory agencies through the Project Manager to resume drilling.
- Recover all waste and spoils if precipitation is falling or imminent. Recover, recycle, or dispose of all drilling fluids and waste to prevent entry into flowing water.
- Recycle drilling fluids using a tank instead of drill recovery/recycling pits, whenever feasible.
- When drilling is completed, make attempts to remove the remaining drilling fluid from the sleeve (for example: by pumping) to reduce turbidity when the sleeve is removed.

00290.36(c) Prevent Nesting - Comply with Migratory Bird Treaty Act (16 U.S.C. 703-712). Submit a migratory bird protection plan for review and approval at least 10 Calendar Days before the pre-construction conference. Include the following:

- Provide a list of qualified personnel experienced in bird identification, including a summary of their qualifications. A qualified individual shall have at least 2 years of work experience identifying nesting birds in the Pacific Northwest.
- Describe measures to avoid disturbance to migratory bird nesting habitat (vegetation, structures) from March 1 to September 1 of each year. If complete avoidance is not feasible, describe measure and method to prevent birds and bats from nesting within the Project Site. Describe measures to install, inspect, maintain, and repair

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exclusionary devices and/or harassment methods, and a schedule for installing, inspecting, and removing exclusionary measures.

- Do not begin work until the migratory bird protection plan and the implementation schedule are approved.
- Prevent nesting by native birds on structures to be removed or repaired and on vegetation to be removed as follows:
 - Install, inspect, repair and maintain exclusionary methods or begin harassment methods to prevent nesting of native birds in, on, or under the structures and the vegetation from March 1 to September 1 of each year.
 - If exclusionary measures have been installed or harassment methods have begun on-site prior to NTP, within 15 Calendar Days of the preconstruction conference, assume responsibility for ensuring that native birds do not nest in, on, or under the structures or the vegetation, according to Agency's migratory bird protection plan, including maintaining and inspecting exclusionary measures.
 - Using qualified personnel from the list, perform inspections on the structures (and the vegetation) according to the implementation schedule for nesting activity and effectiveness of exclusionary measures. Document inspections and maintain documentation on-site.
 - Remove existing bird nests only if no eggs or young are found.
 - Meet with the Agency Biologist, the Engineer, and inspector on-site if nests containing eggs or young are found.
 - Use equivalent materials when repairing or replacing damaged exclusionary measures.
 - If on-site work is completed prior to September 1, discontinue exclusionary measures or harassment methods.

In the event the Contractor fails to prevent nesting of native birds, the Engineer may suspend the work according to 00180.70.

Unless authorized in writing by the Engineer, return to the Engineer, within 5 Calendar Days of removal, all exclusionary measures applied by others prior to the NTP for the Project.

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SECTION 00305 – CONSTRUCTION SURVEY WORK

Section 00305, which is not a Standard Specification, is included for this Project by Special Provision.

Description

00305.00 Scope - Provide construction survey work according to the current edition on the date of Advertisement, of the ODOT "Construction Surveying Manual for Contractors". This manual is available on the web at:

<http://www.oregon.gov/ODOT/HWY/GEOMETRONICS/Pages/documents.aspx>

Measurement

00305.80 Measurement - No measurement of quantities will be made for construction survey work.

Payment

00305.90 Payment - The accepted quantities of construction survey work will be paid for at the Contract lump sum amount for the item "Construction Survey Work".

Payment will be payment in full for furnishing all material, equipment, labor, and incidentals necessary to complete the work as specified.

No separate or additional payment will be made for any temporary protection and direction of traffic measures including flaggers and signing necessary for the performance of the construction survey work.

No separate or additional payment will be made for preparing surveying documents including but not limited to office time, preparing and checking survey notes, and all other related preparation work.

Costs incurred caused by survey errors will be at no additional cost to the Agency. Repair any damage to the Work caused by Contractor's survey errors at no additional cost to the Agency. The Engineer may make an equitable adjustment, which may decrease the Contract Amount, if the required survey work is not performed.

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SECTION 00320 - CLEARING AND GRUBBING

Comply with Section 00320 of the Standard Specifications modified as follows:

00320.40(a) Clearing Trees and Other Vegetation - Add the following:

Meet the requirements of 00290.36(c).

00320.40(b) Preserving and Trimming Vegetation - Add the following to the end of this subsection:

(4) Trees To Be Saved - The Engineer will identify and mark trees to be saved. Provide and place orange plastic mesh fencing, from the QPL, around critical root zones of marked trees or tree groups as directed. Do not begin construction activity or move equipment into existing tree areas until the plastic mesh fencing is in place.

Do not work within the critical root zone of marked trees unless written approval is obtained from the Engineer. Be responsible for all damage to or for removal of marked trees. Tree damage will be determined by a certified arborist selected by the Engineer.

00320.42 Ownership and Disposal of Matter - Replace this subsection with the following subsection:

00320.42 Disposal of Matter - Dispose of all matter and debris according to 00290.20.

00320.90 Payment - Replace the paragraph that begins "No separate or additional payment..." with the following paragraph:

No separate or additional payment will be made for work zone fencing.

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SECTION 00330 - EARTHWORK

Comply with Section 00330 of the Standard Specifications modified as follows:

00330.03 Basis of Performance - Add the following paragraph to the end of this subsection:

Perform all earthwork under this Section on the excavation basis.

00330.41(a-5) Waste Materials - Replace this subsection, except for the subsection number and title, with the following:

Unless otherwise specifically allowed and subject to the requirements of 00280.03, dispose of materials, classed as waste materials in 00330.41(a-3) and 00330.41(a-4), outside and beyond the limits of the Project and Agency controlled property according to 00290.20. Do not dispose of materials on wetlands, either public or private, or within 300 feet of rivers or streams.

00330.41(a-7) Abandoned Pipes and Miscellaneous Matter - Replace this subsection, except for the subsection number and title, with the following:

Remove and dispose of all abandoned pipe and miscellaneous matter:

- Encountered in the work
- Located within 2 feet below subgrade
- Located within 2 feet of finished slope

Remove remaining abandoned pipes and structures, or cut and cap with native material.

Perform removal work as part of the earthwork. Dispose of waste materials according to 00290.20.

00330.45 Filling of Holes - Replace the last two sentences of this subsection with the following:

No separate or additional payment will be made for this work.

00330.71 Daily Progress Reports - Delete this subsection.

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SECTION 00399 – LARGE WOOD DEBRIS (LWD) STRUCTURES

Comply with Section 00399 which is not a Standard Specification, is included in this Project by Special Provision.

Description

00399.0 Scope - This work consists of hauling County furnished logs, with and without rootwads, from an approved location, no further than 20 miles from the project location, to the project site, providing auger equipment, installing auger holes, and installing large woody debris structures in the constructed channel in accordance with the Plans, these Special Specifications and as directed by the Engineer. These structures are intended to interact with the flow of water in the channel.

Materials

00399.10 Woody Slash and Racking – Slash and racking shall be furnished by Clackamas County, and shall be temporarily stored at the county approved location within 20 miles of the project site. It shall be the contractor's responsibility to haul and deliver the logs from the county approved location to the project site, where they will be staged prior to installation.

Species shall be any native northwest tree or wood shrub species. Slash shall be branches, roots, small trees and tree tops with leaves and needles intact. Non-organic material shall not exceed 10% by weight or volume and shall not contain silt or clay which causes turbidity when placed in water. Slash volume is based on normal volume when stacked on the ground. Excessive fluffing will be discounted. No trash, plastic or other deleterious substances will be allowed. Slash shall be harvested within 9 months of installation and shall not be burned, charred or treated.

00399.11 Logs – Logs shall be furnished by Clackamas County, and shall be temporarily stored at the county approved location within 20 miles of the project site. It shall be the contractor's responsibility to haul and deliver the logs from the county approved location to the project site, where they will be staged prior to installation.

The length of each log is defined as an actual measured length, including rootwad. Diameters are to be measured at breast height, approximately 4 feet from the larger end of the log. Diameters include bark thickness. Rootwads are to be intact on required logs, strong enough to support the trunk when laying horizontally, and two to three times the log diameter. Bark shall remain intact to the extent possible given the mechanics of handling the logs. Logs shall be harvested within 9 months of installation. Logs shall not be burned, charred or treated. Waterlogged logs will be accepted for the structures. Remove soil and rocks from rootwads and washing of rootwads may be necessary to meet water quality standards. Dimensions shall be as shown on the plans.

Species for logs shall be Douglas fir or western red cedar. Deciduous trees, western and mountain hemlock, pine, other firs and other species will not be allowed, unless otherwise approved by Engineer. Rot shall not be more than 10% of volume as seen on log ends. All

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logs shall have limbs removed unless otherwise noted on the plans. Logs shall not be split nor have split trunks. Logs shall be straight, with an offset between the two ends not more than 6 inches. Any logs found to be defective shall be removed from the site and replaced at no cost. An inventory of the logs shall be documented and provided to the Engineer. Logs may be further inspected by the Engineer in the staging area to verify information. Damaged logs shall be replaced by the Contractor at no cost to County.

Log Crib - Log Schedule						
Type	Orientation	Diameter	Length	Branches	Rootwad	Number
Horizontal Type 1	Parallel to Flow	16"-18"	25'	No	Yes	4
Horizontal Type 1	Parallel to Flow	16"-18"	25'	No	No	2
Horizontal Type 2	Perpendicular to Flow	16"-18"	12'-15'	No	Yes	4
Horizontal Type 2	Perpendicular to Flow	16"-18"	12'-15'	No	No	3
X Logs	Vertical (± 15 degrees)	12"-13"	20'	No	No	6
Slash and Racking	NA	Varies	Varies	-	-	15 CY
Log Bolt Connections	-	-	-	-	-	9

Log Matrix - Log Schedule						
Type	Orientation	Diameter	Length	Branches	Rootwad	Number
Horizontal Type 1	Parallel to Flow	16"-18"	25'	No	Yes	6
Horizontal Type 1	Parallel to Flow	16"-18"	25'	No	No	4
Horizontal Type 2	Perpendicular to Flow	16"-18"	12'-15'	No	Yes	7
Horizontal Type 2	Perpendicular to Flow	16"-18"	12'-15'	No	No	1
X Logs	Vertical (± 15 degrees)	12"-13"	20'	No	No	4
Slash and Racking	NA	Varies	Varies	-	-	20 CY
Log Bolt Connections	-	-	-	-	-	6

Construction

00399.40 Installation - Contractor shall construct all structures to the quantities, dimensions and depths as shown on the plans and as directed by the Engineer in the field. LWD Structures shall be placed at the locations shown on the drawings or as staked by the Engineer prior to installation; however, final placement shall be verified and logs may be adjusted by the Engineer with no additional compensation allowed therefore. The contractor shall install the vertical logs by pushing into augered holes without excavation. For vertical logs, remove bark and trim as needed on end to be inserted into hole. This end must be straight.

Care shall be taken when handling log to minimize damage such as abrasion, splitting, crushing and shearing. Rootwad may be trimmed as directed by engineer to ensure contact between log and bottom of channel. Care shall be taken not to disturb siltstone any more than necessary.

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Each large top log shall be connected in at least two places with threaded rod to adjacent logs and/or piles or as approved by the engineer. Rods shall be 1-inch diameter minimum fully threaded steel rods (ASTM A193, grade B7) with steel nuts (ASTM A194, grade 2H) and 4-inch washers (ASTM F436) on each end. Visible portions of hardware shall be grey or other approved neutral color. Rods shall be flush cut at the nuts and sharp edges ground flush. All exposed log ends shall have broken ends rather than saw cut ends. The contractor shall install logs and slash in a manner that does not break or crack the wood. The intent is to create a structure which looks natural and not engineered.

Measurement

00399.80 Measurement – Log installation and related work performed under this Section will be measured according to the following:

- (a) Log Crib Structure – The quantities for Log Crib Structures shall be on the unit basis.
- (b) Log Matrix Structure – The quantities for Log Matrix Structure shall be on the unit basis.
- (c) Log Bolt Connections – The quantities for Log Bolt Connections shall be on the unit basis.

No measurement of payment will be made for installation of slash and racking materials.

Payment

00399.90 Payment - The accepted quantities of LWD Structures will be paid for at the Contract unit price, per unit of measurement, for the following items:

Pay Item	Unit of Measurement
(a) Log Crib Structure.....	Each
(b) Log Matrix Structure.....	Each
(c) Log Bolt Connections.....	Each

Additional Log Bolt Connections may be required by the engineer, and shall be paid at the contract price.

Payment will be payment in full for furnishing and placing all materials, and for furnishing all equipment, labor, and incidentals necessary to complete the work as specified.

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SECTION 01030 - SEEDING

Comply with Section 01030 of the Standard Specifications modified as follows:

01030.13(f) Types of Seed Mixes - Add the following to the end of this subsection:

Provide the following seed mix formulas:

- **Native Seeding:**

Botanical Name (Common Name)	PLS (lb/acre)	÷ (% Purity (minimum)	x % Germination) (minimum)	= Amount (lb/acre)
Deschampsia Elongata (Slender Hairgrass)	60 lb/acre	_____	_____	_____
Agrostis Exorata (Spike Bentgrass)	40 lb/acre	_____	_____	_____

01030.15 Mulch - Add the following paragraph and bullets to the end of this subsection:

Furnish mulch for seeding according to the following:

- Bark Mulch - Ground, shredded or broken particles from the bark of fir, pine or hemlock trees which is free of non-bark debris, harmful bacteria, disease spores, pests and substances toxic to plant growth. Provide mulch that is the standard trade size known as "medium fine mulch". Spread wood chips to a nominal depth of 2 inches.

01030.71 Waste Disposal - Replace this subsection with the following subsection:

01030.71 Disposal of Materials - Dispose of all materials according to 00290.20.

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SECTION 01040 - PLANTING

Comply with Section 01040 of the Standard Specifications modified as follows:

01040.13 Soil Testing - Replace this subsection, except for the subsection number and title, with the following:

Soil testing is not required on this Project.

01040.49 General Planting - Replace the bullet that begins "Do not plant in standing..." with the following bullet:

- Do not plant in standing water unless approved by the Agency. If standing water is present within a plant pit, notify the Agency prior to planting to determine what corrective measures are required.

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SECTION 02150 - LUMBER AND TIMBER CONNECTORS

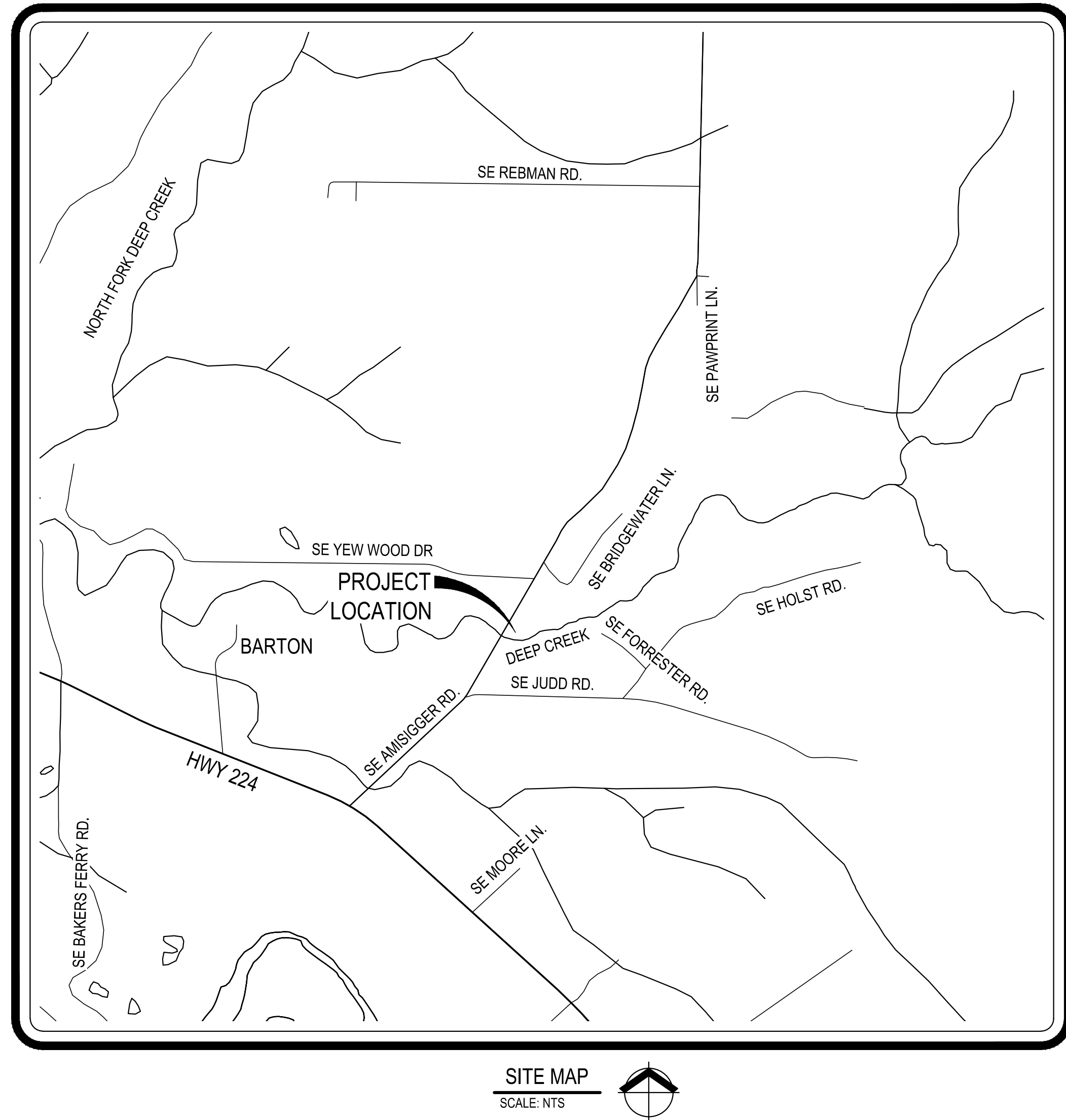
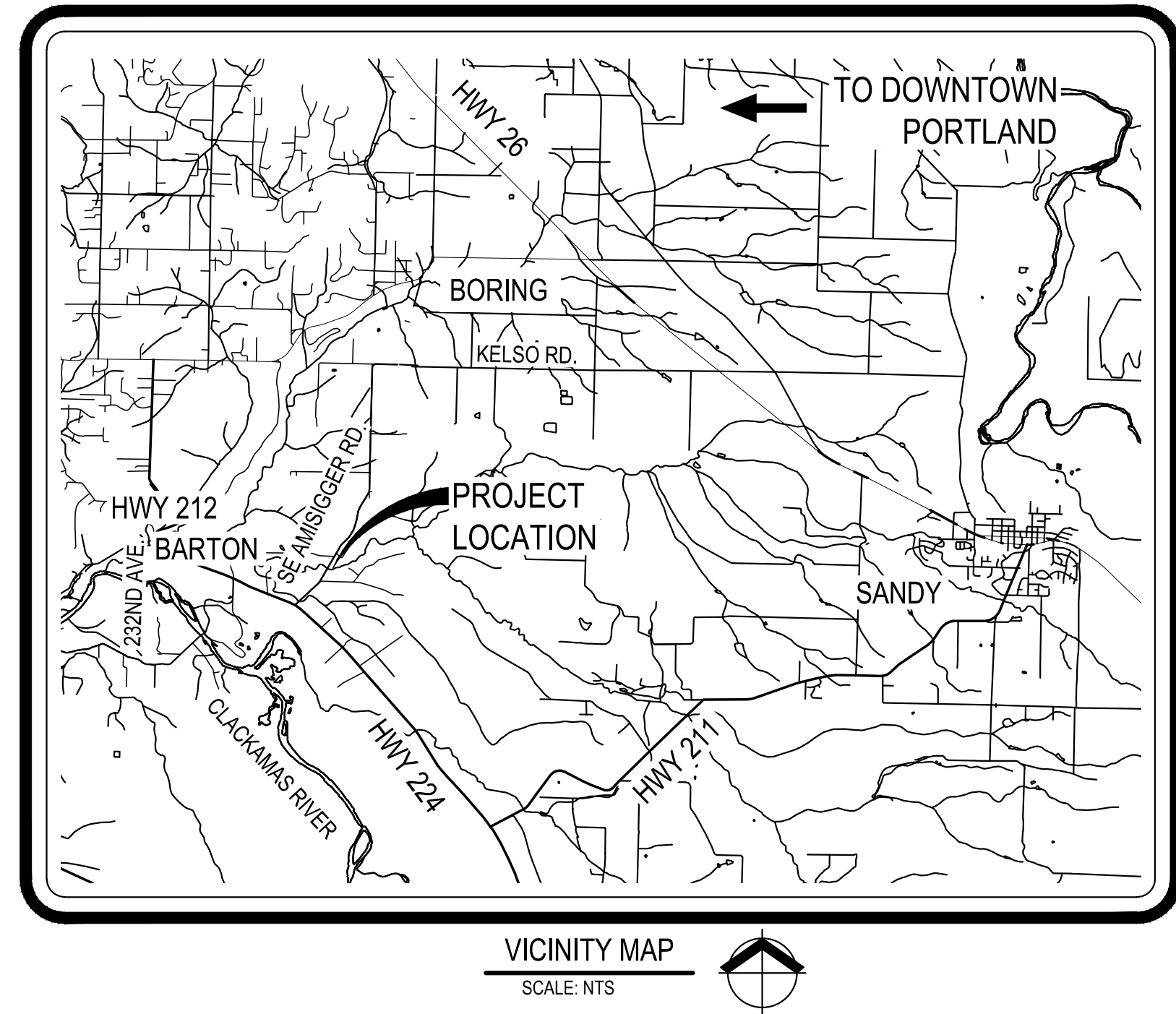
Comply with Section 02150 of the Standard Specifications modified as follows:

02150.10(a) General - Add the following to the end of this subsection:

- Rods shall be 1-inch diameter minimum fully threaded steel rods and shall be ASTM A193, grade B7
- Steel nuts shall be ASTM A194, grade 2H
- 4-inch steel washers shall be ASTM F436

AMISIGGER ROAD - DEEP CREEK REVETMENT

PREPARED FOR:
CLACKAMAS COUNTY DTD
OREGON CITY, OREGON
February 2018



SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
00	COVER
01	NOTES
02	NOTES
03	ACCESS, STAGING, AND ESC PLAN
04	WATER MANAGEMENT PLAN
05	SITE PLAN
06	STRUCTURE PLAN VIEW
07	STRUCTURE SECTION VIEWS
08	STRUCTURE SEQUENCING PLAN
09	DETAILS SHEET
10	DETAILS SHEET

NARRATIVE DESCRIPTIONS

EXISTING SITE CONDITIONS
EXISTING DEEP CREEK CHANNEL AT
AMISIGGER ROAD BRIDGE
DEVELOPED CONDITIONS UPGRADES
TO EXISTING CHANNEL, INSTREAM
STRUCTURES, CHANNEL EXCAVATION

SITE SOIL CLASSIFICATION:
76B - SALEM SILT LOAM, 0 TO 7 PERCENT
SLOPES - 77%
77B - SALEM GRAVELLY SILT LOAM, 0 TO 7
PERCENT SLOPES - 23%

ON-SITE SOIL TYPE 76B HAVE SLIGHT
EROSION POTENTIAL.
ON-SITE SOIL TYPE 77B HAVE SLIGHT
EROSION POTENTIAL.
FILL MATERIAL TO BE USED WILL CONSIST
OF NATIVE SOILS

PROPERTY DESCRIPTION

TAX LOTS: 900, 1000, 1100, 1400, 1500
AND 2300 LOCATED IN SECTION 13,
TOWNSHIP 2 SOUTH, RANGE 3 EAST,
WILLAMETTE MERIDIAN, CLACKAMAS
COUNTY, OREGON

TAX LOTS IDS: 23E13C900, 23E13C1000,
23E13C1100, 23E13C1400, 23E13C1500,
23E13C2300

PROPERTY LOCATION

LOCATED TO THE SOUTH SE YEW
WOOD DRIVE, TO THE NORTH OF
SE JUDD RD., CENTERED ON THE
INTERSECTION OF SE AMISIGGER
RD. AND DEEP CREEK, CLACKAMAS
COUNTY, OREGON.

LATITUDE: 45.3908
LONGITUDE: -122.3905

DATUM:
ELEVATION DATUM: NAVD 1988
BENCHMARK: USBT 1999-040
LOCATION: MOST NORTHERLY
CORNER OF DLC #50
ELEVATION: 301.0'

BASIS OF BEARING:
BASIS OF BEARING WAS DERIVED
FROM THE SW CORNER AND THE
SOUTH 1/4 CORNER OF SECTION 13,
T 2 S, R 3 E, W.M. PER USBT NOTES
2001-113 AND 1999-043, STATE
PLANE COORDINATES ARE BASED
ON SN2007-167, CLACKAMAS
COUNTY SURVEY RECORDS.

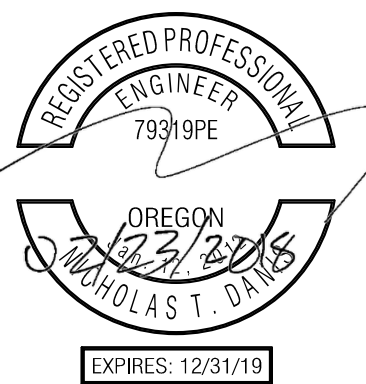
ATTENTION:
OREGON LAW REQUIRES YOU TO FOLLOW RULES
ADOPTED BY THE OREGON UTILITY
NOTIFICATION CENTER. THOSE RULES ARE SET
FORTH IN OAR 952-001-0010 THROUGH OAR
952-001-0090. YOU MAY OBTAIN COPIES OF THE
RULES BY CALLING THE CENTER. (NOTE: THE
TELEPHONE NUMBER FOR THE OREGON UTILITY
NOTIFICATION CENTER IS (503) 232-1987). YOU
MUST NOTIFY THE CENTER AT LEAST TWO
BUSINESS DAYS BEFORE COMMENCING AN
EXCAVATION. CALL (503) 246-6699.

OREGON UTILITY
NOTIFICATION CENTER
1-800-332-2344



CONSTRUCTION SET

BY	DATE	DESCRIPTION



DATE	02/23/2018
DRAWN	I ND, IZ
DESIGNED	I JB, ND
CHECKED	I CJ, JB
PROJECT #	21302830
SHEET TITLE	COVER
SHEET NUMBER	00
LAND USE #	

GENERAL CONSTRUCTION NOTES

1.

ALL IMPROVEMENTS SHALL BE ACCOMPLISHED UNDER THE APPROVAL, INSPECTION, AND TO THE SATISFACTION OF THE OWNER. IMPROVEMENT CONSTRUCTION SHALL COMPLY WITH THESE PLANS AND THE OREGON DEPARTMENT OF TRANSPORTATION (ODOT) STANDARD PLANS FOR CONSTRUCTION OF ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, CURRENT EDITION UNLESS NOTED OTHERWISE. ALL REFERENCES TO THE "STANDARD SPECIFICATIONS" SHALL MEAN THE OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION CURRENT EDITION. CONSTRUCTION NOT SPECIFIED ON THESE PLANS SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS. SUBMITTALS ARE REQUIRED TWO WEEKS PRIOR TO COMMENCING WORK.
2.

THE PROJECT SHALL BE CONSTRUCTED ACCORDING TO THE PLAN SET. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER PRIOR TO ANY IMPLEMENTATION. THE CONSTRUCTION MANAGER OR PROJECT MANAGER SHALL BE CLACKAMAS COUNTY DTD. THE PROJECT ENGINEER SHALL BE CARDNO.
3.

THE LOCATIONS AND EXTENT OF EXISTING UNDERGROUND UTILITIES IN THE WORK AREA AS SHOWN ARE APPROXIMATE AND ARE NOT NECESSARILY COMPLETE. A REASONABLE EFFORT HAS BEEN MADE TO LOCATE AND DELINEATE EXISTING UTILITIES BASED UPON AVAILABLE RECORDS. THE CONTRACTOR SHALL DETERMINE THE TYPE, LOCATION, SIZE, AND/OR DEPTH OF THE EXISTING UTILITIES WITHIN THE WORK AREA BEFORE COMMENCING WORK. THE CONTRACTOR OR ANY SUBCONTRACTOR FOR THIS CONTRACT SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL CONTACT UTILITIES UNDERGROUND LOCATION CENTER AT (800) 332-2344 AT LEAST 48 HOURS PRIOR TO ANY CONSTRUCTION. SEE SPECIAL PROVISIONS FOR CONTRACTOR NOTIFICATION REQUIREMENTS. THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY FOR DAMAGED UTILITIES.
4.

UNLESS NOTED OTHERWISE ON THE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SURVEY MONUMENTS AND OTHER SURVEY MARKERS DURING CONSTRUCTION.
5.

THE CONTRACTOR SHALL PROVIDE, PLACE, AND MAINTAIN ALL LIGHTS, SIGNS, BARRICADES, FLAG PERSONS, PILOT CAR, OR OTHER DEVICES NECESSARY TO CONTROL TRAFFIC THROUGH THE CONSTRUCTION AREA AND FOR PUBLIC SAFETY IN ACCORDANCE WITH THESE PLANS, THE STANDARD SPECIFICATIONS, FEDERAL HIGHWAY ADMINISTRATION (FHWA) MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) CURRENT EDITION.
6.

THE CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, AND FURTHER AGREES THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS IN ACCORDANCE WITH THE PROVISIONS OUTLINED BY THE PROJECT CONTRACT AND STANDARD SPECIFICATIONS.
7.

THE CONTRACTOR SHALL MAINTAIN A SET OF PLANS ON THE JOB SHOWING "AS-CONSTRUCTED" CHANGES MADE TO DATE. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUPPLY TO CLACKAMAS COUNTY DTD A SET OF PLANS, MARKED UP TO THE SATISFACTION OF CLACKAMAS COUNTY DTD, REFLECTING THE AS-CONSTRUCTED MODIFICATIONS.
8.

AT NO TIME SHALL THE CONTRACTOR UNDERTAKE TO CLOSE OFF ANY EXISTING UTILITY LINES OR OPEN VALVES OR TAKE ANY OTHER ACTION WHICH WOULD AFFECT THE OPERATION OF EXISTING WATER OR SEWER SYSTEMS WITHOUT PRIOR APPROVAL FROM THE PUBLIC UTILITY DISTRICT OR PRIVATE LANDOWNERS. APPROVAL SHALL BE REQUESTED AT LEAST 48 HOURS IN ADVANCE OF THE TIME THAT THE INTERRUPTION OF THE EXISTING SYSTEM IS REQUIRED. ANY INTERRUPTION OF SERVICE TO ACTIVE WATER OR SEWER SERVICES, INCLUDING FIRE HYDRANTS, WHETHER INTENTIONAL OR NOT, MUST BE KEPT TO A MINIMUM TIME PERIOD. IF SERVICE TO BUILDINGS IS TO BE OFF FOR MORE THAN FOUR HOURS, THE CONTRACTOR MUST ADVISE THE UTILITY DISTRICT.
9.

GRADING LIMITS SHOWN ON THE PLANS DELINEATE BOUNDARIES FOR THE CONTRACTOR'S OPERATIONS. THESE BOUNDARIES SHALL BE CLEARLY DELINEATED PRIOR TO COMMENCEMENT OF CONSTRUCTION. WITHIN THE CONSTRUCTION LIMITS, EXISTING VEGETATION SHALL BE PROTECTED TO THE EXTENT FEASIBLE. ALL EXISTING TREES SHALL BE PROTECTED WITH ORANGE CONSTRUCTION FENCING UNLESS SHOWN ON THE PLANS TO BE REMOVED.

GENERAL CONSTRUCTION NOTES (CONT.)

10.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND HIS SUBCONTRACTOR(S) TO EXAMINE THE PROJECT SITE PRIOR TO THE OPENING OF BID PROPOSALS. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED, SUCH AS THE NATURE AND LOCATION OF THE WORK AND THE GENERAL AND LOCAL CONDITIONS, PARTICULARLY THOSE AFFECTING THE AVAILABILITY OF TRANSPORTATION, THE DISPOSAL, HANDLING, AND STORAGE OF MATERIALS, AVAILABILITY OF LABOR, WATER, ELECTRICITY, ROADS, THE UNCERTAINTIES OF WEATHER, STREAMFLOW, THE CONDITIONS OF THE GROUND, SURFACE AND SUBSURFACE MATERIALS, THE EQUIPMENT AND FACILITIES NEEDED PRIMARILY FOR AND DURING THE PERFORMANCE OF THE WORK, AND THE COSTS THEREOF. ANY FAILURE BY THE CONTRACTOR AND SUBCONTRACTOR(S) TO ACQUAINT HIMSELF WITH ALL THE AVAILABLE INFORMATION WILL NOT RELIEVE HIM FROM RESPONSIBILITY FOR PROPERLY ESTIMATING THE DIFFICULTY AND COST OF SUCCESSFULLY PERFORMING THE WORK. THE CONTRACTOR SHALL BE PREPARED TO WORK WITHIN THE CONSTRAINTS OF THE SITE HYDROLOGY.
11.

ELEVATIONS SHOWN ON THE PLANS FOR PIPE INVERTS, TOPS OF BANKS, THALWEGS , GRADE CONTROLS, ETC., ARE BASED UPON THE TOPOGRAPHIC INFORMATION SHOWN ON THE PLANS. THE CONTRACTOR SHALL VERIFY ALL NECESSARY SURFACE ELEVATIONS IN THE FIELD AND NOTIFY THE ENGINEER AND CLACKAMAS COUNTY DTD OF ANY DISCREPANCIES, WHICH MIGHT AFFECT PROPER OPERATION OF THE NEW FACILITIES BEFORE BREAKING GROUND AND PRIOR TO FACILITY INSTALLATION. CLACKAMAS COUNTY DTD SHALL BE CONTACTED IN THE EVENT ELEVATIONS ARE INCORRECT SO THAT THE PROPER ADJUSTMENTS CAN BE MADE PRIOR TO THE INSTALLATION OF THE FACILITIES, AS SET FORTH IN THE SPECIAL PROVISIONS.
12.

THE CONTRACTOR IS RESPONSIBLE TO REVIEW THE CONTRACT DOCUMENTS FOR ALL SUBMITTALS REQUIRED FOR CONSTRUCTION MANAGER REVIEW AND ACCEPTANCE.
13.

THE ENGINEER RESPONSIBLE FOR PREPARATION OF THESE PLANS AND SPECIFICATIONS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE ENGINEER RESPONSIBLE FOR PREPARATION OF THESE PLANS.
14.

BASE TOPOGRAPHY OBTAINED FROM THE FOLLOWING SOURCES AND WAS MERGED BY CARDNO

- SITE TOPOGRAPHY PERFORMED BY: CARDNO (APRIL, 2015)
- WETLAND FLAGGING WAS UPDATED BY PHS (DECEMBER 2015)
15.

FOR SITE GEOLOGIC CONDITIONS SEE GEOTECHNICAL REPORT IN CONTRACT DOCUMENTS.

EQUIPMENT NOTES

1.

ALL EXTERNAL GREASE, OIL, SOIL, WEEDS, AND SEEDS SHALL BE PRESSURE-WASHED OFF THE EQUIPMENT PRIOR TO TRANSPORT TO THE SITE. ALL EQUIPMENT SHALL USE VEGETABLE OIL HYDRAULIC FLUID.
2.

THE CONTRACTOR SHALL USE ONLY DESIGNATED SPECIFIC SITES FOR STORAGE OF EQUIPMENT AND MATERIALS AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SECURITY OF ALL EQUIPMENT AND MATERIALS.
3.

THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT NO PETROLEUM PRODUCTS, HYDRAULIC FLUID, SEDIMENTS, SEDIMENT-LADEN WATER, CHEMICALS, OR ANY OTHER TOXIC OR DELETERIOUS MATERIALS ARE ALLOWED TO ENTER OR LEACH INTO THE CREEK.
4.

ALL EQUIPMENT SHALL BE STORED OVERNIGHT AT LEAST 150' AWAY FROM THE ORDINARY HIGH WATER MARK.
5.

EQUIPMENT SHALL BE CHECKED DAILY FOR LEAKS, AND ANY NECESSARY REPAIRS SHALL BE COMPLETED PRIOR TO COMMENCING WORK ACTIVITIES ALONG THE CREEK, GROUNDWATER OR WETLANDS.
6.

CONTRACTOR MAY USE DESIGNATED STAGING AREA AT SITE CONSTRUCTION ENTRANCE FOR EQUIPMENT CLEANING DURING CONSTRUCTION.

PROJECT PERMIT AND APPROVAL NOTES

1.

THE CONTRACTOR SHALL OBTAIN AT HIS OWN EXPENSE ALL PERMITS, LICENSES, INSURANCE POLICIES, ETC., NOT ALREADY OBTAINED BY CLACKAMAS COUNTY DTD, AS MAY BE NECESSARY TO COMPLY WITH STATE AND LOCAL LAWS ASSOCIATED WITH THE PERFORMANCE OF THE WORK. PERMITS NECESSARY TO BE OBTAINED BY CONTRACTOR INCLUDE, BUT ARE NOT LIMITED TO, FISH SALVAGE PERMIT. SEE SPECIAL PROVISIONS.
2.

IF, DURING CONSTRUCTION, ARCHAEOLOGICAL REMAINS ARE ENCOUNTERED, CONSTRUCTION IN THE VICINITY SHALL BE HALTED, AND THE STATE OFFICE OF HISTORIC PRESERVATION, CLACKAMAS COUNTY DTD AND A QUALIFIED ARCHEOLOGIST SHALL BE CONTACTED.
3.

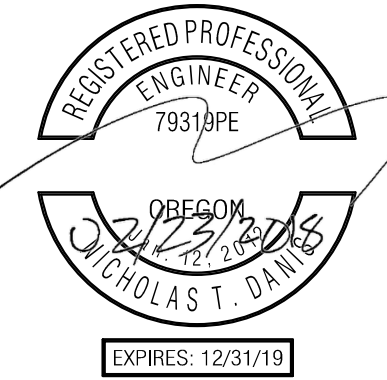
CONTRACTORS WORK SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL PERMITS, AND IS RESPONSIBLE FOR UNDERSTANDING THEIR CONTENT.

CONTRACTOR'S WORK SHALL BE IN ACCORDANCE WITH NOAA SLOPES V. PROVISIONS SHOWN IN THE CONTRACT DOCUMENTS.

CONSTRUCTION SET

NOTES

DATE	DESCRIPTION	BY



DATE	02/23/2018
DRAWN	ND, JZ
DESIGNED	JB, ND
CHECKED	CJ, JB
PROJECT #	21302830

SHEET TITLE	NOTES
SHEET NUMBER	01

LAND USE #

AMISIGGER ROAD - DEEP CREEK REVETMENT
CLACKAMAS COUNTY DTD
OREGON CITY, OREGON



STANDARD NOTES FOR EROSION CONTROL PLAN

1. ALL PERMIT REGISTRANTS MUST IMPLEMENT THE ESCP. FAILURE TO IMPLEMENT ANY OF THE CONTROL MEASURES OR PRACTICES DESCRIBED IN THE ESCP IS A VIOLATION OF THE PERMIT. (SCHEDULE A 8.A)
2. THE ESCP MEASURES SHOWN ON THIS PLAN ARE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, UPGRADE THESE MEASURES AS NEEDED TO COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL EROSION AND SEDIMENT CONTROL REGULATIONS. (SCHEDULE A.8.C.II.(1)(C))
3. PHASE CLEARING AND GRADING TO THE MAXIMUM EXTENT PRACTICAL TO PREVENT EXPOSED INACTIVE AREAS FROM BECOMING A SOURCE OF EROSION. (SCHEDULE A 8.C.II.(1)(D))
4. IDENTIFY, MARK, AND PROTECT (BY FENCING OFF) CRITICAL RIPARIAN AREAS AND VEGETATION INCLUDING IMPORTANT TREES AND ASSOCIATED ROOTING ZONES, AND VEGETATION AREAS TO BE PRESERVED. IDENTIFY VEGETATIVE BUFFER ZONES BETWEEN THE SITE AND SENSITIVE AREAS (E.G., WETLANDS), AND OTHER AREAS TO BE PRESERVED, ESPECIALLY IN PERIMETER AREAS. (SCHEDULE A.8.C.I.(1) & (2))
5. PRESERVE EXISTING VEGETATION WHEN PRACTICAL AND RE-VEGETATE OPEN AREAS. RE-VEGETATE OPEN AREAS WHEN PRACTICABLE BEFORE AND AFTER GRADING OR CONSTRUCTION. IDENTIFY THE TYPE OF VEGETATIVE SEED MIX USED. (SCHEDULE A.7.B.III(1) AND A.7.B.III(3))
6. EROSION AND SEDIMENT CONTROL MEASURES INCLUDING PERIMETER SEDIMENT CONTROL MUST BE IN PLACE BEFORE VEGETATION IS DISTURBED AND MUST REMAIN IN PLACE AND BE MAINTAINED, REPAIRED, AND PROMPTLY IMPLEMENTED FOLLOWING PROCEDURES ESTABLISHED FOR THE DURATION OF CONSTRUCTION, INCLUDING PROTECTION FOR ACTIVE STORM DRAIN INLETS AND CATCH BASINS AND APPROPRIATE NON-STORMWATER POLLUTION CONTROLS. (SCHEDULE A.7.D.I AND A.8.C)
7. AS INSTRUCTED BY COUNTY, ESTABLISH CONCRETE TRUCK AND OTHER CONCRETE EQUIPMENT WASHOUT AREAS BEFORE BEGINNING CONCRETE WORK. (SCHEDULE A.8.C.I.(6))
8. AS INSTRUCTED BY COUNTY, APPLY TEMPORARY AND/OR PERMANENT SOIL STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS AS GRADING PROGRESSES AND FOR ALL ROADWAYS INCLUDING GRAVEL ROADWAYS. (SCHEDULE A.8.C.II.(2))
9. AS INSTRUCTED BY COUNTY, ESTABLISH MATERIAL AND WASTE STORAGE AREAS, AND OTHER NON-STORMWATER CONTROLS. (SCHEDULE A.8.C.I.(7))
10. PREVENT TRACKING OF SEDIMENT ONTO PUBLIC OR PRIVATE ROADS USING BMPS SUCH AS: GRAVELED (OR PAVED) EXITS AND PARKING AREAS, GRAVEL ALL UNPAVED ROADS LOCATED ONSITE, OR USE AN EXIT TIRE WASH. THESE BMPS MUST BE IN PLACE PRIOR TO LAND-DISTURBING ACTIVITIES. (SCHEDULE A 7.D.II.(1) AND A.8.C.I.(4))
11. WHEN TRUCKING SATURATED SOILS FROM THE SITE, EITHER USE WATER-TIGHT TRUCKS OR DRAIN LOADS ON SITE. (SCHEDULE A.7.D.II.(3))
12. USE BMPS TO PREVENT OR MINIMIZE STORMWATER EXPOSURE TO POLLUTANTS FROM SPILLS; VEHICLE AND EQUIPMENT FUELING, MAINTENANCE, AND STORAGE; OTHER CLEANING AND MAINTENANCE ACTIVITIES; AND WASTE HANDLING ACTIVITIES. THESE POLLUTANTS INCLUDE FUEL, HYDRAULIC FLUID, AND OTHER OILS FROM VEHICLES AND MACHINERY, AS WELL AS DEBRIS, LEFTOVER PAINTS, SOLVENTS, AND GLUES FROM CONSTRUCTION OPERATIONS. (SCHEDULE A.7.E.I.(2)) RE-FUELLING OF EQUIPMENT MUST BE DONE 150' AWAY FROM OHW OF CREEK.
13. IMPLEMENT THE FOLLOWING BMPS: WRITTEN SPILL PREVENTION AND RESPONSE PROCEDURES, EMPLOYEE TRAINING ON SPILL PREVENTION AND PROPER DISPOSAL PROCEDURES, SPILL KITS IN ALL VEHICLES, REGULAR MAINTENANCE SCHEDULE FOR VEHICLES AND MACHINERY, MATERIAL DELIVERY AND STORAGE CONTROLS, TRAINING AND SIGNAGE, AND COVERED STORAGE AREAS FOR WASTE AND SUPPLIES. (SCH A 7.E.III.)
14. USE WATER, SOIL-BINDING AGENT OR OTHER DUST CONTROL TECHNIQUE AS NEEDED TO AVOID WIND-BLOWN SOIL. (SCHEDULE A 7.B.II)

STANDARD NOTES FOR EROSION CONTROL PLAN (CONT.)

15. TEMPORARILY STABILIZE SOILS AT THE END OF THE SHIFT, BEFORE HOLIDAYS, AND WEEKENDS, IF NEEDED. THE REGISTRANT IS RESPONSIBLE FOR ENSURING THAT SOILS ARE STABLE DURING RAIN EVENTS AT ALL TIMES OF THE YEAR. (SCHEDULE A 7.B)
16. AT THE END OF EACH WORKDAY SOIL STOCKPILES MUST BE STABILIZED OR COVERED, OR OTHER BMPS MUST BE IMPLEMENTED TO PREVENT DISCHARGES TO SURFACE WATERS OR CONVEYANCE SYSTEMS LEADING TO SURFACE WATERS. (SCHEDULE A 7.E.II.(2))
17. CONSTRUCTION ACTIVITIES MUST AVOID OR MINIMIZE EXCAVATION AND CREATION OF BARE GROUND DURING WET WEATHER. (SCHEDULE A.7.A.I)
18. SEDIMENT FENCE: REMOVE TRAPPED SEDIMENT BEFORE IT REACHES ONE THIRD OF THE ABOVE GROUND FENCE HEIGHT AND BEFORE FENCE REMOVAL. (SCHEDULE A.9.C.I)
19. OTHER SEDIMENT BARRIERS (SUCH AS BIOBAGS): REMOVE SEDIMENT BEFORE IT REACHES TWO INCHES DEPTH ABOVE GROUND HEIGHT. AND BEFORE BMP REMOVAL. (SCHEDULE A.9.C.II)
20. CATCH BASINS: CLEAN BEFORE RETENTION CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT. SEDIMENT BASINS AND SEDIMENT TRAPS: REMOVE TRAPPED SEDIMENTS BEFORE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT AND AT COMPLETION OF PROJECT. (SCHEDULE A.9.C.III & IV)
21. WITHIN 24 HOURS, SIGNIFICANT SEDIMENT THAT HAS LEFT THE CONSTRUCTION SITE, MUST BE REMEDIATED. INVESTIGATE THE CAUSE OF THE SEDIMENT RELEASE AND IMPLEMENT STEPS TO PREVENT A RECURRENCE OF THE DISCHARGE WITHIN THE SAME 24 HOURS. ANY IN-STREAM CLEAN UP OF SEDIMENT SHALL BE PERFORMED ACCORDING TO THE OREGON DIVISION OF STATE LANDS REQUIRED TIMEFRAME. (SCHEDULE A.9.B.I)
22. THE INTENTIONAL WASHING OF SEDIMENT INTO STORM SEWERS OR DRAINAGE WAYS MUST NOT OCCUR. VACUUMING OR DRY SWEEPING AND MATERIAL PICKUP MUST BE USED TO CLEANUP RELEASED SEDIMENTS. (SCHEDULE A.9.B.II)
23. THE ENTIRE SITE MUST BE TEMPORARILY STABILIZED USING VEGETATION OR A HEAVY MULCH LAYER, TEMPORARY SEEDING, OR OTHER METHOD SHOULD ALL CONSTRUCTION ACTIVITIES CEASE FOR 30 DAYS OR MORE. (SCHEDULE A.7.F.I)
24. PROVIDE TEMPORARY STABILIZATION FOR THAT PORTION OF THE SITE WHERE CONSTRUCTION ACTIVITIES CEASE FOR 14 DAYS OR MORE WITH A COVERING OF BLOWN STRAW AND A TACKIFIER, LOOSE STRAW, OR AN ADEQUATE COVERING OF COMPOST MULCH UNTIL WORK RESUMES ON THAT PORTION OF THE SITE. (SCHEDULE A.7.F.II)
25. PROVIDE PERMANENT EROSION CONTROL MEASURES ON ALL EXPOSED AREAS. DO NOT REMOVE TEMPORARY SEDIMENT CONTROL PRACTICES UNTIL PERMANENT VEGETATION OR OTHER COVER OF EXPOSED AREAS IS ESTABLISHED. HOWEVER, DO REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AS EXPOSED AREAS BECOME STABILIZED, UNLESS DOING SO CONFLICTS WITH LOCAL REQUIREMENTS. PROPERLY DISPOSE OF CONSTRUCTION MATERIALS AND WASTE, INCLUDING SEDIMENT RETAINED BY TEMPORARY BMPS. (SCHEDULE A.7.B.III(2) AND A.8.C.III)
26. SLOPE TO RECEIVE TEMPORARY OR PERMANENT SEEDING SHALL HAVE THE SURFACE ROUGHENED BY MEANS OF TRACK-WALKING OR THE USE OF OTHER APPROVED IMPLEMENTS. SURFACE ROUGHENING IMPROVES SEED BEDDING AND REDUCES RUN-OFF VELOCITY.
27. LONG TERM SLOPE STABILIZATION MEASURES SHALL INCLUDE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER VIA SEEDING WITH APPROVED MIX AND APPLICATION RATE.
28. TEMPORARY SLOPE STABILIZATION MEASURES SHALL INCLUDE: COVERING EXPOSED SOIL WITH PLASTIC SHEETING, STRAW MULCHING, WOOD CHIPS, OR OTHER APPROVED MEASURES.
29. STOCKPILED SOIL OR STRIPPINGS SHALL BE PLACED IN A STABLE LOCATION AND CONFIGURATION. DURING "WET WEATHER" PERIODS, STOCKPILES SHALL BE COVERED WITH PLASTIC SHEETING OR STRAW MULCH. SEDIMENT FENCE IS REQUIRED AROUND THE PERIMETER OF THE STOCKPILE.

STANDARD NOTES FOR EROSION CONTROL PLAN (CONT.)

30. EXPOSED CUT OR FILL AREAS SHALL BE STABILIZED THROUGH THE USE OF TEMPORARY SEEDING AND MULCHING, EROSION CONTROL BLANKETS OR MATS, MID-SLOPE SEDIMENT FENCES OR WATTLES, OR OTHER APPROPRIATE MEASURES. SLOPES EXCEEDING 25% MAY REQUIRE ADDITIONAL EROSION CONTROL MEASURES.
31. AREAS SUBJECT TO WIND EROSION SHALL USE APPROPRIATE DUST CONTROL MEASURES INCLUDING THE APPLICATION OF A FINE SPRAY OF WATER, PLASTIC SHEETING, STRAW MULCHING, OR OTHER APPROVED MEASURES.
32. CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES INCLUDING, BUT NOT LIMITED TO, TIRE WASHES, STREET SWEEPING, AND VACUUMING MAY BE BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
33. ACTIVE INLETS TO STORM WATER SYSTEMS SHALL BE PROTECTED THROUGH THE USE OF APPROVED INLET PROTECTION MEASURES. ALL INLET PROTECTION MEASURES ARE TO BE REGULARLY INSPECTED AND MAINTAINED AS NEEDED.
34. SATURATED MATERIALS THAT ARE HAULED OFF-SITE MUST BE TRANSPORTED IN WATER-TIGHT TRUCKS TO ELIMINATE SPILLAGE OF SEDIMENT AND SEDIMENT-LADEN WATER.
35. USE BMPS SUCH AS CHECK-DAMS, BERMS, AND INLET PROTECTION TO PREVENT RUN-OFF FROM REACHING DISCHARGE POINTS.
36. COVER CATCH BASINS, MANHOLES, AND OTHER DISCHARGE POINTS WHEN APPLYING SEAL COAT, TACK COAT, ETC. TO PREVENT INTRODUCING THESE MATERIALS TO THE STORM WATER SYSTEM.

CONSTRUCTION SET

NOTES

BY	DATE	DESCRIPTION

REGISTERED PROFESSIONAL
ENGINEER
79319PE

OREGON
NICHOLAS T. DANIS

EXPIRES: 12/31/19

DATE	02/23/2018
DRAWN	ND, JZ
DESIGNED	JB, ND
CHECKED	CJ, JB
PROJECT #	21302830

SHEET TITLE

NOTES

SHEET NUMBER

02

LAND USE #

Cardno

Shaping the Future

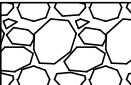

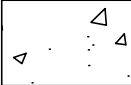


PORTLAND

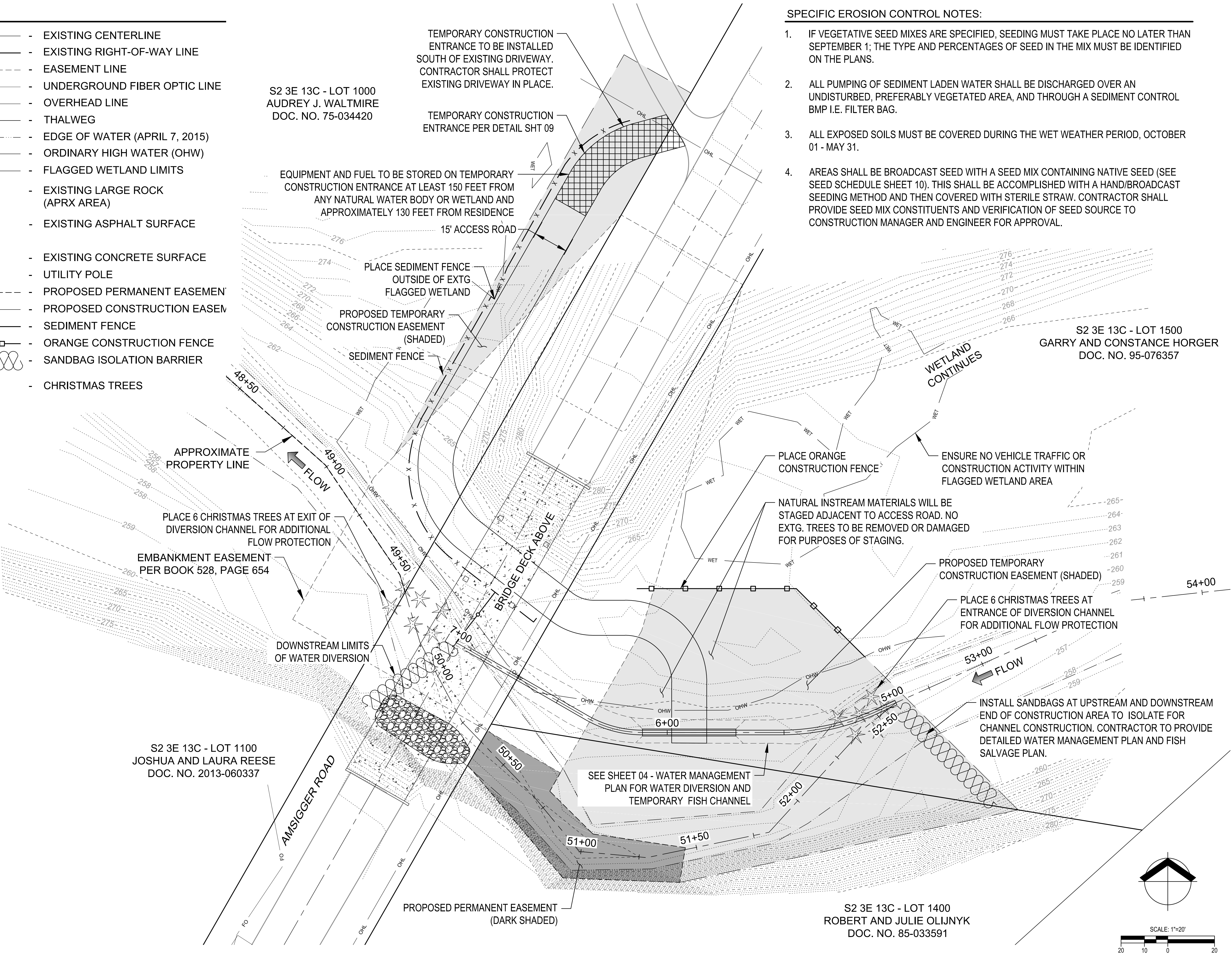
6720 SW MACADAM, STE 200, PORTLAND, OR 97219

TEL: (503) 419-2500 FAX: (503) 419-2600

www.cardno.com

LEGEND

- - - - - EXISTING CENTERLINE
- - - - - EXISTING RIGHT-OF-WAY LINE
- - - - - EASEMENT LINE
- FO - - - - - UNDERGROUND FIBER OPTIC LINE
- OHL - - - - - OVERHEAD LINE
- - - - - THALWEG
- - - - - EDGE OF WATER (APRIL 7, 2015)
- OHW - - - - - ORDINARY HIGH WATER (OHW)
- OHW - - - - - FLAGGED WETLAND LIMITS
-  - EXISTING LARGE ROCK (APRX AREA)
-  - EXISTING ASPHALT SURFACE
-  - EXISTING CONCRETE SURFACE
-  - UTILITY POLE
- - - - - PROPOSED PERMANENT EASEMENT
- - - - - PROPOSED CONSTRUCTION EASEMENT
- x - x - SEDIMENT FENCE
- [] - ORANGE CONSTRUCTION FENCE
- [] - SANDBAG ISOLATION BARRIER
-  - CHRISTMAS TREES

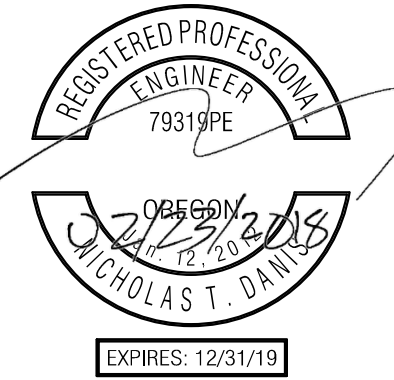


SPECIFIC EROSION CONTROL NOTES:

1. IF VEGETATIVE SEED MIXES ARE SPECIFIED, SEEDING MUST TAKE PLACE NO LATER THAN SEPTEMBER 1; THE TYPE AND PERCENTAGES OF SEED IN THE MIX MUST BE IDENTIFIED ON THE PLANS.
2. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE DISCHARGED OVER AN UNDISTURBED, PREFERABLY VEGETATED AREA, AND THROUGH A SEDIMENT CONTROL BMP I.E. FILTER BAG.
3. ALL EXPOSED SOILS MUST BE COVERED DURING THE WET WEATHER PERIOD, OCTOBER 01 - MAY 31.
4. AREAS SHALL BE BROADCAST SEED WITH A SEED MIX CONTAINING NATIVE SEED (SEE SEED SCHEDULE SHEET 10). THIS SHALL BE ACCOMPLISHED WITH A HAND/BROADCAST SEEDING METHOD AND THEN COVERED WITH STERILE STRAW. CONTRACTOR SHALL PROVIDE SEED MIX CONSTITUENTS AND VERIFICATION OF SEED SOURCE TO CONSTRUCTION MANAGER AND ENGINEER FOR APPROVAL.

ACCESS, STAGING, AND ESC PLAN

#	DATE	DESCRIPTION



DATE	02/23/2018
DRAWN	ND, JZ
DESIGNED	JB, ND
CHECKED	CJ, JB
PROJECT #	21302830

SHEET TITLE
ACCESS, STAGING AND ESC
SHEET NUMBER

03
LAND USE #

Cardno
Shaping the Future
PORTLAND
6720 SW MACADAM, STE 200, PORTLAND, OR 97219
TEL: (503) 419-2800 FAX: (503) 419-2600
www.cardno.com

AMISIGGER ROAD - DEEP CREEK REVETMENT
CLACKAMAS COUNTY DTD
OREGON CITY, OREGON

CONSTRUCTION SET

WATER MANAGEMENT AND EROSION CONTROL NOTES

1.

THE CONTRACTOR SHALL BE REQUIRED TO PERFORM PREVENTIVE DUST CONTROL MEASURES TO ENSURE THAT DUST RESULTING FROM THE CONTRACTOR'S PERFORMANCE OF THE WORK IS CONTROLLED IN CONFORMANCE WITH THE STANDARD SPECIFICATIONS AND FEDERAL, STATE, LOCAL, AND PERMIT REQUIREMENTS.
2.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING ALL TEMPORARY EROSION CONTROL MEASURES. THE EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND PERFORMANCE OF THE TEMPORARY EROSION CONTROL MEASURES THROUGHOUT THE DURATION OF THE PROJECT. SEE SPECIAL PROVISIONS REGARDING TEMPORARY EROSION CONTROL FACILITY REMOVAL.
3.

THE CONTRACTOR SHALL HAVE AN EMERGENCY SPILL KIT ONSITE AT ALL TIMES.
4.

NO NATIVE TREES OR WETLAND VEGETATION SHALL BE REMOVED UNLESS THEY ARE SHOWN AND NOTED TO BE REMOVED ON THE PLANS, OR AS DIRECTLY SPECIFIED ON-SITE BY CLACKAMAS COUNTY DTD. ALL TREES CONFLICTING WITH GRADING SHALL BE TRIMMED. NO GRADING SHALL TAKE PLACE WITHIN THE DRIP LINE OF TREES NOT TO BE REMOVED UNLESS OTHERWISE APPROVED.
5.

THE CONTRACTOR SHALL FOLLOW PROVISIONS SET FORTH IN THE PROJECT PERMITS, AND INSTALL BMP'S TO CONTROL SEDIMENT AND MINIMIZE DISTURBANCE TO EXISTING VEGETATION.
6.

THE PLANS MAY SHOW CONSTRUCTION SEQUENCING. THESE ARE PROVIDED TO THE CONTRACTOR FOR CONSIDERATION. CONTRACTOR IS TO USE THIS PLAN OR DEVELOP A NEW PLAN FOR THE ENGINEER'S APPROVAL.
7.

CONTRACTOR SHALL PREPARE A WATER MANAGEMENT PLAN FOR REVIEW AND APPROVAL BY THE ENGINEER. WATER MANAGEMENT PLAN TO INCLUDE WORK AREA ISOLATION PLAN, FISH SALVAGE PLAN, AND FLOW BYPASS OPTIONS. PLAN TO BE SUBMITTED TO ENGINEER AT LEAST 2 WEEKS PRIOR TO MOBILIZATION.
8.

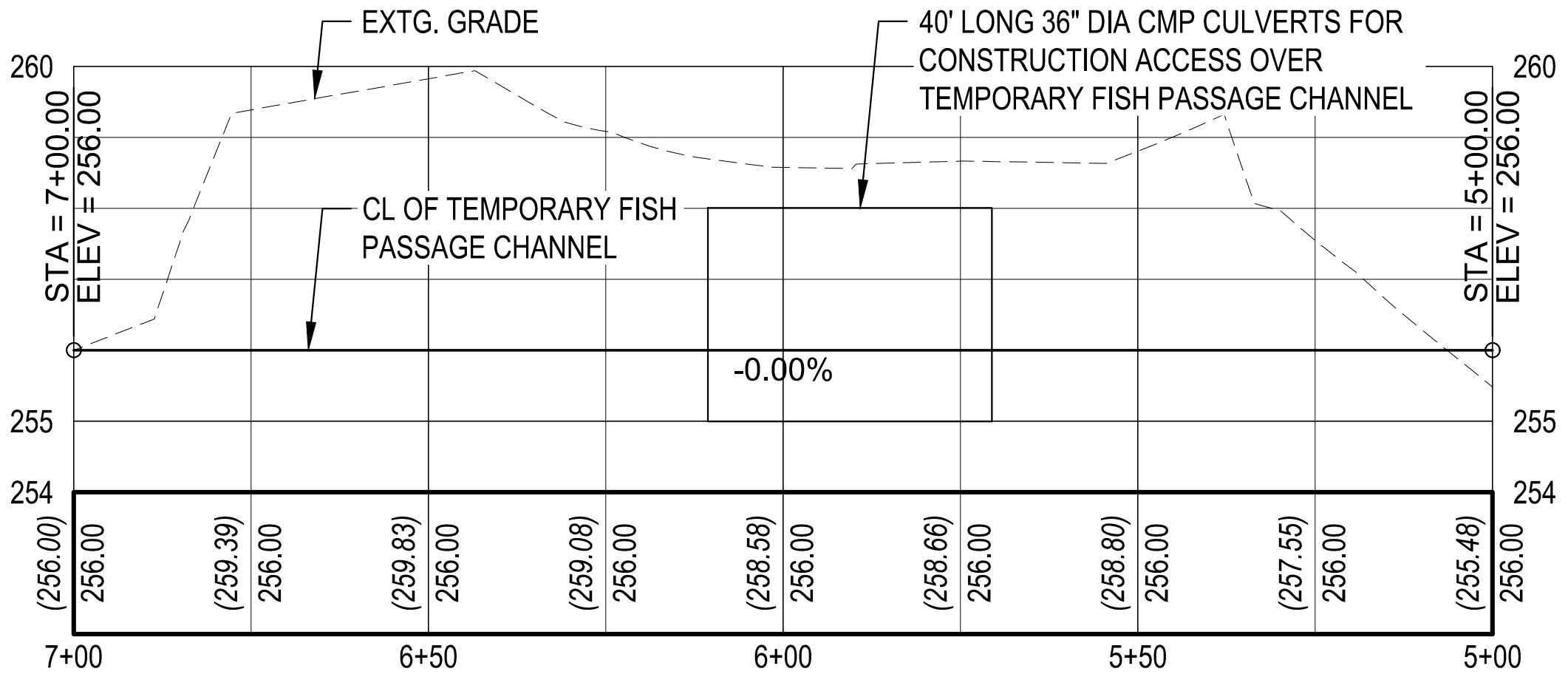
THE CONSTRUCTION SEQUENCING PLAN AND WATER MANAGEMENT PLAN SHALL CONSIDER AND PROVIDE PROVISIONS FOR FISH EXCLUSION FROM ACTIVE CONSTRUCTION ZONES. FISH WITHIN THE WORK AREA SHALL BE REMOVED AND RELOCATED TO AREAS NOT IMPACTED BY CONSTRUCTION ACTIVITIES.
9.

CONTRACTOR SHALL PROVIDE INVENTORY LIST OF LOGS PRIOR TO STAGING ON SITE, IN ACCORDANCE WITH THE SPECIFICATIONS.
10.

IN-WATER WORK WINDOW FOR DEEP CREEK IS JULY 15-AUGUST 31.
11.

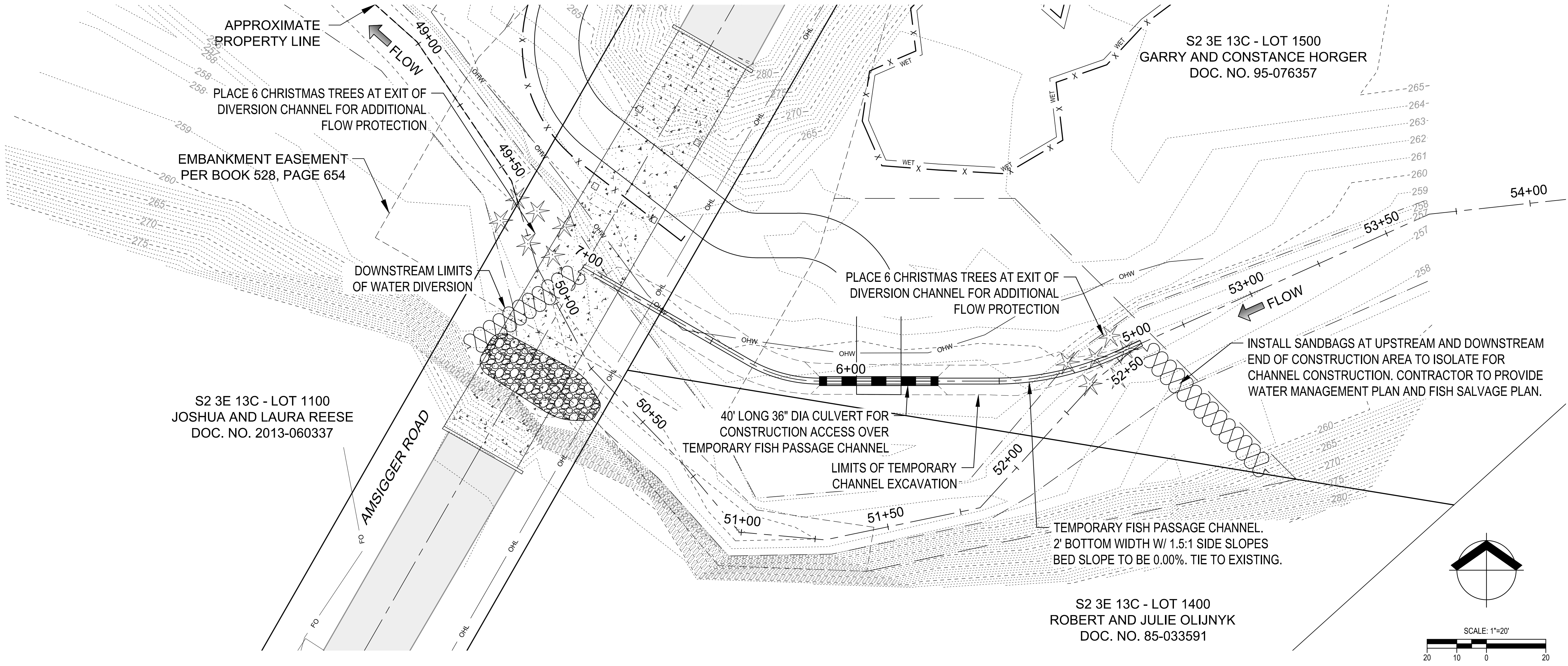
TEMPORARY CULVERT TO BE REMOVED AFTER CONSTRUCTION AND TEMPORARY FISH PASSAGE CHANNEL TO BE RESTORED TO FINISHED GRADE.
12.

PERMIT CONDITIONS MAY CONTAIN SPECIFIC REQUIREMENTS FOR THE CONTROL OF OFF-SITE TURBIDITY FROM PROJECT OPERATIONS. TURBIDITY WILL BE MONITORED PER PERMIT REQUIREMENTS OR SPECIFICATIONS. TURBIDITY AMOUNTS IN EXCESS OF THE PERMITTED AMOUNT AND/OR DURATIONS WILL CAUSE WORK TO BE STOPPED UNTIL IMPROVED PRACTICES ARE IN EFFECT AND THE PROBLEMS CONTROLLED. THE CONTRACTOR IS COMPLETELY RESPONSIBLE FOR ANY PROJECT DELAYS THAT OCCUR BY NATURE OF THIS FAILURE TO ADEQUATELY CONTAIN SEDIMENT ON-SITE.



NOTE:
TEMPORARY FISH PASSAGE CHANNEL TO HAVE 2' BOTTOM WIDTH W/ 1.5:1 SIDE SLOPES.

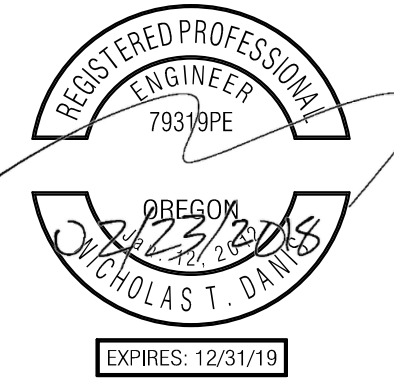
1
04 TEMPORARY FISH PASSAGE CHANNEL - PROFILE
SCALE: 1" = 20'



CONSTRUCTION SET

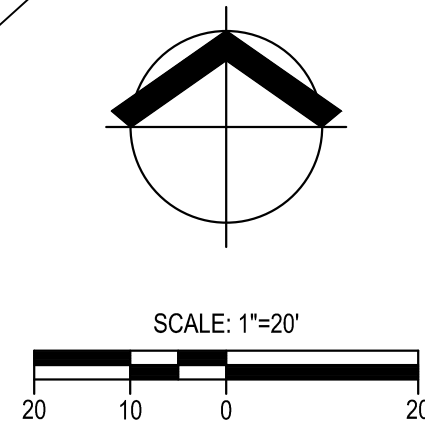
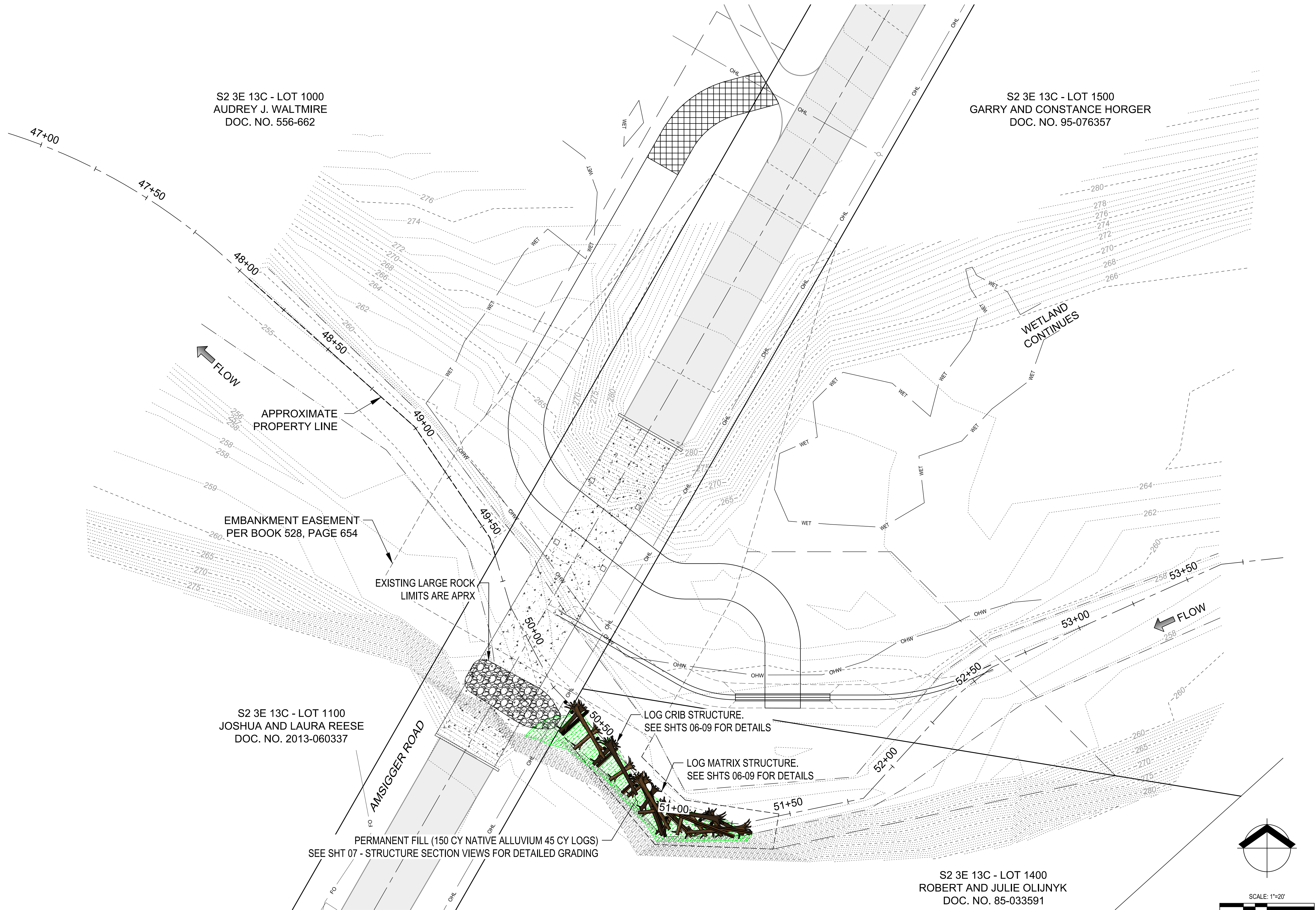
WATER MANAGEMENT PLAN
AMISIGGER ROAD - DEEP CREEK REVETMENT
CLACKAMAS COUNTY DTD
OREGON CITY, OREGON

#	DATE	DESCRIPTION



DATE	02/23/2018
DRAWN	I ND, JZ
DESIGNED	I JB, ND
CHECKED	I CJ, JB
PROJECT #	21302830
SHEET TITLE	WATER PLAN
SHEET NUMBER	04
LAND USE #	

Plot Stamp: 2/23/2018 11:41:19 AM - Nick Davis
File: W121302830\Civil_CD\0283-CD-PLAN.dwg, Tab: 05

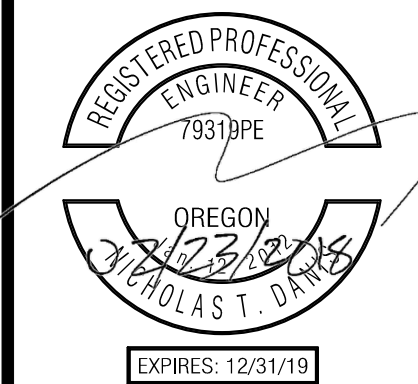


CONSTRUCTION SET

SITE PLAN

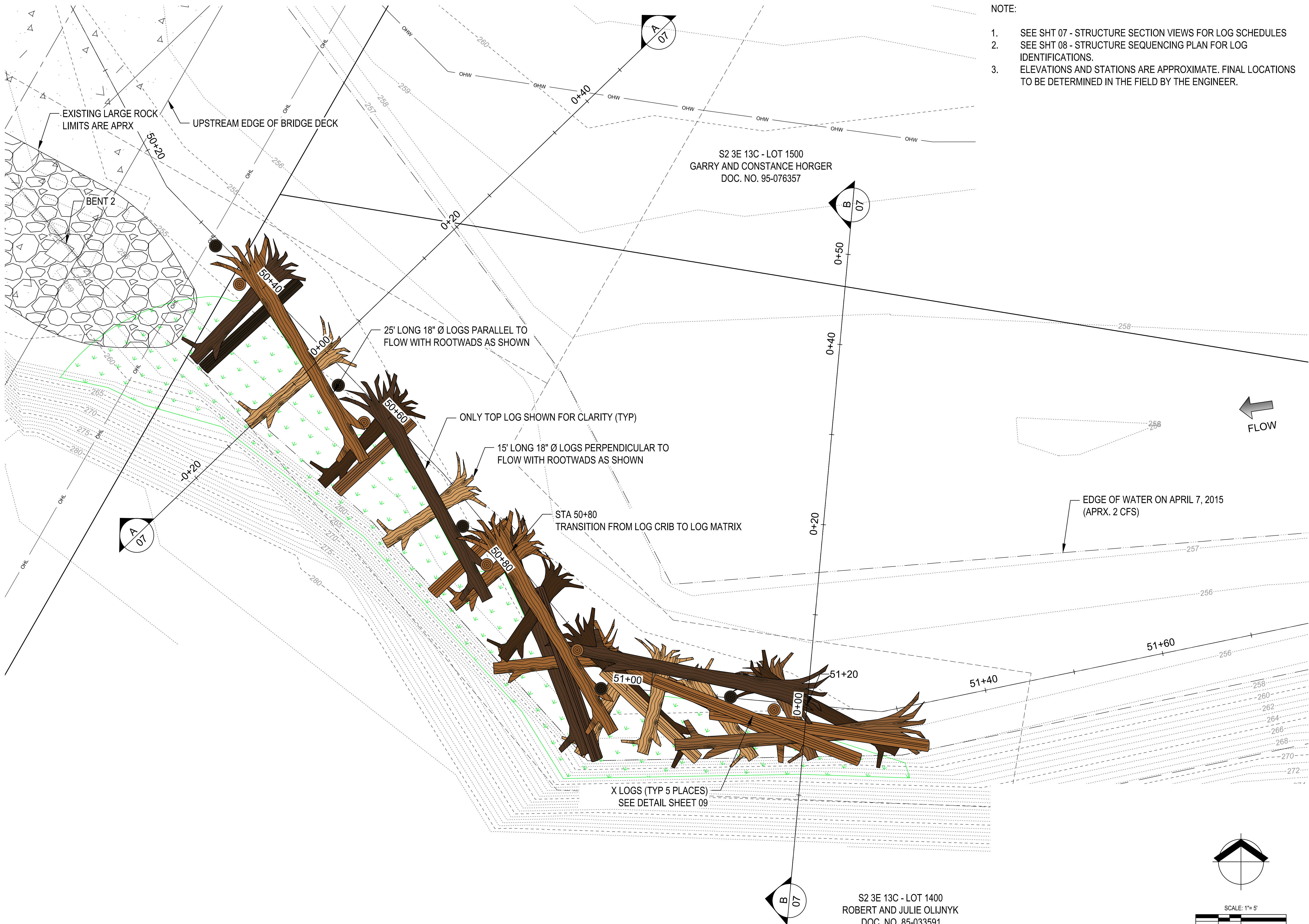
AMISIGGER ROAD - DEEP CREEK REVETMENT
CLACKAMAS COUNTY DTD
OREGON CITY, OREGON

#	DATE	DESCRIPTION	BY



DATE	02/23/2018
DRAWN	I ND, JZ
DESIGNED	I JB, ND
CHECKED	I CJ, JB
PROJECT #	21302830
SHEET TITLE	SITE PLAN
SHEET NUMBER	05
LAND USE #	

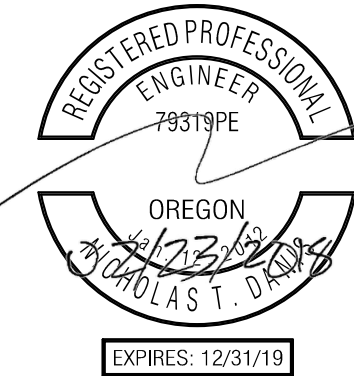
Plot Stamp: 2/23/2018 11:41:21 AM - Nick Davis
File: W121302830\Civil_CD\0283-CD-DETAILS.dwg, Tab: 06



- NOTE:
- SEE SHT 07 - STRUCTURE SECTION VIEWS FOR LOG SCHEDULES
 - SEE SHT 08 - STRUCTURE SEQUENCING PLAN FOR LOG IDENTIFICATIONS.
 - ELEVATIONS AND STATIONS ARE APPROXIMATE. FINAL LOCATIONS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

CONSTRUCTION SET

BY	DATE	DESCRIPTION



DATE	02/23/2018
DRAWN	ND, JZ
DESIGNED	JB, ND
CHECKED	CJ, JB
PROJECT #	21302830
SHEET TITLE	STRUCTURE PLAN
SHEET NUMBER	06
LAND USE #	

STRUCTURE PLAN VIEW
AMISIGGER ROAD - DEEP CREEK REVETMENT
CLACKAMAS COUNTY DTD
OREGON CITY, OREGON

Plot Stamp: 2/23/2018 11:41:25 AM - Nick Danis
File: W:\21302830\Civil_CD\0283-CD-DETAILS.dwg, Tab: 07

NOTES:

- LOGS SHALL BE FURNISHED BY CLACKAMAS COUNTY, AND SHALL BE TEMPORARILY STORED AT THE COUNTY APPROVED LOCATION WITHIN 20 MILES OF THE PROJECT SITE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HAUL AND DELIVER THE LOGS FROM THE COUNTY APPROVED LOCATION TO THE PROJECT SITE, WHERE THEY WILL BE STAGED PRIOR TO INSTALLATION. SEE SPECIAL PROVISIONS.
- CARE SHALL BE TAKEN WHEN HANDLING LOG TO MINIMIZE DAMAGE SUCH AS ABRASION, SPLITTING, CRUSHING AND SHEARING.
- EACH LARGE TOP LOG SHALL BE CONNECTED IN AT LEAST TWO PLACES WITH THREADED ROD TO ADJACENT LOGS AND/OR PILES OR AS APPROVED BY THE ENGINEER.
- RODS SHALL BE 1-INCH DIAMETER MINIMUM FULLY THREADED STEEL RODS (ASTM A193, GRADE B7) WITH STEEL NUTS (ASTM A194, GRADE 2H) AND 4-INCH WASHERS (ASTM F436) ON EACH END. VISIBLE PORTIONS OF HARDWARE SHALL BE GREY OR OTHER APPROVED NEUTRAL COLOR. RODS SHALL BE FLUSH CUT AT THE NUTS AND SHARP EDGES GROUND FLUSH.
- ALL EXPOSED LOG ENDS SHALL HAVE BROKEN ENDS RATHER THAN SAW CUT ENDS.
- STRUCTURE BACKFILL MEET THE FOLLOWING GRADATION: 35% - SMALL BOULDERS (10.1 INCH- 20.2 INCH), 35% - LARGE COBBLES (5.0 INCH - 10.165 INCH), 30% - GRAVELS AND COURSE SANDS (2.51 INCH TO 0.02 INCH). MATERIAL SHALL BE ROUNDED TO SUB-ANGULAR IN SHAPE.
- FOR VERTICAL LOGS, REMOVE BARK AND TRIM AS NEEDED ON END TO BE INSERTED INTO HOLE. THIS END MUST BE STRAIGHT.
- PLACE 2" THICKNESS COMPOST OR MULCH . FURNISH AND INSTALL NATIVE PLANTS IN ACCORDANCE WITH SCHEDULE ON SHEET 10
- CONTRACTOR TO MINIMIZE IMPACTS TO EXISTING SILTSTONE LAYER.
- AUGUR HOLE 2" SMALLER THAN DBH OF LOG TO BE PLACED. DBH OF LOGS LIKELY TO VARY.

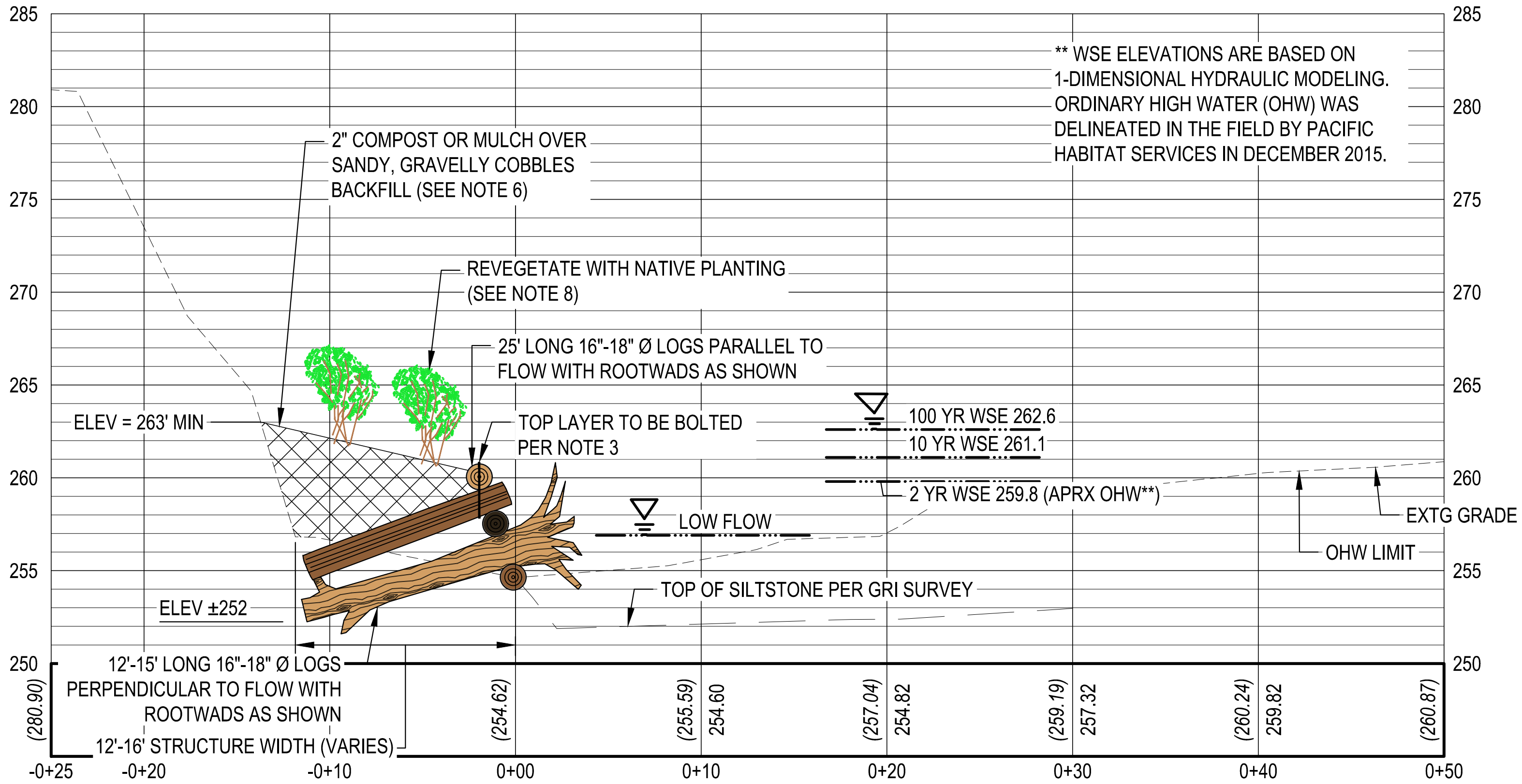
1
07
GENERAL LOG STRUCTURE NOTES

LOG CRIB LOG SCHEDULE						
TYPE	ORIENTATION	DIAMETER	LENGTH	BRANCHES	ROOTWAD	NUMBER
HORIZONTAL TYPE 1	PARALLEL TO FLOW	16"-18"	25'	NO	YES	4
HORIZONTAL TYPE 1	PARALLEL TO FLOW	16"-18"	25'	NO	NO	2
HORIZONTAL TYPE 2	PERPENDICULAR TO FLOW	16"-18"	12'-15'	NO	YES	4
HORIZONTAL TYPE 2	PERPENDICULAR TO FLOW	16"-18"	12'-15'	NO	NO	3
X LOGS	VERTICAL (±15 DEG)	12"-13"	20'	NO	NO	6
SLASH	NA	VARIABLES	VARIABLES	-	-	15CY
LOG BOLT CONNECTIONS	-	-	-	-	-	9

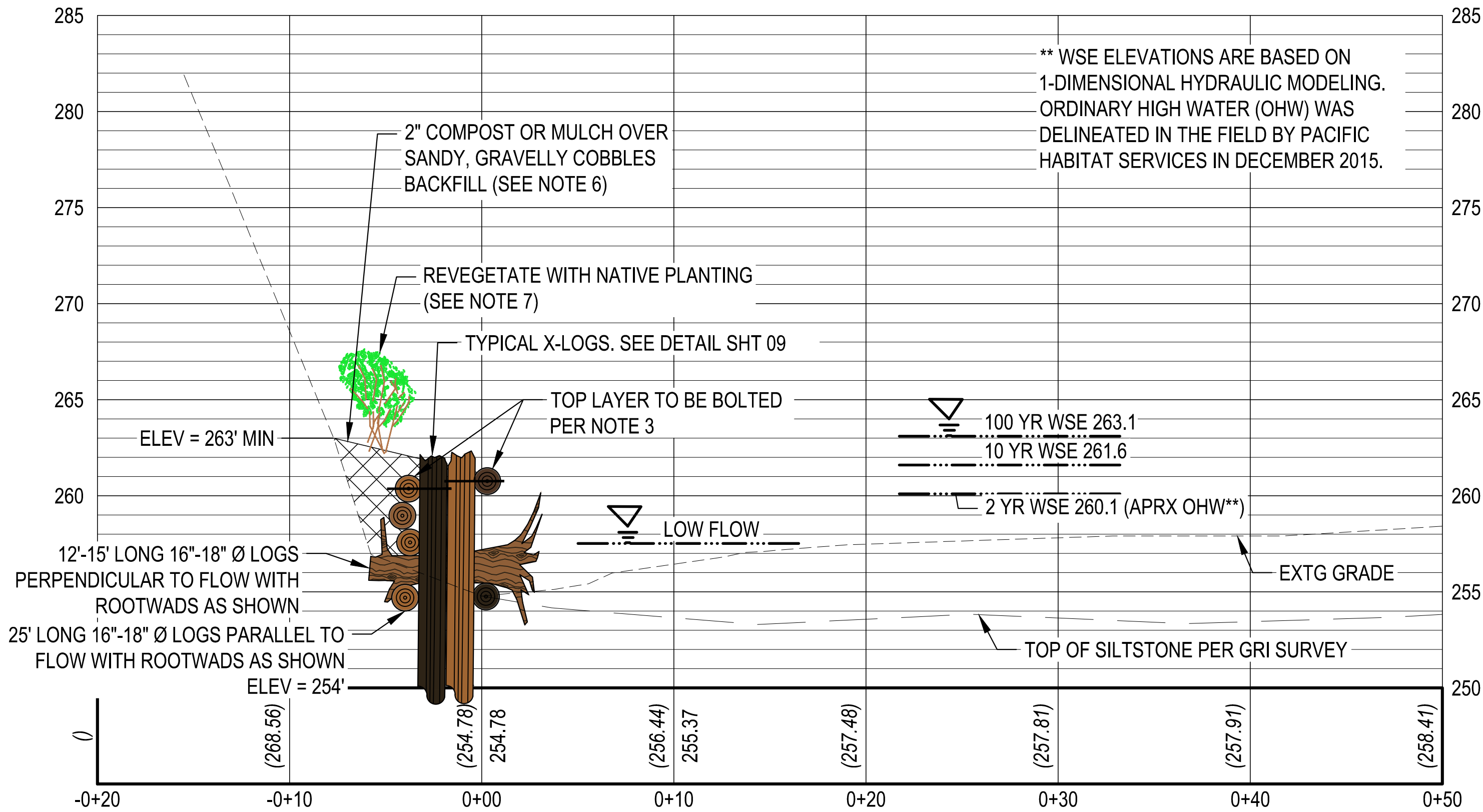
2
07
LOG CRIB - LOG SCHEDULE

LOG MATRIX LOG SCHEDULE						
TYPE	ORIENTATION	DIAMETER	LENGTH	BRANCHES	ROOTWAD	NUMBER
HORIZONTAL TYPE 1	PARALLEL TO FLOW	16"-18"	25'	NO	YES	6
HORIZONTAL TYPE 1	PARALLEL TO FLOW	16"-18"	25'	NO	NO	4
HORIZONTAL TYPE 2	PERPENDICULAR TO FLOW	16"-18"	12'-15'	NO	YES	7
HORIZONTAL TYPE 2	PERPENDICULAR TO FLOW	16"-18"	12'-15'	NO	NO	1
X LOGS	VERTICAL (±15 DEG)	12"-13"	20'	NO	NO	4
SLASH	NA	VARIABLES	VARIABLES	-	-	20 CY
LOG BOLT CONNECTIONS	-	-	-	-	-	6

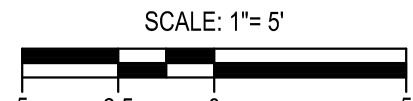
3
07
LOG MATRIX - LOG SCHEDULE



A
07
LOG CRIB - ELEVATION - STA 50+50
SCALE: 1" = 5'



B
07
LOG MATRIX - ELEVATION - STA 51+20
SCALE: 1" = 5'



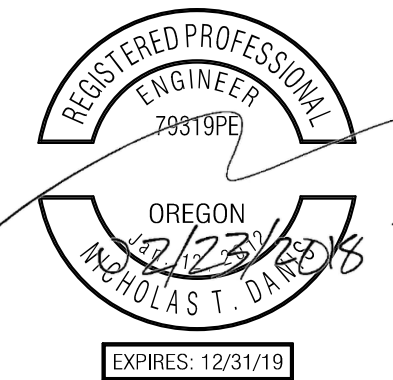
STRUCTURE SECTION VIEWS

AMISIGGER ROAD - DEEP CREEK REVETMENT

CLACKAMAS COUNTY DTD

OREGON CITY, OREGON

BY	DATE	DESCRIPTION

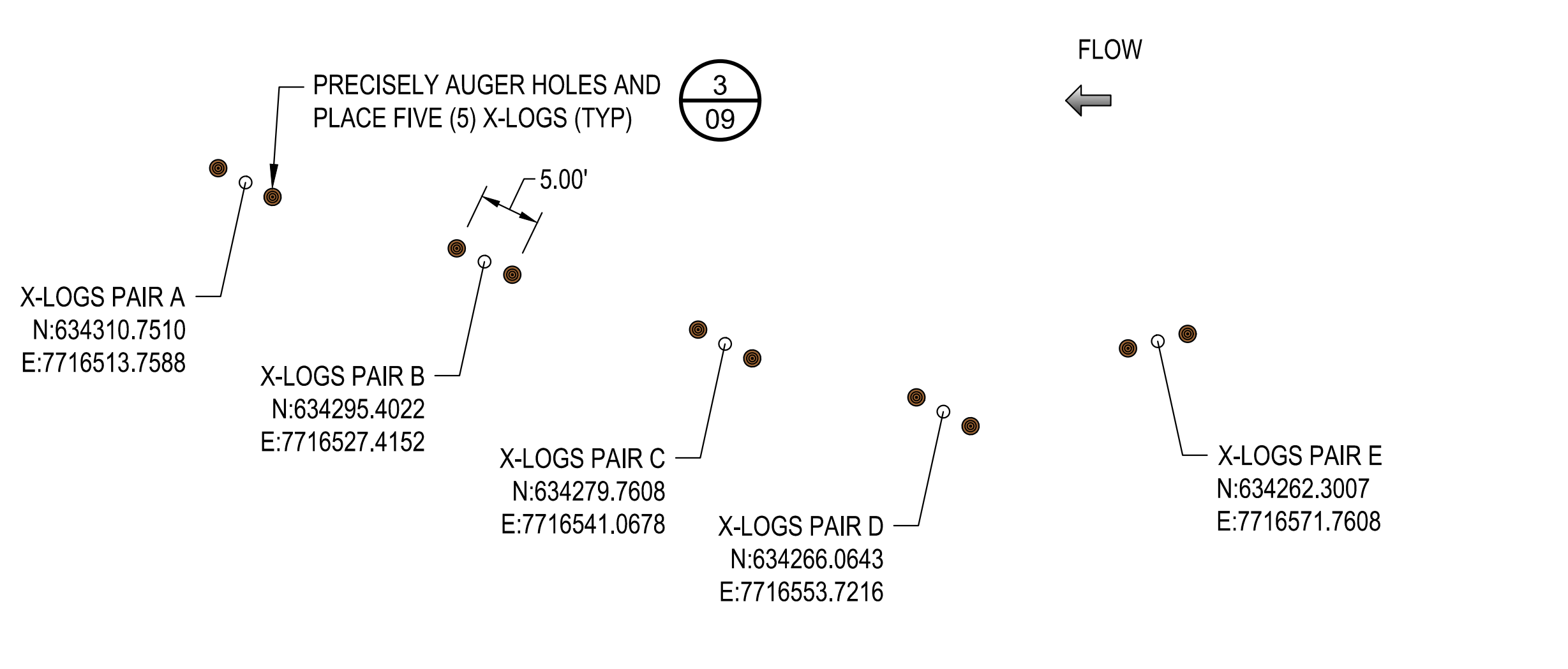


DATE	02/23/2018
DRAWN	I ND, IZ
DESIGNED	I JB, ND
CHECKED	I CJ, JB
PROJECT #	21302830

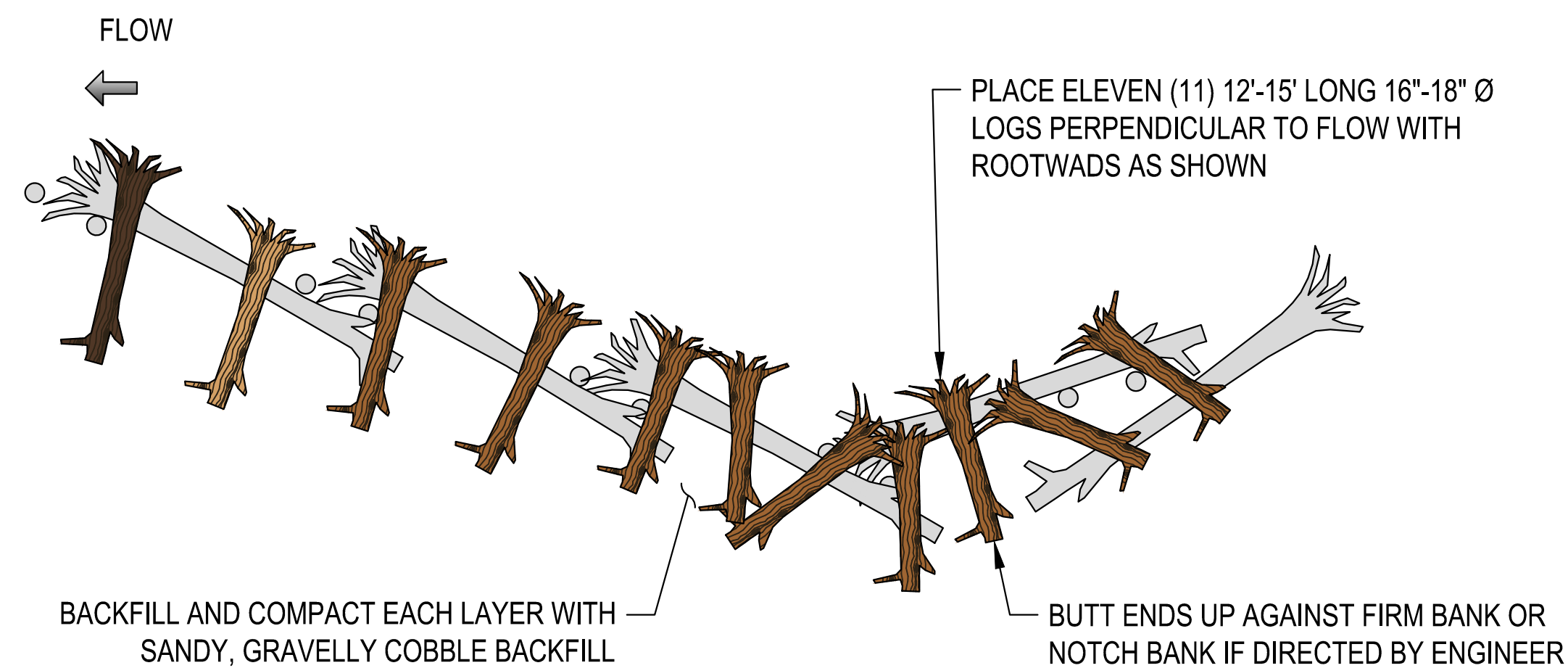
SHEET TITLE	STRUCTURE SECTION
SHEET NUMBER	07

LAND USE #

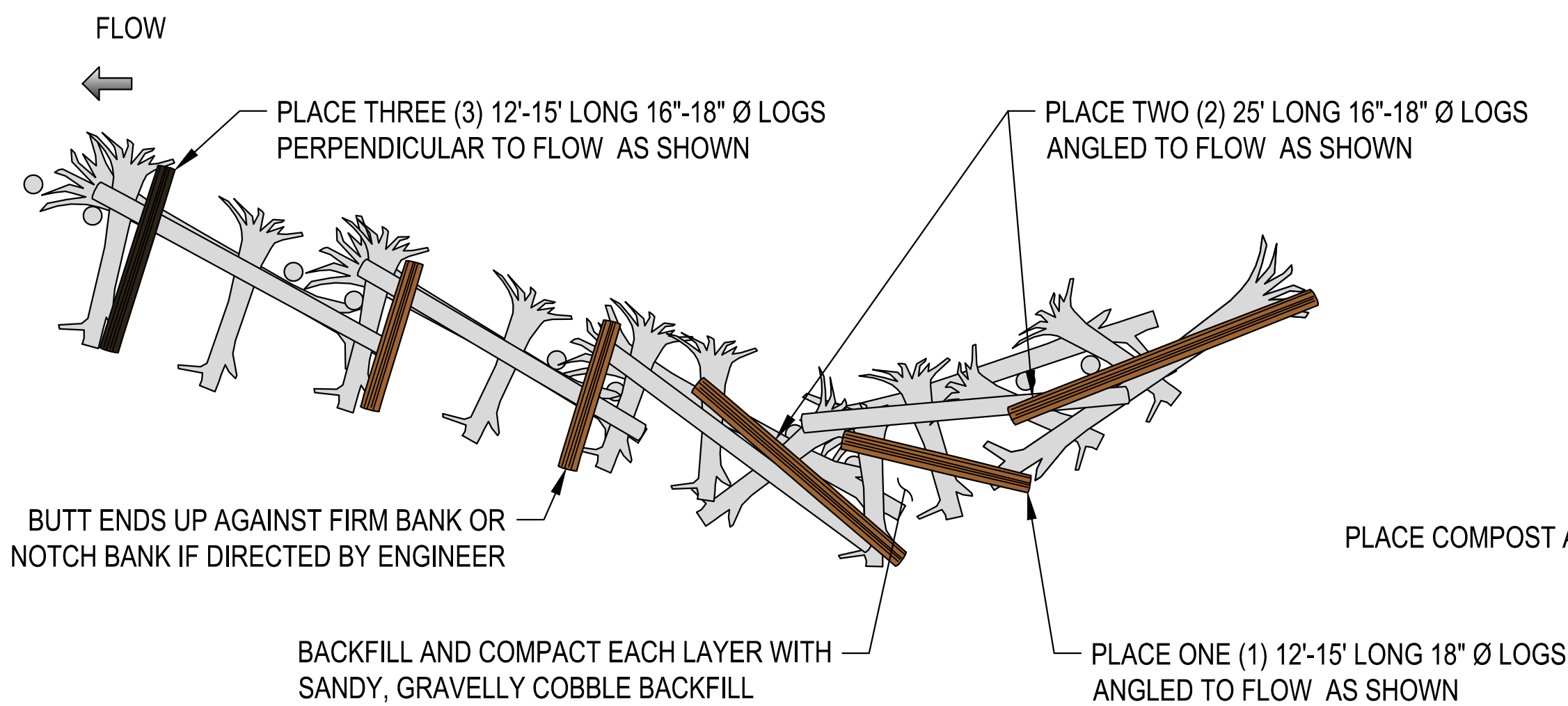
Plot Stamp: 2/23/2018 11:41:27 AM - Nick Danis
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SEQUENCE 1



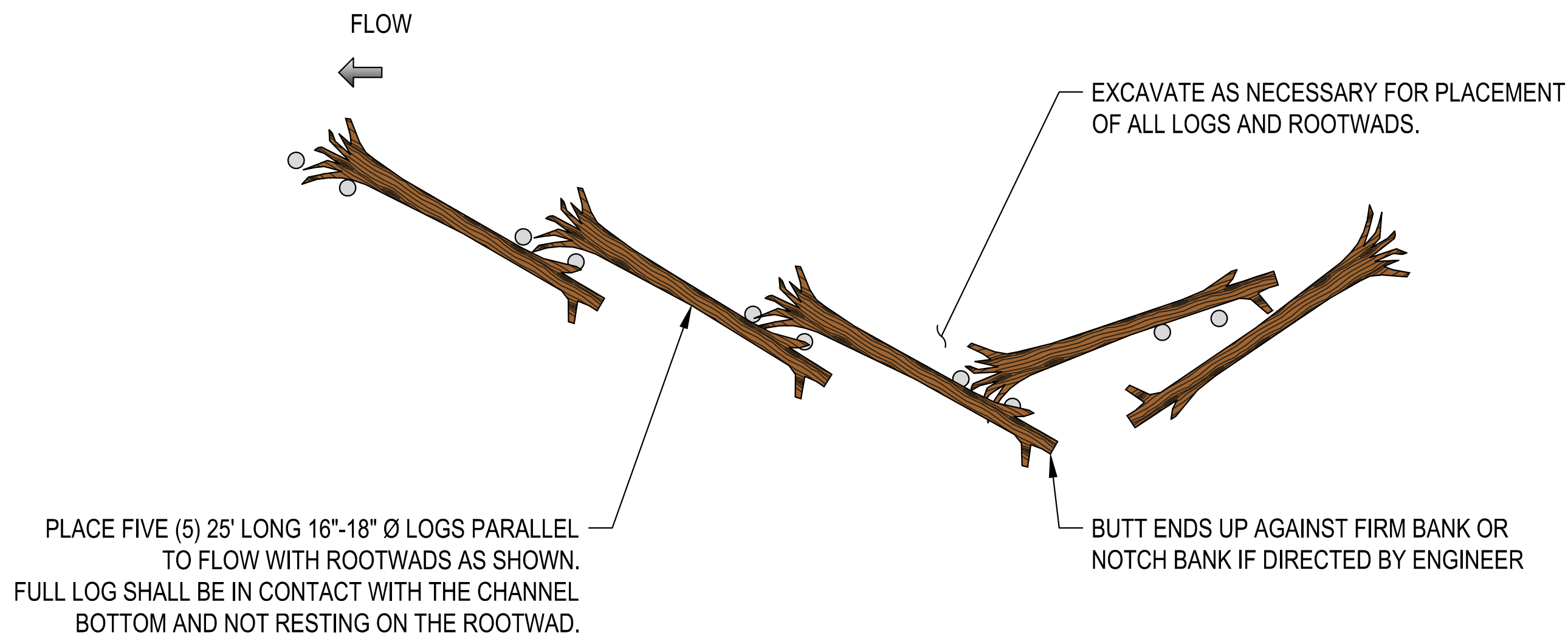
SEQUENCE 3



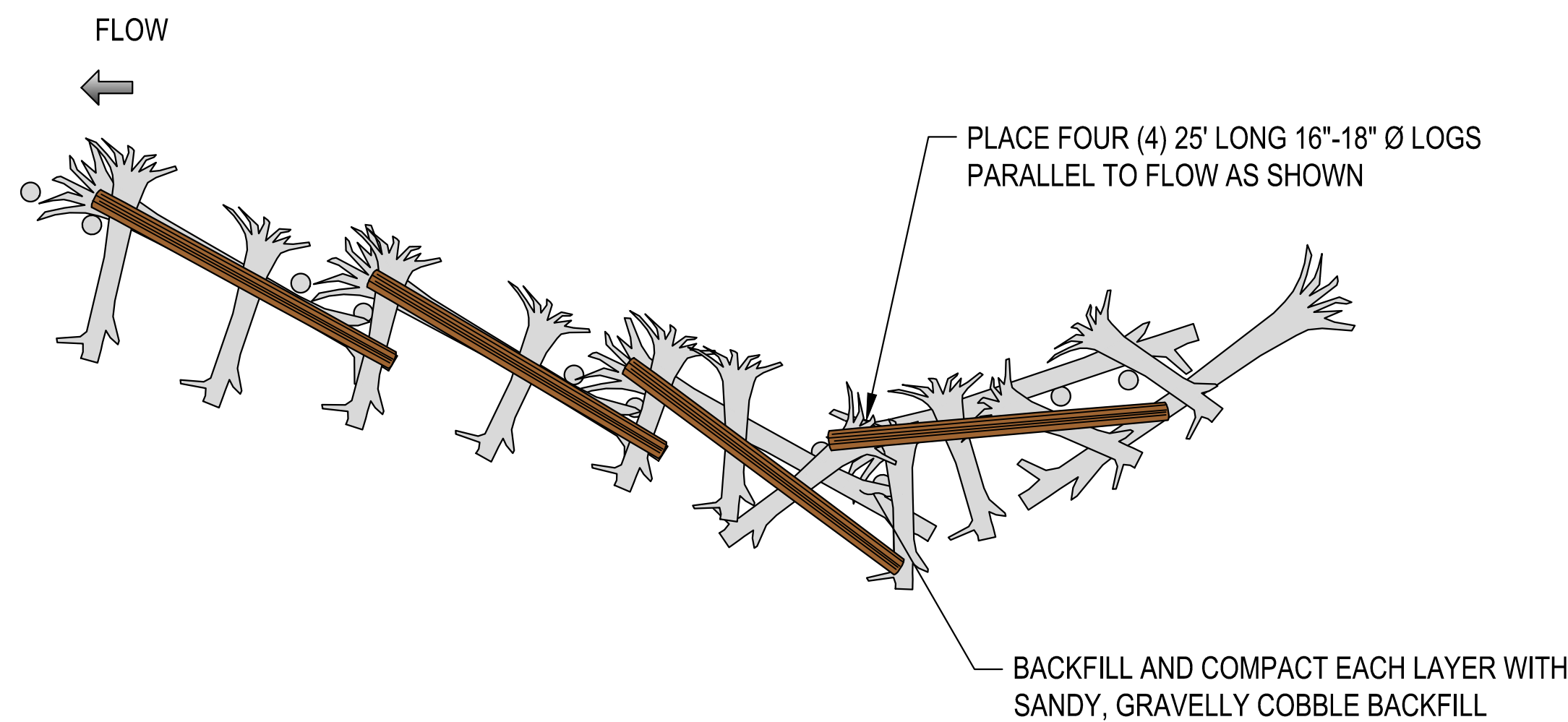
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NOTES:

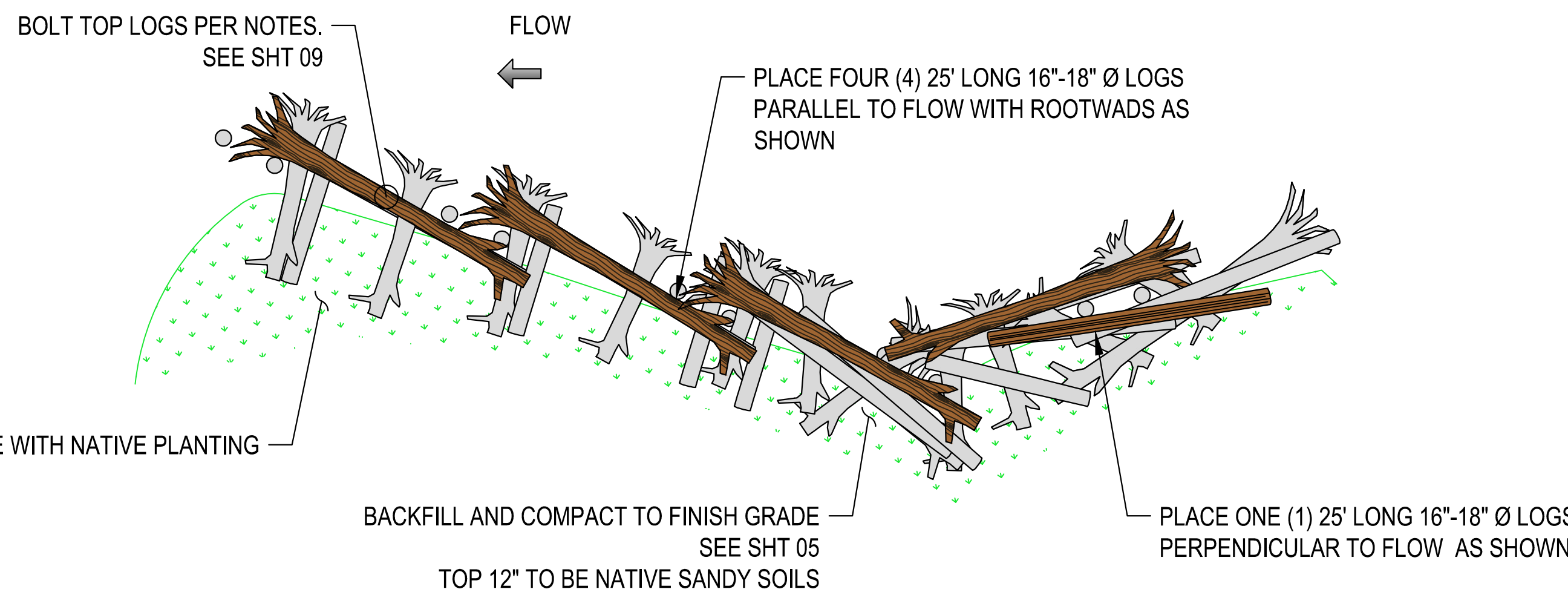
- CONTRACTOR TO STAKE LOCATIONS FOR X-LOGS AS SHOWN. LOCATIONS TO BE APPROVED IN FIELD BY ENGINEER PRIOR TO CONSTRUCTION.
- ENGINEER TO BE ON SITE FOR AUGERING AND INSTALLATION OF X-LOGS.
- PLACE SLASH IN OPENINGS BETWEEN LOGS ON INSIDE OF LOGS BETWEEN PLACING EACH LIFT. TOTAL VOLUME OF RACKING AND SLASH TO BE 35 CY.



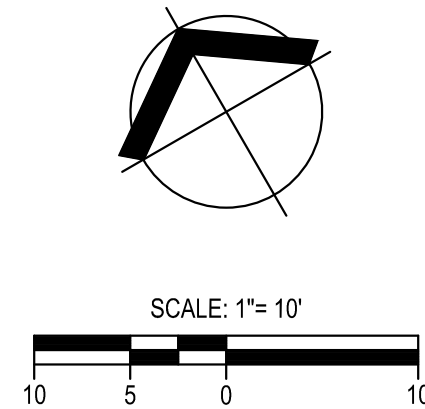
SEQUENCE 2



SEQUENCE 4



SEQUENCE 6



CONSTRUCTION SET

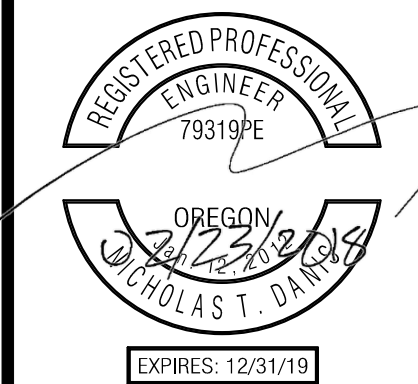
STRUCTURE SEQUENCING PLAN

AMISIGGER ROAD - DEEP CREEK REVETMENT

CLACKAMAS COUNTY DTD

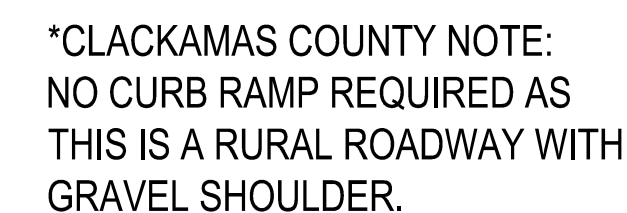
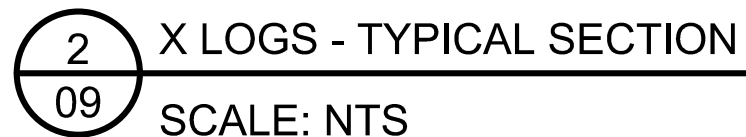
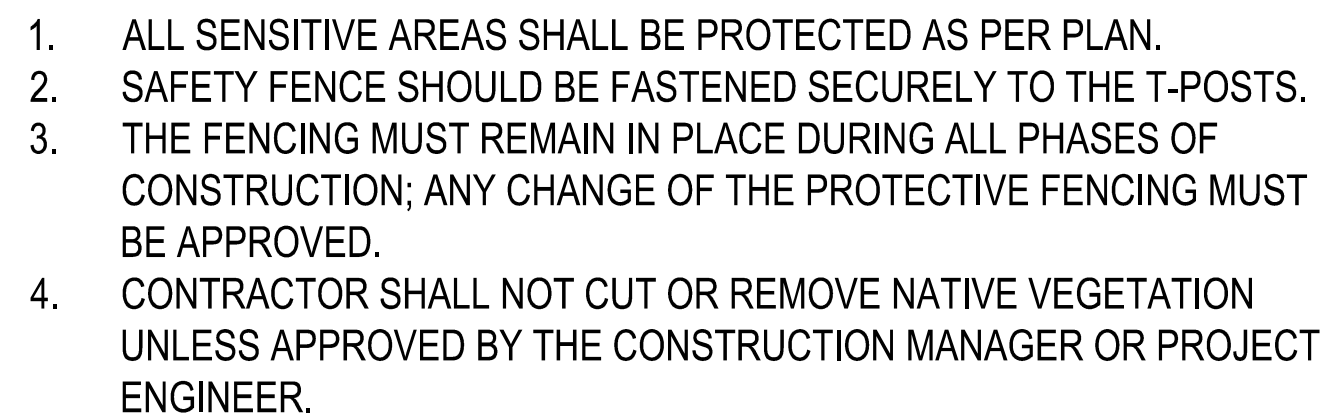
OREGON CITY, OREGON

BY	DATE	DESCRIPTION



DATE	02/23/2018
DRAWN	I ND, JZ
DESIGNED	I JB, ND
CHECKED	I CJ, JB
PROJECT #	21302830
SHEET TITLE	SEQUENCING PLAN
SHEET NUMBER	08

LAND USE #



REVISÉD 01-09

	NAME	CALIPER (IN)	NUMBER
SALMONBERRY	RUBUS SPECTABILIS	1/2	75
RED ELDERBERRY	SAMBUCUS RACEMOSA	1/2	50
PACIFIC NINEBARK	PHYSOCARPUS CAPITATUS	1/2	50
OREGON GRAPE	MAHONIA NERVOSA	1/2	50

1
10

PLANT SCHEDULE

SCALE: NTS

2
10

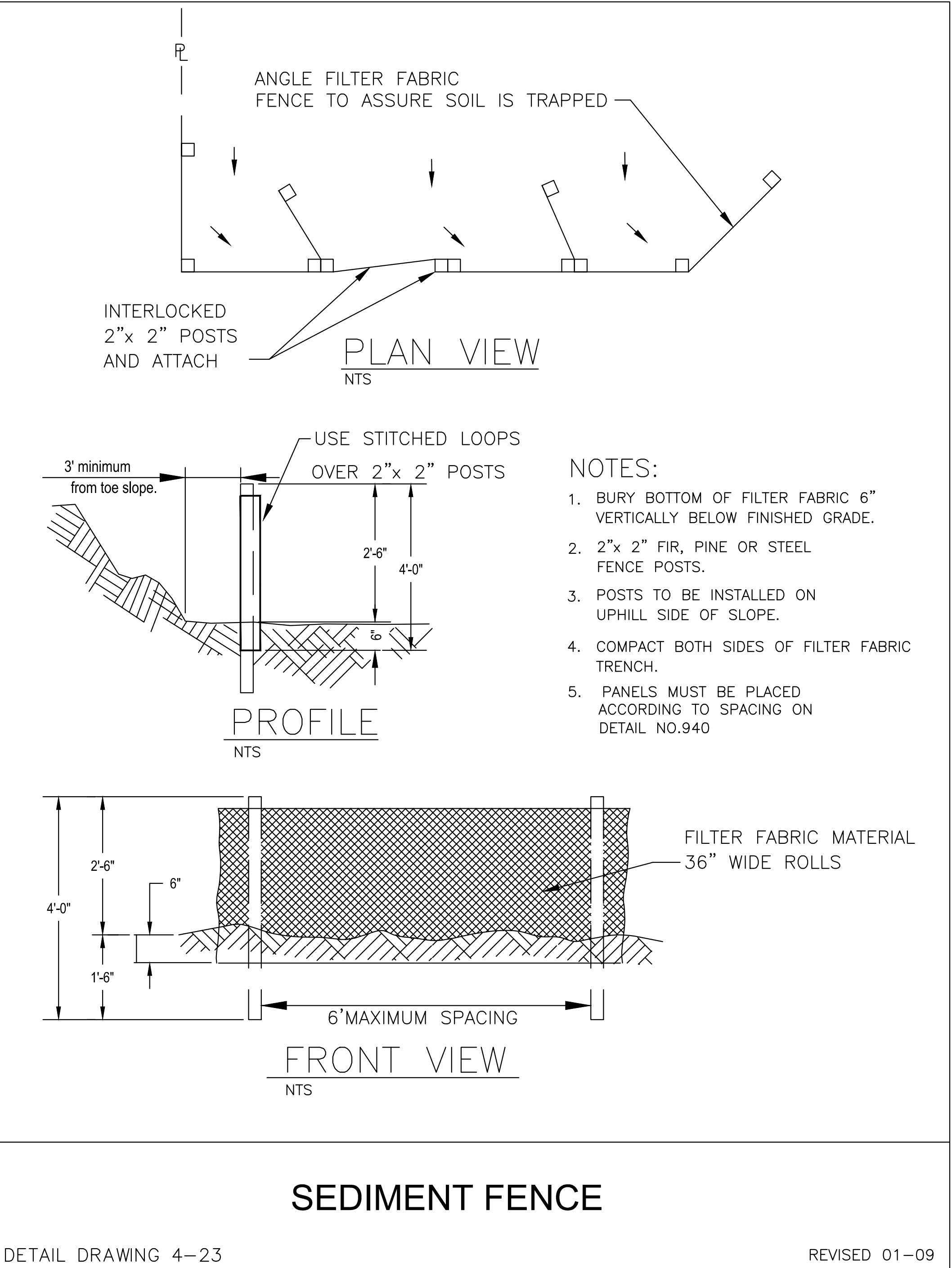
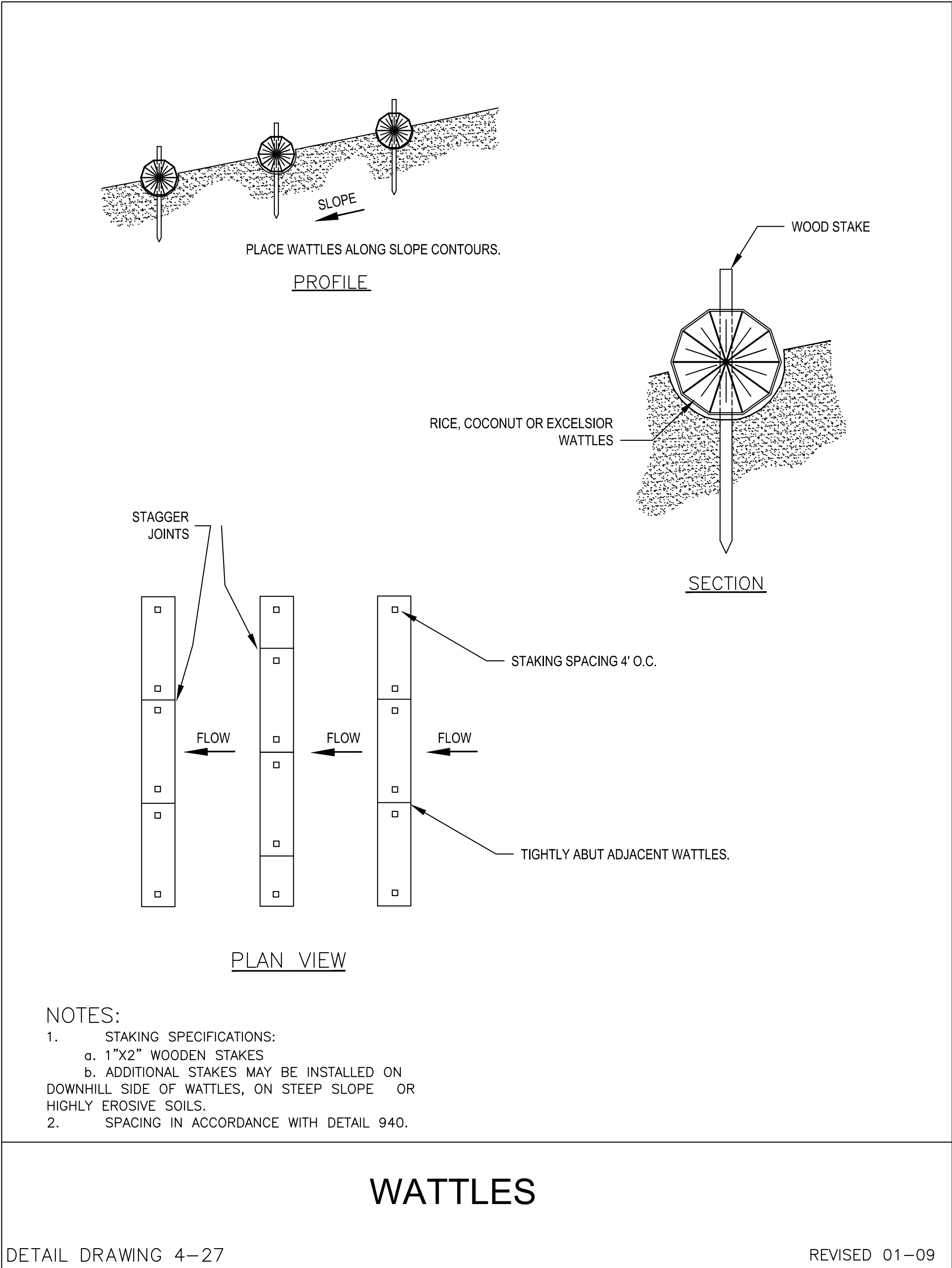
RESTORATION SEEDING

SCALE: NTS

	NAME	INSTALLATION
NATIVE SEED	DESCHAMPSIA ELONGATA (60%) AGROSTIS EXORATA (40%)	MIXED 100 LBS/ACRE

NOTES

- AREAS SHALL BE BROADCAST SEED WITH A SEED MIX CONTAINING NATIVE SEED (SEE SEED SCHEDULE THIS SHEET). THIS SHALL BE ACCOMPLISHED WITH A HAND/BROADCAST SEEDING METHOD AND THEN COVERED WITH WOOD FIBER MULCH. CONTRACTOR SHALL PROVIDE SEED MIX CONSTITUENTS AND VERIFICATION OF SEED SOURCE TO PROJECT MANAGER AND ENGINEER FOR APPROVAL.
- TEMPORARY ACCESS ROUTES AND OTHER AREAS DISTURBED DURING CONSTRUCTION WELL BE REHABILITATED TO SIMILAR OR BETTER THAN PRE-WORK CONDITIONS. AREAS WHERE CONSTRUCTION TRAFFIC ACCESSED SHALL BE SCARIFIED TO AT LEAST 6 INCHES DEEP.
- PLANTS SHALL BE BE MIXED SPACED 1' TO 3' IN A RANDOM PATTERN RESEMBLING NATURE

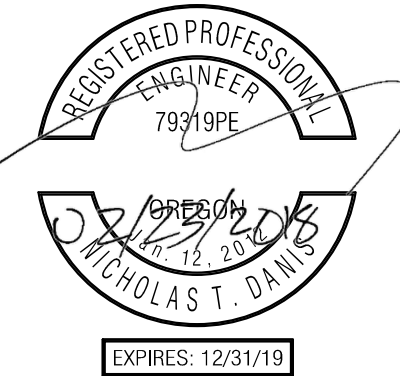


CONSTRUCTION SET

DETAILS SHEET

AMISIGGER ROAD - DEEP CREEK REVETMENT
CLACKAMAS COUNTY DTD
OREGON CITY, OREGON

BY	DATE	DESCRIPTION



DATE	02/23/2018
DRAWN	ND, JZ
DESIGNED	JB, ND
CHECKED	CJ, JB
PROJECT #	21302830
SHEET TITLE	----
SHEET NUMBER	10
LAND USE #	---



9750 SW Nimbus Avenue
Beaverton, OR 97008-7172
p | 503-641-3478 f | 503-644-8034

MEMORANDUM

To: Cedomir Jessic, PE and Jack Bjork, PE
Cardno

Date: November 3, 2015

GRI Project No.: 5390

From: Michael J. Zimmerman, PE, GE, CEG; Jason D. Bock, PE

Re: Geotechnical Explorations
Deep Creek Bridge Scour Protection Project
Armisigger Road
Boring, Oregon

At your request, GRI completed a series of explorations to support the Deep Creek Bridge Scour Protection Project. The project location is shown on the attached Vicinity Map, Figure 1. We understand scour has been undermining the south abutment of the bridge and the purpose of the project is to evaluate scour mitigation alternatives. The GRI scope for the project involves completing an exploration program to estimate the approximate thickness of stream bed gravel deposits on top of the siltstone underlying the site to aid in design of the scour protection structures.

On August 20, 2015, explorations were completed and consisted of driving and removing 4-in.-diameter pipe piles through the gravel and into the underlying siltstone. The approximate locations of the explorations are shown on the attached site plan, Figure 2. Probing was completed using a 4-in.-diameter open-ended pipe driven with a Movax ML-15 vibratory hammer attached to a Euromach walking excavator ("spider hoe"). The excavator was provided and operated by PLI Systems, Inc. of Hillsboro, Oregon. The site was accessed from the north side of the creek. At each location, the pipe was driven using the vibratory hammer until refusal to further advance of the pipe was reached in the underlying siltstone. Typically, 1 to 4 ft of gravel was encountered over the underlying siltstone. Refusal was generally reached in the siltstone at depths of 7 to 10 ft. In our opinion, it is likely the depth of penetration into the siltstone is due to the ability of the machinery to drive the pipe and not necessarily indicative of a relatively soft weathered zone in the upper few feet of the rock. Table 1 summarizes the results of the exploration efforts. Elevations (NAVD 1988) shown on the summary were determined using level and rod measurements completed by GRI relative to the elevation of concrete bridge rail provided by Cardno.

Table 1: Deep Creek Exploration Summary

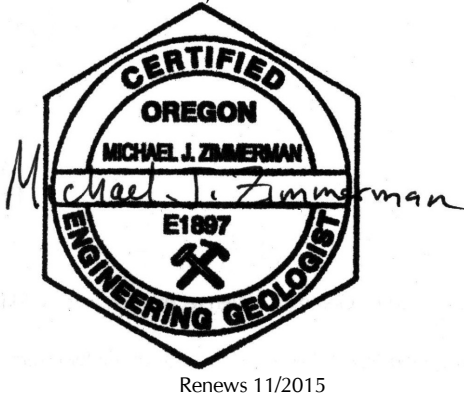
Location	Ground Surface Elevation, ft	Depth to Siltstone, ft	Depth to Refusal, ft
1A	254.7	2.5	8.0
1B	255.3	3.0	6.0
2A	254.2	2.5	5.5
2B	255.3	2.8	7.0
2C	257.2	3.8	6.8

Location	Ground Surface Elevation, ft	Depth to Siltstone, ft	Depth to Refusal, ft
3A	254.7	2.6	6.8
3B	256.3	3.0	8.0
3C	257.1	3.2	9.2
4A	255.5	1.0	7.5
4B	257.4	4.0	9.0
4C	258.0	3.7	10.0
5A	255.2	1.0	6.0
5B	257.7	3.7	9.0
5C	258.2	3.8	10.5

LIMITATIONS

This memorandum has been prepared to aid in the design of scour protection structures for this project. The estimated rock elevations provided in this memorandum are based on the data obtained from the exploration efforts completed as part of our investigation. In the performance of subsurface investigations, specific information is obtained at specific locations at specific times. However, it is acknowledged that variations in soil conditions may exist between exploration locations. This memorandum does not reflect any variations that may occur between these locations.

Submitted for GRI,



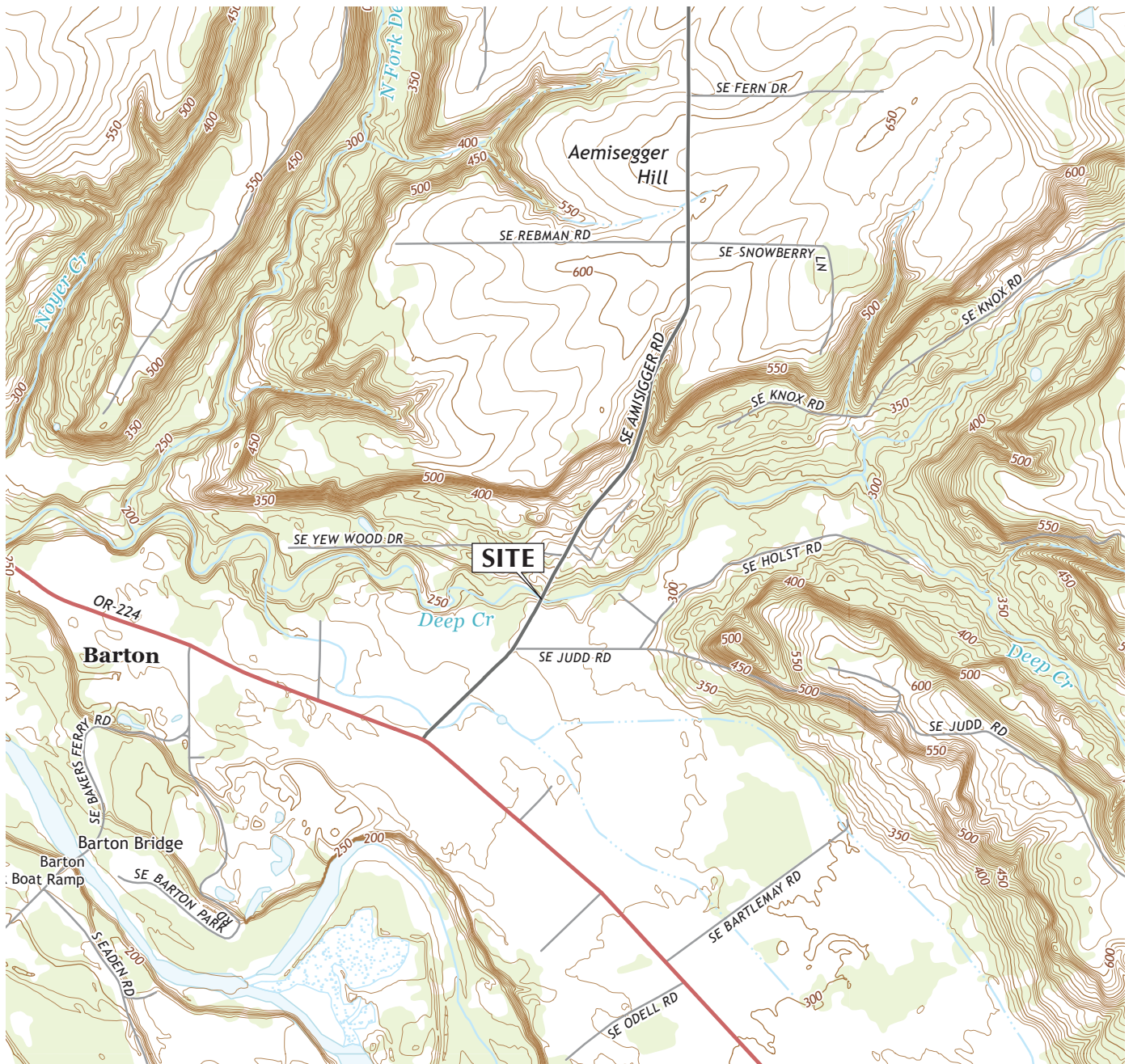
Renews 11/2015

Michael J. Zimmerman, PE, GE, CEG
Senior Engineer/Geologist

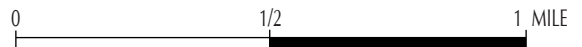
Jason D. Bock, PE
Project Engineer

This document has been submitted electronically.

5390 EXPLORATION MEMO

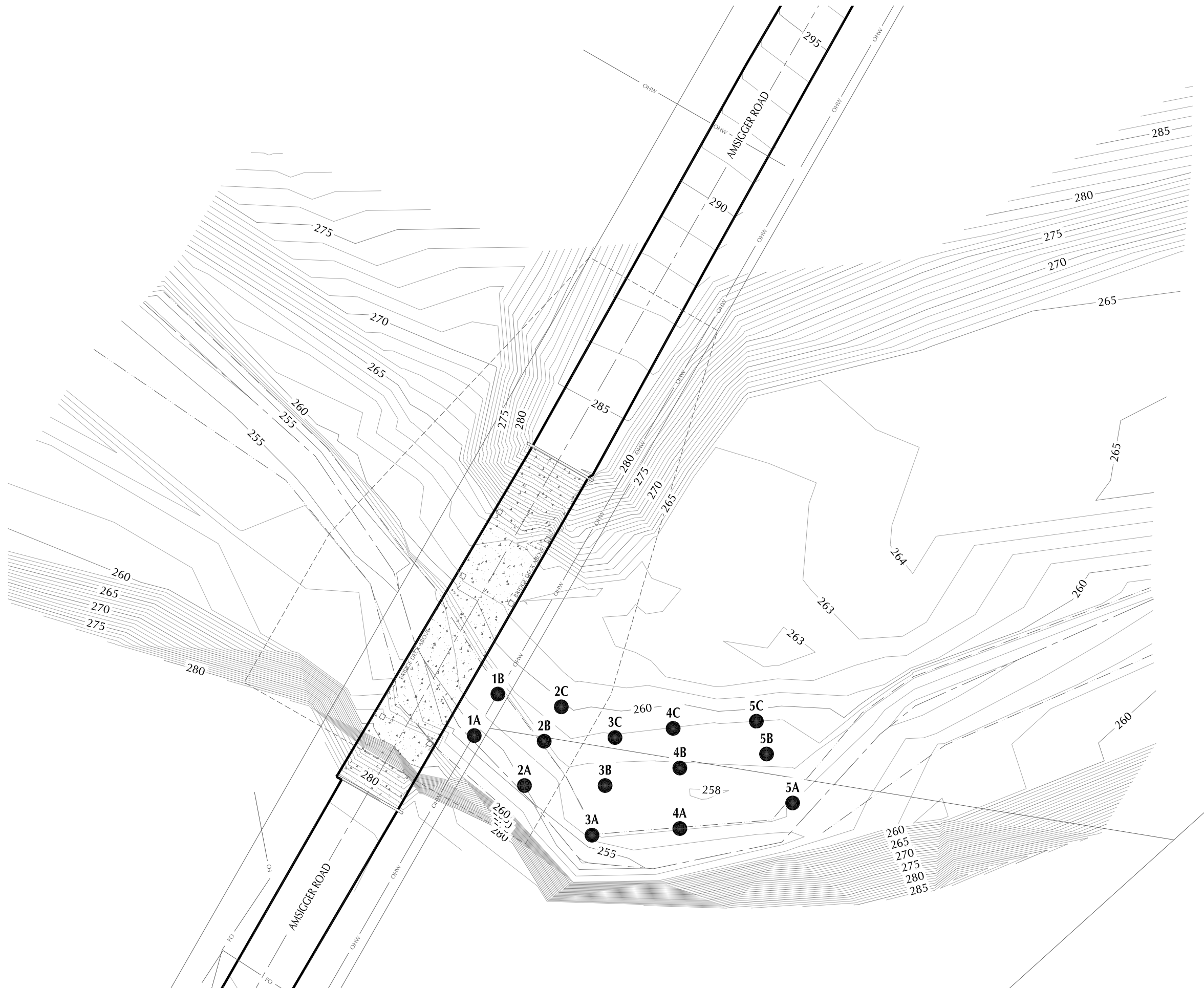


USGS TOPOGRAPHIC MAP
DAMASCUS, OREG. (2014)
SANDY, OREG. (2014)



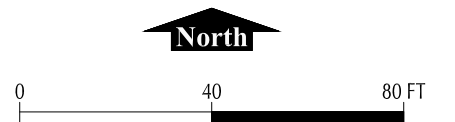
CARDNO
DEEP CREEK BRIDGE SCOUR

VICINITY MAP



● EXPLORATORY LOCATIONS MADE BY GRI

SITE PLAN FROM FILE BY CARDNO WRG, DATED APRIL 24, 2015



GRI CARDNO
DEEP CREEK BRIDGE SCOUR

SITE PLAN



Oregon

Kate Brown, Governor

Department of Environmental Quality
Northwest Region Portland Office/Water Quality
700 NE Multnomah Street, Suite 600
Portland, OR 97232-4100
(503) 229-5263
FAX (503) 229-6957
TTY 711

November 3, 2017

Mr. Devin Patterson
Clackamas County DTD
2051 Kaen Road
Oregon City, Oregon 97045
DevinPat@co.clackamas.or.us

RE: Nationwide 401 Water Quality Certification Approval for 2017-00168, Amisigger Road Bridge.

The US Army Corps of Engineers (USACE) has determined that your project will be authorized under Nationwide Permit (NWP) category #14. As described in the application package received and reviewed by the Oregon Department of Environmental Quality (DEQ), the project qualifies for the Nationwide Section 401 Water Quality Certification (WQC), subject to the conditions outlined below. If you cannot meet all conditions of this 401 WQC, you may apply for a standard individual certification. A standard individual certification will require additional information and higher fees will apply.

Certification Decision: Based on information provided by USACE and the Applicant, DEQ is reasonably assured that implementation-eligible activities under the proposed NWP will be consistent with applicable provisions of Sections 301, 302, 303, 306, and 307 of the federal Clean Water Act, state water-quality standards set forth in Oregon Administrative Rules Chapter 340 Division 41, and other appropriate requirements of state law, provided the following conditions are incorporated into the federal permit and strictly adhered to by the Applicant.

In addition to all USACE national and regional permit conditions, the following 401 WQC conditions apply to all NWP categories that qualify for the Nationwide 401 WQC.

401 GENERAL CERTIFICATION CONDITIONS

- 1) **Responsible parties:** This 401 WQC applies to the Applicant. The Applicant is responsible for the work of its contractors and sub-contractors, as well as any other entity that performs work related to this WQC.
- 2) **Work Authorized:** Work authorized by this 401 WQC is limited to the work described in the Application or Pre-Construction Notification submitted to the USACE and additional application materials (hereafter "the permit application materials"), unless otherwise authorized by DEQ. If the project is operated in a manner not consistent with the project description contained in the permit application materials, the Applicant is not in compliance with this 401 WQC and may be subject to enforcement.
- 3) A copy of this 401 WQC must be kept on the job site and readily available for reference by Applicant and its contractors, as well as by DEQ, USACE, National Marine Fisheries Service (NMFS), Oregon Department of Fish and Wildlife (ODFW), and other appropriate state and local government officials.

- 4) In accordance with OAR 340-048-0050, DEQ may modify or revoke this 401 WQC if project activities are having an adverse impact on state water quality or beneficial uses, or if the Applicant is otherwise in violation of the conditions of this certification.
- 5) The Applicant and its contractors must allow DEQ access to the project site, staging areas, and mitigation sites to monitor compliance with these 401 WQC conditions, including:
 - a. Access to any records, logs, and reports that must be kept under the conditions of this 401 WQC;
 - b. To inspect best management practices (BMPs), monitoring or operational equipment or methods; and
 - c. To collect samples or monitor any discharge of pollutants.
- 6) Failure of any person or entity to comply with this Order may result in the issuance of civil penalties or other actions, whether administrative or judicial, to enforce its terms.
- 7) **Land Use Compatibility Statement:** In accordance with OAR 340-048-0020(2) (i), each Applicant must submit findings prepared by the local land use jurisdiction that demonstrates the activity's compliance with the local comprehensive plan. Such findings can be submitted using the appropriate section of the USACE & DSL Joint Permit Application, signed by the appropriate local official and indicating:
 - a. "This project is consistent with the comprehensive plan and land use regulations;" or,
 - b. "This project will be consistent with the comprehensive plan and land use regulations when the following local approvals are obtained," accompanied by the obtained local approvals.
 - c. Rarely, such as for federal projects on federal land, "this project is not regulated by the comprehensive plan" will be acceptable.

In lieu of submitting the appropriate section of the USACE & DSL Joint Permit Application, the Applicant may use DEQ's Land Use Compatibility Statement form found at:
<http://www.deq.state.or.us/pubs/permithandbook/lucs.pdf>

**FOR PROJECTS THAT PROPOSE CONSTRUCTION, THE FOLLOWING GENERAL
CONDITIONS APPLY**

- 8) **Erosion and Sediment Control:** During construction, erosion and sediment control measures must be implemented to prevent or control movement of sediment, soil or pollutants into waters of the state. The applicant is required to develop and implement an effective erosion and sediment control plan. **Any project that disturbs more than one acre is required to obtain an NPDES 1200-C construction stormwater permit from DEQ.** In addition, the applicant (or responsible party) must:
 - a. Where practicable, use removable pads or mats to prevent soil compaction at all construction access points through, and staging areas in, riparian or wetland areas to prevent soil compaction.
 - b. Demarcate wetlands not specifically authorized to be impacted to protect from disturbance and/or erosion.

- c. Place dredged or other excavated material on upland areas with stable slopes to prevent materials from eroding back into waterways or wetlands. Place BMPs as necessary to stabilize and prevent erosion.
- 9) **Spill Prevention:** Applicant must fuel, operate, maintain and store vehicles, and must store construction materials, in areas that will not impact water quality either directly or due to potential discharges.
- 10) **Spill & Incident Reporting:**
 - a. In the event that petroleum products, chemicals, or any other deleterious materials are discharged into state waters, the discharge must be promptly reported to the Oregon Emergency Response Service (OERS, 1-800-452-0311). Containment and cleanup must begin immediately and be completed as soon as practicable.
 - b. If the project operations result in distressed or dying fish, the operator must immediately: cease operations; take appropriate corrective measures to prevent further environmental damage; and immediately notify DEQ and ODFW.
- 11) **Vegetation Protection and Site Restoration:**
 - a. Applicant must protect riparian, wetland, and shoreline vegetation in the authorized project area from disturbance through one or more of the following:
 - i. Minimization of project and impact footprint;
 - ii. Designation of staging areas and access points in open, upland areas;
 - iii. Fencing and other barriers demarking construction areas; and
 - iv. Use of alternative equipment (e.g., spider hoe or crane).
 - b. If authorized work results in any vegetative disturbance and the disturbance has not been accounted for in planned mitigation actions, the Applicant must successfully reestablish vegetation to a degree of function equivalent or better than before the disturbance.
- 12) The Applicant shall avoid and protect from harm, all wetlands and riparian areas located within 50 feet of USACE jurisdictional waters, unless proposed, necessary, and approved as part of the project. If a local jurisdiction has a more stringent buffer requirement, that requirement will override this certification requirement.

FOR PROJECTS THAT PROPOSE IN-STREAM WORK IN JURISDICTIONAL WATERS

- 13) **Fish protection/Oregon Department of Fish and Wildlife timing:** The Applicant must perform in-water work only within the Oregon Department of Fish and Wildlife preferred time window as specified in the *Oregon Guidelines for Timing of In-Water Work to Protect Fish and Wildlife Resources*, or as authorized otherwise under a USACE permit and/or Department of State Lands removal/fill permit. Exceptions to the timing window must be recommended by Oregon Department of Fish and Wildlife, the National Marine Fisheries Services and/or the US Fish and Wildlife as appropriate.
- 14) **Aquatic life movements:** Any activity that may disrupt the movement of aquatic life living in the water body, including those species that normally migrate through the area, is prohibited. The Applicant must provide unobstructed fish passage at all times during any authorized activity, unless otherwise approved in the approved application.

- 15) **Turbidity:** The Applicant must implement appropriate Best Management Practices (BMPs) to minimize turbidity during in-water work. Any activity that causes turbidity to exceed 10% above natural stream turbidity is prohibited except as specifically provided below:
- a. **Monitoring:** Turbidity monitoring must be conducted and recorded as described below. Monitoring must occur at two hour intervals each day during daylight hours when in-water work is being conducted. A properly calibrated turbidimeter is required **unless another monitoring method is proposed and authorized by DEQ.**
 - i. **Representative Background Point:** Applicant must take and record a turbidity measurement every two hours during in-water work at an undisturbed area. A background location shall be established at a representative location approximately 100 feet upcurrent of the in water activity unless otherwise authorized by DEQ. The background turbidity, location, date, tidal stage (if applicable) and time must be recorded immediately prior to monitoring downcurrent at the compliance point described below.
 - ii. **Compliance Point:** The Applicant must monitor every two hours. A compliance location shall be established at a representative location approximately 100 feet downcurrent from the disturbance at approximately mid-depth of the waterbody and within any visible plume. The turbidity, location, date, tidal stage (if applicable) and time must be recorded for each measurement.
 - b. **Compliance:** The Applicant must compare turbidity monitoring results from the compliance points to the representative background levels taken during each two – hour monitoring interval. Pursuant to OAR 340-041-0036, short term exceedances of the turbidity water quality standard are allowed as follows:

MONITORING WITH A TURBIDIMETER EVERY 2 HOURS	
<i>TURBIDITY LEVEL</i>	<i>Restrictions to Duration of Activity</i>
0 to 4 NTU above background	No Restrictions
5 to 29 NTU above background	Work may continue maximum of 4 hours. If turbidity remains 5-29 NTU above background, stop work and modify BMPs. Work may resume when NTU is 0-5 above background.
30 to 49 NTU above background	Work may continue maximum of 2 hours. If turbidity remains 30-49 NTU above background, stop work and modify BMPs. Work may resume when NTU is 0-5 above background.
50 NTU or more above background	Stop work immediately and inform DEQ

- c. **Reporting:** The Applicant must record all turbidity monitoring required by subsections (a) and (b) above in daily logs. The daily logs must include calibration documentation; background NTUs; compliance point NTUs; comparison of the points in NTUs; location; date; time; and tidal stage (if applicable) for each reading. Additionally, a narrative must be prepared discussing all exceedances with subsequent monitoring, actions taken, and the effectiveness of the actions. Applicant must make available copies of daily logs for turbidity monitoring to DEQ, USACE, NMFS, USFWS, and ODFW upon request.

- d. **BMPs to Minimize In-stream Turbidity:** The Applicants must implement the following BMPs, unless otherwise accepted by DEQ:
 - i. Sequence/Phasing of Work – The Applicant must schedule work activities so as to minimize in-water disturbance and duration of in-water disturbances;
 - ii. Bucket control - All in-stream digging passes by excavation machinery and placement of fill in-stream using a bucket must be completed so as to minimize turbidity. All practicable techniques such as employing an experienced equipment operator, not dumping partial or full buckets of material back into the wetted stream, adjusting the volume, speed, or both of the load, or using a closed-lipped environmental bucket must be implemented;
 - iii. The Applicant must limit the number and location of stream-crossing events. Establish temporary crossing sites as necessary in the least sensitive areas and amend these crossing sites with clean gravel or other temporary methods as appropriate;
 - iv. Machinery may not be driven into the flowing channel, unless authorized by DEQ; and
 - v. Excavated material must be placed so that it is isolated from the water edge or wetlands, and not placed where it could re-enter waters of the state uncontrolled.

FOR PROJECTS THAT INCLUDE NEW IMPERVIOUS SURFACES OR REDEVELOPMENT OF EXISTING SURFACES, THE FOLLOWING CONDITIONS APPLY

- 16) **Post-Construction Stormwater Management:** For projects which propose new impervious surfaces or the redevelopment of existing surfaces, the Applicant must submit a post-construction stormwater management plan to DEQ for review and approval prior to construction, in order to ensure compliance with water quality standards. The Applicant must implement BMPs as proposed in the stormwater management plan, including operation and maintenance. If proposed stormwater facilities change due to site conditions, the Applicant must notify DEQ.

In lieu of a complete stormwater management plan, the applicant may submit documentation of acceptance of the stormwater into a DEQ permitted National Pollutant Discharge Elimination System (NPDES) Phase I Municipal Separate Storm Sewer System (MS4).

- 17) **Stormwater Management & System Maintenance:** The Applicant is required to implement effective operation and maintenance practices for the lifetime of the proposed facility.

CATEGORY-SPECIFIC CONDITIONS

In addition to all national and regional conditions of the USACE permit and the 401 Water Quality Certification general conditions above, the following conditions apply to the noted specific categories of authorized activities.

NWP 7 – Outfall Structures and Associated Intake Structures:

- 7.1) The following actions are denied certification:
- a. Discharge outfalls that are not subject to an NPDES permit; and

- b. Outfalls that discharge stormwater without pollutant removal demonstrated to meet water-quality standards prior to discharge to waters of the state.
- 7.2) If an Applicant cannot obtain an NPDES permit or submit an approvable stormwater management plan per DEQ's Guidelines found at: <http://www.deq.state.or.us/wq/sec401cert/docs/stormwaterGuidelines.pdf>, the Applicant must submit complete project information and water quality impacts analysis directly to DEQ in order to undergo individual 401 WQC evaluation and fulfill public participation requirements.

NWP 12 – Utility Lines:

- 12.1) For proposals that include directionally-bored stream or wetland crossings:
 - a. All drilling equipment, drill recovery and recycling pits, and any waste or spoil produced, must be completely isolated, recovered, then recycled or disposed of to prevent entry into waters of the state.
 - b. In the event that drilling fluids enter a water of the state, the equipment operator must stop work, immediately initiate containment measures and report the spill to the Oregon Emergency Response System (OERS) at 800-452-0311.
 - c. An adequate supply of materials needed to control erosion and to contain drilling fluids must be maintained at the project construction site and deployed as necessary.
 - d. The Applicant must have a contingency plan in place prior to construction for the inadvertent return of drilling lubricant.
- 12.2) For proposals that include utility lines through wetlands, include anti-seep collars or equivalent technology to prevent draining the wetlands.

NWP 13 – Bank Stabilization:

- 13.1) Projects that do not include bioengineering are denied certification, unless a registered professional engineer provides a written statement that non-bioengineered solutions are the only means of protection.
- 13.2) To apply for certification for a project without bioengineering, the permittee must submit complete project information and water quality impacts analysis directly to DEQ in order to undergo individual 401 WQC evaluation and fulfill public participation requirements.

NWP 14 – Linear Transportation:

- 14.1) For projects that include bank stabilization, bioengineering must be a component of the project, unless a registered professional engineer provides a written statement that non-bioengineered solutions are the only means to protect an existing structure.
- 14.2) To apply for certification for a project without bioengineering, the permittee must submit complete project information and water quality impacts analysis directly to DEQ in order to undergo individual 401 WQC evaluation and fulfill public participation requirements.

NWP 16 - Return Water from Contained Upland Disposal Areas: Water-quality criteria and guidance values for toxics, per OAR 340-041-0033, are available in Tables 20, 33A, 33B, and 33C at: <http://www.deq.state.or.us/wq/standards/toxics.htm#Cur>.

- 16.1) Discharge of return water from contaminated dredged material that exceeds a chronic or acute toxicity water quality standard is prohibited.
- 16.2) Water removed with contaminated dredged material that could or does exceed chronic water-quality criteria must be contained and disposed of at an appropriately sized and sealed upland facility by evaporation or infiltration.
- 16.3) If a Modified Elutriate Test (MET) is performed for the known contaminants of concern (CoCs) and CoC concentrations are below DEQ chronic water-quality criteria, return water discharge is not limited.
 - a. The MET must be performed before dredging.
 - b. DEQ must approve the list of CoCs and analytical method prior to the permittee performing the MET.
 - c. DEQ must review the results and provide approval of discharge from return water, in writing, prior to dredging.

NWP 20 – Response Operations for Oil and Hazardous Waste:

- 20.1) Coordination with DEQ's Emergency Response program is required. See: <http://www.deq.state.or.us/lq/cu/emergency/index.htm>.

NWP 22 – Removal of Vessels:

- 22.1) Coordination with DEQ's Emergency Response program is required. See: <http://www.deq.state.or.us/lq/cu/emergency/index.htm>.

NWP 31 – Maintenance of Existing Flood Control Facilities:

- 31.1) Projects in streams with temperature TMDLs which result in a net reduction of riparian shade are prohibited.

NWP 38 – Cleanup of Hazardous and Toxic Waste:

- 38.1) For removal of contaminated material from waters, dredging method is limited to diver assisted hydraulic suction, hydraulic suction, closed-lipped environmental bucket, or excavation in the dry, unless otherwise authorized by DEQ.
 - a. For in-water isolation measures, the permittee is referred to Appendix D of DEQ's Oregon Erosion and Sediment Control Manual, April 2005 (or most current version), at: <http://www.deq.state.or.us/wq/stormwater/docs/escmanual/appxd.pdf>.
- 38.2) Discharge to waters of the state resulting from dewatering during dredging or release of return water from an upland facility is prohibited except as provided below.

- a. All water removed with sediment must be contained and disposed of at an appropriately sized and sealed upland facility by evaporation or infiltration; or,
- b. A Modified Elutriate Test (MET) may be performed for the known Contaminants of Concern (CoCs) and if CoC concentrations are below DEQ chronic water-quality criteria; return water discharge is not limited.
 - i. The MET must be performed before dredging.
 - ii. DEQ must approve the list of CoCs and analytical method prior to the permittee performing the MET.
 - iii. DEQ must review the results and provide approval of discharge from dewatering and return water in writing prior to dredging.

38.3) Dredged material must be disposed of in compliance with DEQ Rules governing Hazardous Waste (see: <http://www.deq.state.or.us/lq/hw/hwmanagement.htm>) or Solid Waste (see: <http://www.deq.state.or.us/lq/sw/index.htm>).

38.4) The new in-water surface must be managed to prevent exposure or mobilization of contaminants.

NWP 41 - Reshaping Existing Drainage Ditches:

- 41.1) To the extent practicable, permittees must work from only one bank in order to minimize disturbance to existing vegetation, preferably the bank with the least existing vegetation;
- 41.2) Following authorized work, permittee must establish in-stream and riparian vegetation on reshaped channels and side-channels using native plant species wherever practicable. Plantings must be targeted to address water-quality improvement (e.g., provide shade to water to reduce temperature or provide bank stability through root systems to limit sediment inputs). Planting options may include clustering or vegetating only one side of a channel, preferably the side which provides maximum shade.

NWP 42 – Recreational Facilities:

- 42.1) For facilities that include turf maintenance actions, the permittee must develop and implement an Integrated Pest Management Plan (IPM) that describes pest prevention, monitoring and control techniques with a focus on prevention of chemical and nutrient inputs to waters of the state, including maintenance of adequate buffers for pesticide application near salmonid streams, or coverage under an NPDES permit, if required (information is available at: <http://www.deq.state.or.us/wq/wqpermit/pesticides.htm>).

NWP 43 – Stormwater Management Facilities:

- 43.1) Projects that propose the following elements are denied certification:
 - a. In-stream or wetland stormwater facilities;
 - b. Discharge outfalls not subject to an NPDES permit; and,
 - c. Proposals that do not demonstrate pollutant removal to meet water-quality standards prior to discharge to waters of the state.
- 43.2) To apply for certification for a project with in-stream stormwater facilities, without an NPDES permit, or without submittal of an approvable stormwater management plan per DEQ's Guidelines (at: <http://www.deq.state.or.us/wq/sec401cert/docs/stormwaterGuidlines.pdf>), the

permittee must submit complete project information and water quality impacts analysis directly to DEQ in order to undergo individual 401 WQC evaluation and fulfill public participation requirements.

NWP 44 – Mining Activities:

- 44.1) Projects that do not obtain an NPDES 700-PM or Individual permit are denied certification.
- 44.2) To apply for certification for a project without an NPDES permit, the permittee must submit complete project information and water quality impacts analysis directly to DEQ in order to undergo individual 401 WQC evaluation and fulfill public participation requirements.

NWP 51 – Land-Based Renewable Energy Generation Facilities:

- 51.1) For associated utility lines with directionally-bored stream or wetland crossings proposed, condition 12.1 must be applied.

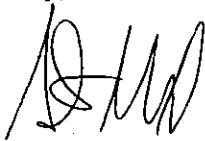
NWP 54 – Living Shorelines

- B.1) Projects that do not include bioengineering are denied certification, unless a registered professional engineer provides a written statement that non-bioengineered solutions are the only means of protection.

If the Applicant is dissatisfied with the conditions contained in this certification, a hearing may be requested. Such request must be made in writing to DEQ's Office of Compliance and Enforcement at 700 NE Multnomah St, Suite 600, Portland Oregon 97232, within 20 days of the mailing of this certification.

The DEQ hereby certifies that this project complies with the Clean Water Act and state rules, with the above conditions. If you have any questions, please contact Roxann Nayar at 503-229-6414, by email at Nayar.Roxy@deq.state.or.us, or at the address on this letterhead.

Sincerely,



Steve Mrazik,
Water Quality Manager
Northwest Region

ec: USACE: Brad Johnson, Brad.A.Johnson2@usace.army.mil
DSL: Anita Huffman, Anita.Huffman@state.or.us



US Army Corps
of Engineers®
Portland District

Nationwide Permit 14

Terms and Conditions

Effective Date: March 19, 2017

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- A. Description of Activities Authorized by Nationwide Permit 14
 - B. Nationwide Permit General Conditions
 - C. District Engineer's Decision
 - D. Further Information
 - E. Portland District Regional Conditions
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In addition to any special conditions that may be required on a case-by-case basis by the District Engineer, the following terms and conditions must be met, as applicable, for a Nationwide Permit authorization to be valid in Oregon.

A. Description of Activities Authorized by Nationwide Permit (NWP) 14

14. *Linear Transportation Projects.* Activities required for crossings of waters of the United States associated with the construction, expansion, modification, or improvement of linear transportation projects (e.g., roads, highways, railways, trails, airport runways, and taxiways) in waters of the United States. For linear transportation projects in non-tidal waters, the discharge cannot cause the loss of greater than 1/2-acre of waters of the United States. For linear transportation projects in tidal waters, the discharge cannot cause the loss of greater than 1/3-acre of waters of the United States. Any stream channel modification, including bank stabilization, is limited to the minimum necessary to construct or protect the linear transportation project; such modifications must be in the immediate vicinity of the project.

This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to construct the linear transportation project. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

This NWP cannot be used to authorize non-linear features commonly associated with transportation projects, such as vehicle maintenance or storage buildings, parking lots, train stations, or aircraft hangars.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) The loss of waters of the United States exceeds 1/10-acre; or (2) there is a discharge in a special aquatic site, including wetlands. (See general condition 32.)

(Authorities: Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act)

Note 1: For linear transportation projects crossing a single waterbody more than one time at separate and distant locations, or multiple waterbodies at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. Linear transportation projects must comply with 33 CFR 330.6(d).

Note 2: Some discharges for the construction of farm roads or forest roads, or temporary roads for moving mining equipment, may qualify for an exemption under section 404(f) of the Clean Water Act (see 33 CFR 323.4).

Note 3: For NWP 14 activities that require pre-construction notification, the PCN must include any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings that require Department of the Army authorization but do not require pre-construction notification (see paragraph (b) of general condition 32). The district engineer will evaluate the PCN in accordance with Section D, "District Engineer's Decision." The district engineer may require mitigation to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see general condition 23).

B. NWP General Conditions

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/ or Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. Navigation.

- (a) No activity may cause more than a minimal adverse effect on navigation.
- (b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.
- (c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. *Aquatic Life Movements.* No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.

3. *Spawning Areas.* Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. *Migratory Bird Breeding Areas.* Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. *Shellfish Beds.* No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWP 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. *Suitable Material.* No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).

7. *Water Supply Intakes.* No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. *Adverse Effects From Impoundments.* If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. *Management of Water Flows.* To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. *Fills Within 100-Year Floodplains.* The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. *Equipment.* Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. *Soil Erosion and Sediment Controls.* Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

13. *Removal of Temporary Fills.* Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. *Proper Maintenance.* Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. *Single and Complete Project.* The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. *Wild and Scenic Rivers.*

(a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.

(b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. The permittee shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.

(c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: <http://www.rivers.gov/>.

17. *Tribal Rights.* No NWP activity may cause more than minimal adverse effects on tribal rights (including treaty rights), protected tribal resources, or tribal lands.

18. *Endangered Species.*

(a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which “may affect” a listed species or critical habitat, unless ESA section 7 consultation addressing the effects of the proposed activity has been completed. Direct effects are the immediate effects on listed species and critical habitat caused by the NWP activity. Indirect effects are those effects on listed species and critical habitat that are caused by the NWP activity and are later in time, but still are reasonably certain to occur.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. If pre- construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that might be affected by the proposed activity or that utilize the designated critical habitat that might be affected by the proposed activity. The district engineer will determine whether the proposed activity “may affect” or will have “no effect” to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps’ determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have “no effect” on listed species or critical habitat, or until ESA section 7 consultation has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWPs.

(e) Authorization of an activity by an NWP does not authorize the “take” of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with “incidental take” provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any

person subject to the jurisdiction of the United States to take a listed species, where “take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word “harm” in the definition of “take” means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will coordinate with the agency that issued the ESA section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation conducted for the ESA section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA section 7 consultation for the ESA section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre-construction notification whether the ESA section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA section 7 consultation is required.

(g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their world wide Web pages at <http://www.fws.gov/> or [http:// www.fws.gov/ipac](http://www.fws.gov/ipac) and [http:// and www.nmfs.noaa.gov/pr/species/esa/](http://www.nmfs.noaa.gov/pr/species/esa/) respectively.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for ensuring their action complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting appropriate local office of the U.S. Fish and Wildlife Service to determine applicable measures to reduce impacts to migratory birds or eagles, including whether “incidental take” permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. Historic Properties.

(a) In cases where the district engineer determines that the activity may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act. If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional

consultation under section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with section 106.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of section 106 of the NHPA: no historic properties affected, no adverse effect, or adverse effect. Where the non-Federal applicant has identified historic properties on which the activity might have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA section 106 consultation has been completed.

(d) For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA section 106 consultation is required. If NHPA section 106 consultation is required, the district engineer will notify the non-Federal applicant that he or she cannot begin the activity until section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance

despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/ THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts. If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the

district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation to ensure that the activity results in no more than minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)).

(e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. Restored riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWPs, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation.

(2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f)).

(3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.

(4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)).

(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided.

(6) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).

(g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any NWP activity resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.

(h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.

24. *Safety of Impoundment Structures.* To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. *Water Quality.* Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. *Coastal Zone Management.* In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. *Regional and Case-By-Case Conditions.* The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. *Use of Multiple Nationwide Permits.* The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

29. *Transfer of Nationwide Permit Verifications.* If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities

associated with compliance with its terms and conditions, have the transferee sign and date below.

(Transferee)

(Date)

30. *Compliance Certification.* Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

(c) The signature of the permittee certifying the completion of the activity and mitigation.

The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

31. *Activities Affecting Structures or Works Built by the United States.* If an NWP activity also requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a "USACE project"), the prospective permittee must submit a pre-construction notification. See paragraph (b)(10) of general condition 32. An activity that requires section 408 permission is not authorized by NWP until the appropriate Corps office issues the section 408 permission to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

32. *Pre-Construction Notification.*

(a) *Timing.* Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will

notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) *Contents of Pre-Construction Notification:* The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed activity;

(3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;

(4) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures. For single and complete linear projects, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete crossing of those wetlands, other special aquatic sites, and other

waters. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

(5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(7) For non-Federal permittees, if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed activity or utilize the designated critical habitat that might be affected by the proposed activity. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act;

(8) For non-Federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with section 106 of the National Historic Preservation Act;

(9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the "study river" (see general condition 16); and

(10) For an activity that requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include a statement confirming that the project proponent has submitted a written request for section 408 permission from the Corps office having jurisdiction over that USACE project.

(c) *Form of Pre-Construction Notification:* The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly

indicate that it is an NWP PCN and must include all of the applicable information required in paragraphs (b)(1) through (10) of this general condition. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.

(d) *Agency Coordination:*

(1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity's adverse environmental effects so that they are no more than minimal.

(2) Agency coordination is required for: (i) All NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States; (ii) NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of stream bed; (iii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and (iv) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.

(3) When agency coordination is required, the district engineer will immediately provide (e.g., via email, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or email that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the preconstruction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of preconstruction notifications to expedite agency coordination.

C. District Engineer's Decision

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If a project proponent requests authorization by a specific NWP, the district engineer should issue the NWP verification for that activity if it meets the terms and conditions of that NWP, unless he or she determines, after considering mitigation, that the proposed activity will result in more than minimal individual and cumulative adverse effects on the aquatic environment and other aspects of the public interest and exercises discretionary authority to require an individual permit for the proposed activity. For a linear project, this determination will include an evaluation of the individual crossings of waters of the United States to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings authorized by NWP. If an applicant requests a waiver of the 300 linear foot limit on impacts to streams or of an otherwise applicable limit, as provided for in NWPs 13, 21, 29, 36, 39, 40, 42, 43, 44, 50, 51, 52, or 54, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in only minimal individual and cumulative adverse environmental effects. For those NWPs that have a waivable 300 linear foot limit for losses of intermittent and ephemeral stream bed and a 1/2-acre limit (i.e., NWPs 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52), the loss of intermittent and ephemeral stream bed, plus any other losses of jurisdictional waters and wetlands, cannot exceed 1/2- acre.

2. When making minimal adverse environmental effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. He or she will also consider the cumulative adverse environmental effects caused by activities authorized by NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional or condition assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse environmental effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

3. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for NWP activities with smaller impacts, or for impacts to other types of waters (e.g., streams). The district engineer will consider any proposed compensatory mitigation or other mitigation

measures the applicant has included in the proposal in determining whether the net adverse environmental effects of the proposed activity are no more than minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse environmental effects are no more than minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure the NWP activity results in no more than minimal adverse environmental effects. If the net adverse environmental effects of the NWP activity (after consideration of the mitigation proposal) are determined by the district engineer to be no more than minimal, the district engineer will provide a timely written response to the applicant. The response will state that the NWP activity can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

4. If the district engineer determines that the adverse environmental effects of the proposed activity are more than minimal, then the district engineer will notify the applicant either: (a) That the activity does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the activity is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal; or (c) that the activity is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse environmental effects, the activity will be authorized within the 45-day PCN period (unless additional time is required to comply with general conditions 18, 20, and/or 31, or to evaluate PCNs for activities authorized by NWPs 21, 49, and 50), with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation plan or a requirement that the applicant submit a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal. When compensatory mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

D. Further Information

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.

2. NWP's do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWP's do not grant any property rights or exclusive privileges.
4. NWP's do not authorize any injury to the property or rights of others.
5. NWP's do not authorize interference with any existing or proposed Federal project (see general condition 31).

E. Portland District Regional Conditions

Note: The following Nationwide Permit (NWP) regional conditions are for the State of Oregon. Regional conditions are placed on NWP's to ensure projects result in no more than minimal adverse impacts to the aquatic environment and to address local resource concerns.

1. *Notification:* For permittees that received written NWP approval, upon starting the authorized activities, you shall notify the U.S. Army Corps of Engineers, Portland District, Regulatory Branch that the work has started. Notification shall be provided by e-mail to cenwp.notify@usace.army.mil and the email subject line shall include: Corps project number and the project location by county.

2. *Aquatic Resources of Special Concern:* Pre-construction notification to the District Engineer is required for all activities proposed in waters of the U.S. within an aquatic resource of special concern. Aquatic resources of special concern are resources that are difficult to replace, unique, and/or have high ecological function. For the purpose of this regional condition, aquatic resources of special concern are native eel grass (*Zostera marina*) beds, mature forested wetlands, bogs, fens, vernal pools, alkali wetlands, wetlands in dunal systems along the Oregon coast, estuarine wetlands, Willamette Valley wet prairie wetlands, marine gardens, marine reserves, kelp beds, and rocky substrate in tidal waters.

In addition to the content requirements of NWP General Condition (GC) 32, the pre-construction notification must include a statement explaining why the effects of the proposed activity are no more than minimal. Written approval from the District Engineer must be obtained prior to commencing work.

Note: If the District Engineer determines that the adverse effects of the proposed activity are more than minimal, then the District Engineer will notify the applicant that either:

(a) the activity does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) the activity is authorized under the NWP subject to submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or (c) the activity is authorized under the NWP with specific modifications or conditions.

3. *Cultural Resources and Human Burials-Inadvertent Discovery Plan:* In addition to the requirements in NWP GCs 20 and 21, the permittee shall immediately notify the District Engineer if, at any time during the course of the work authorized, human burials, cultural items, or historic properties, as defined by the National Historic Preservation Act

and Native American Graves Protection and Repatriation Act, are discovered. The permittee shall implement the following procedures:

a. Immediately cease all ground disturbing activities.

b. Notify the Portland District Engineer as soon as possible following discovery but in no case later than 24 hours. Notification may be sent by fax (503-808-4375) or electronically (cenwp.notify@usace.army.mil) and shall identify the Corps project number and clearly specify the purpose is to report a cultural resource discovery. The permittee shall also notify the Corps representative (by email and telephone) identified in the verification letter.

c. Notify the Oregon State Historic Preservation Office by telephone at (503) 986-0690.

Failure to stop work immediately and until such time as the District Engineer has coordinated with all appropriate agencies and Native American tribes, and complied with the provisions of 33 CFR 325 (Appendix C), the National Historic Preservation Act, Native American Graves Protection and Repatriation Act, and other pertinent regulations could result in violation of state and federal laws. Violators may be subject to civil and criminal penalties.

4. *In-water Work:* To minimize potential impacts to aquatic species and habitat, in-water work will be limited by the following timing considerations:

a. Permittee shall complete all in-water work, to the maximum extent practicable, within the preferred time period (i.e., work window) specified in Oregon Department of Fish and Wildlife's (ODFW) "Oregon Guidelines for Timing of In-Water Work to Protect Fish and Wildlife Resources," June 2008, or most current version, available at: <http://www.dfw.state.or.us/lands/inwater/>.

b. If work cannot be completed within the preferred timing window, despite every attempt to do so, permittee shall submit a written request to work outside of the preferred window to the District Engineer. The request can be made by means of the joint-agency In-water Work Period Variance Request for Previously Permitted Authorizations form which can be found at <http://www.oregon.gov/dsl/WW/Pages/WWforms.aspx>. Permittee shall not begin any in-water work outside of the preferred window until they have received written approval from the District Engineer.

Note: The final specified in-water work period will be based on a project-specific evaluation and may supersede these guidelines through special conditions of the permit verification.

5. *Essential Fish Habitat:* Activities which may adversely affect essential fish habitat, as defined under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), are not authorized by NWP until essential fish habitat requirements have been met by the applicant and the Corps. Non-federal permittees must submit a pre-

construction notification to the District Engineer if essential fish habitat may be affected by, or is in the vicinity of, a proposed activity and shall not begin work until notified by the District Engineer that the requirements of the essential fish habitat provisions of the MSA have been satisfied and the activity is authorized. The notification must identify the type(s) of essential fish habitat (e.g., Pacific coast salmon, Pacific coast groundfish, and/or Coastal-pelagic species) managed by a Fishery Management Plan that may be affected. Information about essential fish habitat is available at NOAA's website: <http://www.westcoast.fisheries.noaa.gov/>.

6. *Bank Stabilization:* Permittee shall include the use of bioengineering techniques and natural materials in the project design to the maximum extent practicable and shall minimize the use of rock. Bioengineering bank stabilization techniques are those that increase the strength and structure of soils with a combination of biological and mechanical elements (e.g., vegetation, root wads and woody debris, rock structures). Riparian plantings shall be included in all project designs unless the permittee can demonstrate that such plantings are not practicable.

7. *Fish Screening:* To prevent injury or mortality to fish due to entrainment, the permittee shall ensure that all intake pipes include adequately sized screens.

Note: Fish passage and screening criteria can be obtained from the National Marine Fisheries Service (NMFS) at http://www.westcoast.fisheries.noaa.gov/fish_passage/solutions/index.html. Information regarding Oregon's fish passage laws can be obtained from ODFW at <http://www.dfw.state.or.us/fish/passage/links.asp>.

8. *Work Area Isolation and Dewatering:* Appropriate best management practices shall be implemented to prevent erosion and to prevent sediments from entering waters of the U.S.

a. All in-water work shall be isolated from the active channel or conducted during low seasonal stream flows to the maximum extent practicable.

b. Cofferdams shall be constructed of non-erosive material, such as concrete jersey barriers, sand and gravel bag dams, or water bladders. Constructing a cofferdam by pushing material from the streambed or sloughing material from the streambanks is not authorized.

c. Sand and gravel bag dams shall be lined with a plastic liner or geotextile fabric to reduce permeability and prevent sediments and/or construction materials from entering waters of the U.S.

d. Upstream and downstream flows shall be maintained by routing flows around the construction site.

e. When dewatering is necessary for construction, a sediment basin, or other applicable method, shall be used to settle sediments prior to releasing the water back

into the waterbody. Settled water shall be returned to the waterbody in such a manner as to avoid erosion. Sediment basins shall be placed in uplands.

f. Fish and other aquatic species must be salvaged (i.e., safely captured and relocated away from the project or development site) prior to dewatering.

Note: The ODFW requires a Scientific Take Permit be obtained to salvage fish and wildlife. Further information from ODFW is available at http://www.dfw.state.or.us/fish/license_permits_apps/scientific_taking_permit.asp.

9. *Dredging:* For NWP-authorized activities that involve removal of sediment from waters of the U.S., the permittee shall ensure that any necessary sediment characterization regarding size, composition, and potential contaminants is conducted prior to dredging. Sediment characterization must be conducted per the Sediment Evaluation Framework for the Pacific Northwest (available at: <http://www.nwp.usace.army.mil/Missions/Environment/DMM.aspx>).

Note 1: The return water from a contained disposal area is defined as a discharge of dredged material by 33 CFR Part 323.2(d) and requires separate authorization from the District Engineer (e.g., by NWP 16).

Note 2: The Oregon Department of Environmental Quality (DEQ) requires removed material placed in an upland site to meet the definitions of clean fill as provided in OAR 340-093-0030 or the use must be specifically allowed by DEQ by rule, permit, or other authorization.

10. *Mechanized Equipment:* In addition to the requirements in NWP GC 11, permittee shall implement the following practices to prevent or minimize impacts to the aquatic environment from mechanized equipment:

a. Use existing roads, paths, and construction pads where available. Temporary mats or pads, when required to provide access onto wetlands or tidal flats, shall be removed within 30 days of completing the authorized work.

b. Operate equipment from the top of a streambank and conduct work outside of the active stream channel, unless specifically authorized by the District Engineer.

c. Equipment shall not be staged, fueled, or maintained within waters of the U.S.

d. Spill prevention and containment materials shall be maintained and be readily accessible at vehicle staging areas. The amount of spill response materials (such as straw matting/bales, geotextiles, booms, diapers, and other absorbent materials, shovels, brooms, and containment bags) maintained on-site must be appropriate for the size of the authorized activity.

11. *Stormwater Management:* Pre-construction notification to the District Engineer is required for all activities resulting in the creation of new impervious surfaces if any species or designated critical habitat listed under the Endangered Species Act (ESA)

might be affected or are in the vicinity of the activity. The Corps may require a post-construction stormwater management plan (SWMP) and completion of a supplemental Stormwater Information Form to assist in the determination of the activity's affects to listed species or designated critical habitat and to be used in ESA consultation as necessary.

Note 1: The Corps considers impervious surfaces to include roof tops, walkways, patios, driveways, parking or storage areas, concrete or asphalt paving, gravel roads, packed earthen material, and oiled surfaces.

Note 2: Under the DEQ 401 Water Quality Certification Program, the DEQ evaluates post-construction stormwater pollution for any project resulting in new, an increase in, or redevelopment of impervious surfaces. DEQ may require the applicant to submit a post-construction SWMP for review and approval prior to the start of construction. DEQ provides information on preparing a SWMP at <http://www.deq.state.or.us/wq/sec401cert/docs/stormwaterGuidelines.pdf>. DEQ requires applicants to first consider low impact development options. If these options can't be implemented, a narrative must be provided explaining why.

12. *Erosion Control:* During construction and until the site is stabilized, the permittee shall ensure all practicable measures are implemented and maintained to prevent erosion and runoff. Temporary stockpiles of excavated or dredged material shall be stabilized to prevent erosion. Once soils or slopes have been stabilized, permittee shall completely remove and properly dispose of or re-use all non-biodegradable components of installed control measures.

Note: DEQ provides information on erosion and sediment control measures at <http://www.deq.state.or.us/wq/wqpermit/docs/general/npdes1200c/ErosionSedimentControl.pdf>. Details on best management practices are found at <http://www.deq.state.or.us/wq/wqpermit/docs/general/npdes1200c/BMPManual.pdf>.

13. *Temporary Fills and Impacts:* To ensure no more than minimal adverse environmental effects from temporary fills and impacts to waters of the U.S:

a. Temporary fills and/or impacts to waters of the U.S. shall not exceed six months unless otherwise approved by the District Engineer.

b. No more than one-half ($\frac{1}{2}$) acre of waters of the U.S. may be temporarily filled or impacted unless otherwise approved by the District Engineer (temporary fills and impacts do not affect specified limits for loss of waters associated with specific nationwide permits).

c. Native soils and/or sediments removed from waters of the U.S. for project construction shall be stockpiled and used for site restoration to the maximum extent practicable.

d. Site restoration of temporarily filled or impacted areas shall include returning the area to pre-project ground surface contours. The permittee shall appropriately

revegetate temporarily filled or impacted areas with native, noninvasive herbs, shrubs, and/or tree species sufficient in number, spacing, and diversity to replace affected aquatic functions.

Note: The Corps will determine compensatory mitigation requirements for temporary fills and impacts on a case-by-case basis depending on the duration and nature of the temporary fill or impact and the type of aquatic resource affected.

14. *Contractor Notification of Permit Requirements:* The permittee must provide a copy of the nationwide permit verification letter, conditions, and permit drawings to all contractors and any other parties performing the authorized work, prior to the commencement of any work in waters of the U.S.

15. *Inspection of the Project Site:* The permittee shall allow representatives of the District Engineer to inspect the authorized activity to confirm compliance with nationwide permit terms and conditions. A request for access to the site will normally be made sufficiently in advance to allow a property owner or representative the option to be on site during the inspection.

**Endangered Species Act – Section 7 Programmatic
Consultation
Conference and Biological
Opinion and
Magnuson-Stevens Fishery Conservation
and
Management Act
Essential Fish Habitat
Consultation
For**

Revised Standard Local Operating Procedures for Endangered Species to Administer
Maintenance or Improvement of Stormwater, Transportation, and Utility Actions
Authorized or Carried Out by the U.S. Army Corps of Engineers in Oregon
(SLOPES for Stormwater, Transportation or Utilities)

NMFS Consultation No. NWR-2013-10411

Action Agency: U.S. Army Corps of Engineers
 Portland District, Operations and Regulatory Branches

Affected Species and Determinations:

ESA-Listed Species	ESA Statu s	Is the action likely to adversely affect this species or its critical habitat?	Is the action likely to jeopardiz e this species?	Is the action likely to destroy or adversely modify critical habitat for this species?
Lower Columbia River Chinook salmon	T	Yes	No	No
Upper Willamette River Chinook salmon	T	Yes	No	No
Upper Columbia River spring-run Chinook salmon	E	Yes	No	No
Snake River spring/summer run Chinook salmon	T	Yes	No	No
Snake River fall-run Chinook salmon	T	Yes	No	No
Columbia River chum salmon	T	Yes	No	No
Lower Columbia River Coho salmon	T	Yes	No	No*
Oregon Coast Coho salmon	T	Yes	No	No
Southern Oregon/Northern California coasts Coho	T	Yes	No	No
Snake River sockeye salmon	E	Yes	No	No
Lower Columbia River steelhead	T	Yes	No	No
Upper Willamette River steelhead	T	Yes	No	No
Middle Columbia River steelhead	T	Yes	No	No
Upper Columbia River steelhead	T	Yes	No	No
Snake River Basin steelhead	T	Yes	No	No
Southern green sturgeon	T	Yes	No	No
Eulachon	T	Yes	No	No
Southern resident killer whale	T	No	No	N/A

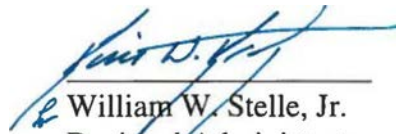
*Critical habitat has been proposed for LCR Coho salmon.

Fishery Management Plan that Describes	Would the action adversely affect	Are EFH conservation recommendations
Coastal Pelagic Species	Yes	Yes
Pacific Coast Groundfish	Yes	Yes
Pacific Coast Salmon	Yes	Yes

Consultation

Conducted By:

National Marine Fisheries Service
West Coast Region


William W. Stelle, Jr.
Regional Administrator

Issued by:

Date Issued:

March 14, 2014

Excerpt from SLOPES for Stormwater, Transportation, or Utilities General Construction March 14, 2014

Natural hazard response to complete an unplanned, immediate, or short-term repair of a stormwater facility, road, culvert, bridge, or utility line without federal assistance. These include in-water repairs that must be made before the next in-water work period to resolve critical conditions that, unless corrected, are likely to cause loss of human life, unacceptable loss of property, or natural resources. Natural hazards may include, but are not limited to, a flood that causes scour erosion and significantly weakens the foundation of a road or bridge; culvert failure due to blockage by fluvial debris, overtopping, or crushing; and ground saturation that causes a debris slide, earth flow, or rock fall to cover a road. This category of actions is only included to the extent that they require Corps permits or are undertaken by the Corps, but otherwise do not require federal authorization, funding, or federal agency involvement.. The response will include an assessment of its effects to listed species and critical habitats and a plan to bring the response into conformance with all other applicable PDC in this opinion, including compensatory mitigation based on the baseline conditions prior to the natural hazard.

Streambank and channel stabilization to ensure that roads, culverts, bridges and utility lines do not become hazardous due to the long-term effects of toe erosion, scour, subsurface entrainment, or mass failure. This action includes installation and maintenance of scour protection, such as at a footing, facing, or headwall, to prevent scouring or down-cutting of an existing culvert, road foundation, or bridge support. It does not include scour protection for bridge approach fills. Proposed streambank stabilization methods include alluvium placement, vegetated riprap with large wood (LW), log or roughened rock toe, woody plantings, herbaceous cover, deformable soil reinforcement, coir logs, bank reshaping and slope grading, floodplain flow spreaders, floodplain roughness, and engineered log jams (ELJs), alone or in combination. Any action that requires additional excavation or structural changes to a road, culvert, or bridge foundation is covered under road, culvert and bridge maintenance, rehabilitation, and replacement.

Road surface, culvert and bridge maintenance, rehabilitation and replacement. Maintenance, rehabilitation, and replacement to ensure that roads, culverts and bridges remain safe and reliable for their intended use without impairing fish passage, to extend their service life, and to withdraw temporary access roads from service in a way that promotes watershed restoration when their usefulness has ended. This includes actions necessary to complete geotechnical surveys, such as access road construction, drill pad preparation, mobilization and set up, drilling and sampling operations, demobilization, boring abandonment, and access road and drill pad reclamation. It also includes, excavation, grading, and filling necessary to maintain, rehabilitate, or replace existing roads, culverts, and bridges. This type of action does not include significant channel realignment, installation of fish passage (e.g., fish ladders, juvenile fish bypasses, culvert baffles, roughened chutes, step weirs), tidegate maintenance or replacements other than full removal, construction of new permanent roads within the riparian zone that are not a bridge approach, or construction of a new bridge where a culvert or other road stream crossing did not previously exist, or any project which will result in or contribute to other land use changes that trigger effects, including indirect effects not considered in this opinion.

Stormwater facilities and utility line stream crossings to install, maintain, rehabilitate, or replace stormwater facilities, or pipes or pipelines used to transport gas or liquids, including new or upgraded stormwater outfalls, and cables, or lines or wires used to transmit electricity or communication. Construction, maintenance or improvement of stormwater facilities include surveys, access road construction, excavation, grading, and filling necessary to maintain, rehabilitate, or replace existing stormwater treatment or flow control best management practices (BMPs). Utility line actions involve excavation, temporary side casting of excavated material, backfilling of the trench, and restoration of the work site to preconstruction contours and vegetation. This type of action does not include construction or enlargement of gas, sewer, or water lines to support a new or expanded service area for which effects, including indirect effects from interrelated or interdependent activities, have not been analyzed in this opinion. This opinion also does not include construction of any line that transits the bed of an estuary or saltwater area at depths less than -10.0 feet (mean lower low water).

1.3.1.2 Project Design Criteria - General Construction Measures

13. Project Design

- a. Use the best available scientific information regarding the likely impacts of climate change on resources in the project area to design the project so that it will be resilient to those impacts, including projections of local stream flow, water temperature, and extreme events.
- b. Assess whether the project area is contaminated by chemical substances that may cause harm if released by the project. The assessment will be commensurate with site history and may include the following:
 - i. Review available records, e.g., the history of existing structures and contamination events.
 - ii. If the project area was used for industrial processes, inspect to determine the environmental condition of the property.
 - iii. Interview people who are knowledgeable about the site, e.g., site owners, operators, and occupants, neighbors, or local government officials.
 - iv. If contamination is found or suspected, consult with a suitably qualified and experienced contamination professional and NMFS before carrying out ground disturbing activities.
- c. Obtain all applicable regulatory permits and authorizations before starting construction.
- d. Minimize the extent and duration of earthwork, e.g., compacting, dredging, drilling, excavation, and filling.

14. In-Water Work Timing

- a. Unless the in-water work is part of a natural hazard response, complete all work within the wetted channel during dates listed in the most recent version of Oregon In-water Work Guidelines (ODFW 2008), except that that in-water work in the Willamette River below Willamette Falls is not approved between December 1 and January 31.
- b. Hydraulic and topographic measurements and placement of LW or gravel may be completed anytime, provided the affected area is not occupied by adult fish congregating for spawning, or redds containing eggs or pre-emergent alevins.

15. Pile Installation. Pile may be concrete, or steel round pile 24 inches in diameter or smaller, steel H-pile designated as HP24 or smaller, or wood that has not been treated with preservatives or pesticides. Any proposal to use treated wood pilings is not covered by this consultation and will require individual consultation.

- a. NMFS will review and approve pile installation plans.
- b. When practical, use a vibratory hammer for in-water pile installation. In the lower Columbia River only a vibratory hammer may be used in October.
- c. Jetting may be used to install pile in areas with coarse, uncontaminated sediments that meet criteria for unconfined in-water disposal (USACE Northwest Division 2009).
- d. When using an impact hammer to drive or proof a steel pile, one of the following sound attenuation methods will be used:
 - i. Completely isolate the pile from flowing water by dewatering the area around the pile.
 - ii. If water velocity is 1.6 feet per second or less, surround the pile being driven by a confined or unconfined bubble curtain that will distribute small air bubbles around 100% of the pile perimeter for the full depth of the water column. See, *e.g.*, NMFS and USFWS (2006), Wursig *et al.* (2000), and Longmuir and Lively (2001).
 - iii. If water velocity is greater than 1.6 feet per second, surround the pile being driven with a confined bubble curtain (*e.g.*, surrounded by a fabric or non-metallic sleeve) that will distribute air bubbles around 100% of the pile perimeter for the full depth of the water column.
 - iv. Provide NMFS information regarding the timing of in-water work, the number of impact hammer strikes per pile and the estimated time required to drive piles, hours per day pile driving will occur, depth of water, and type of substrate, hydroacoustic assumptions, and the pile type, diameter, and spacing of the piles.

16. Pile Removal. The following steps will be used to minimize creosote release, sediment disturbance and total suspended solids:

- a. Install a floating surface boom to capture floating surface debris.
- b. Keep all equipment (*e.g.*, bucket, steel cable, vibratory hammer) out of the water, grip piles above the waterline, and complete all work during low water and low current conditions.
- c. Dislodge the pile with a vibratory hammer, when possible; never intentionally break a pile by twisting or bending.
- d. Slowly lift the pile from the sediment and through the water column.
- e. Place the pile in a containment basin on a barge deck, pier, or shoreline without attempting to clean or remove any adhering sediment. A containment basin for the removed piles and any adhering sediment may be constructed of durable plastic sheeting with sidewalls supported by hay bales or another support structure to contain all sediment and return flow which may otherwise be directed back to the waterway.
- f. Fill the hole left by each pile with clean, native sediments immediately after removal.
- g. Dispose of all removed piles, floating surface debris, any sediment spilled on work surfaces, and all containment supplies at a permitted upland disposal site.

17. Broken or Intractable Pile. If a pile breaks above the surface of uncontaminated sediment, or less than 2 feet below the surface, make every attempt short of excavation to remove it entirely. If the pile cannot be removed without excavation, drive the pile deeper if possible.

- a. If a pile in contaminated sediment is intractable or breaks above the surface, cut the pile or stump off at the sediment line.
- b. If a pile breaks within contaminated sediment, make no further effort to remove it and cover the hole with a cap of clean substrate appropriate for the site.
- c. If dredging is likely where broken piles are buried, use a global positioning system (GPS) device to note the location of all broken piles for future use in site debris characterization.

18. Fish Capture and Release

- a. If practicable, allow listed fish species to migrate out of the work area or remove fish before dewatering; otherwise remove fish from an exclusion area as it is slowly dewatered with methods such as hand or dip-nets, seining, or trapping with minnow traps (or gee-minnow traps).
- b. Fish capture will be supervised by a qualified fisheries biologist, with experience in work area isolation and competent to ensure the safe handling of all fish.
- c. Conduct fish capture activities during periods of the day with the coolest air and water temperatures possible, normally early in the morning to minimize stress and injury of species present.
- d. Monitor the nets frequently enough to ensure they stay secured to the banks and free of organic accumulation.
- e. Electrofishing will be used during the coolest time of day, only after other means of fish capture are determined to be not feasible or ineffective.
 - i. Do not electrofish when the water appears turbid, e.g., when objects are not visible at depth of 12 inches.
 - ii. Do not intentionally contact fish with the anode.
 - iii. Follow NMFS (2000) electrofishing guidelines, including use of only direct current (DC) or pulsed direct current within the following ranges:¹¹
 1. If conductivity is less than 100 μ s, use 900 to 1100 volts.
 2. If conductivity is between 100 and 300 μ s, use 500 to 800 volts.
 3. If conductivity greater than 300 μ s, use less than 400 volts.
 - iv. Begin electrofishing with a minimum pulse width and recommended voltage, then gradually increase to the point where fish are immobilized.
 - v. Immediately discontinue electrofishing if fish are killed or injured, i.e., dark bands visible on the body, spinal deformations, significant de-scaling, torpid or inability to maintain upright attitude after sufficient recovery time. Recheck machine settings, water temperature and conductivity, and adjust or postpone procedures as necessary to reduce injuries.

¹¹ National Marine Fisheries Service. 2000. Guidelines for electrofishing waters containing Salmonid listed under the Endangered Species Act. Portland, Oregon and Santa Rose, California
http://swr.nmfs.noaa.gov/sr/Electrofishing_Guidelines.pdf

- f. If buckets are used to transport fish:
 - i. Minimize the time fish are in a transport bucket.
 - ii. Keep buckets in shaded areas or, if no shade is available, covered by a canopy.
 - iii. Limit the number of fish within a bucket; fish will be of relatively comparable size to minimize predation.
 - iv. Use aerators or replace the water in the buckets at least every 15 minutes with cold clear water.
 - v. Release fish in an area upstream with adequate cover and flow refuge; downstream is acceptable provided the release site is below the influence of construction.
 - vi. Be careful to avoid mortality counting errors.
- g. Monitor and record fish presence, handling, and injury during all phases of fish capture and submit a fish salvage report (Appendix A, Part 1 with Part 3 completed) to the Corps and the SLOPES mailbox (slopes.nwr@noaa.gov) within 60 days.

19. Fish Passage

- a. Provide fish passage for any adult or juvenile ESA-listed fish likely to be present in the action area during construction, unless passage did not exist before construction or the stream is naturally impassable at the time of construction.
- b. After construction, provide fish passage for any adult or juvenile ESA-listed fish that meets NMFS's fish passage criteria (NMFS 2011a) for the life of the action.

20. Fish Screens

- a. Submit to NMFS for review and approval fish screen designs for surface water diverted by gravity or by pumping at a rate that exceeds 3 cubic feet per second (cfs).
- b. All other diversions will have a fish screen that meets the following specifications:
 - i. An automated cleaning device with a minimum effective surface area of 2.5 square feet per cubic foot per second, and a nominal maximum approach velocity of 0.4 feet per second, or no automated cleaning device, a minimum effective surface area of 1 square foot per cubic foot per second, and a nominal maximum approach rate of 0.2 foot per second; and
 - ii. A round or square screen mesh that is no larger than 2.38 millimeters (mm) (0.094") in the narrow dimension, or any other shape that is no larger than 1.75 mm (0.069") in the narrow dimension.
- c. Each fish screen will be installed, operated, and maintained according to NMFS's fish screen criteria.

21. Surface Water Withdrawal

- a. Surface water may be diverted to meet construction needs, including dust abatement, only if water from developed sources (e.g., municipal supplies, small ponds, reservoirs, or tank trucks) are unavailable or inadequate; and
- b. Diversions may not exceed 10% of the available flow and will have a juvenile fish exclusion device that is consistent with NMFS's criteria (NMFS 2011a).¹²

¹² National Marine Fisheries Service 2011. Anadromous Salmonid passage facility design. Northwest Region.
<http://www.nwr.noaa.gov/publications/hydropower/ferc/fish-passage-design.pdf>

22. Construction Discharge Water. Treat all discharge water using best management practices to remove debris, sediment, petroleum products, and any other pollutants likely to be present (e.g., green concrete, contaminated water, silt, welding slag, sandblasting abrasive, grout cured less than 24 hours, drilling fluids), to avoid or minimize pollutants discharged to any perennial or intermittent water body. Pump seepage water from the dewatered work area to a temporary storage and treatment site or into upland areas and allow water to filter through vegetation prior to reentering the stream channel. Treat water used to cure concrete until pH stabilizes to background levels.

23. Temporary Access Roads and Paths

- a. Whenever reasonable, use existing access roads and paths preferentially.
- b. Minimize the number and length of temporary access roads and paths through riparian areas and floodplains.
- c. Minimize removal of riparian vegetation.
- d. When it is necessary to remove vegetation, cut at ground level (no grubbing).
- e. Do not build temporary access roads or paths where grade, soil, or other features suggest slope instability.
- f. Any road on a slope steeper than 30% will be designed by a civil engineer with experience in steep road design.
- g. After construction is complete, obliterate all temporary access roads and paths, stabilize the soil, and revegetate the area.
- h. Temporary roads and paths in wet areas or areas prone to flooding will be obliterated by the end of the in-water work window. Decompact road surfaces and drainage areas, pull fill material onto the running surface, and reshape to match the original contours.

24. Temporary Stream Crossings

- a. No stream crossing may occur at active spawning sites, when holding adult listed fish are present, or when eggs or alevins are in the gravel.
- b. Do not place temporary crossings in areas that may increase the risk of channel re-routing or avulsion, or in potential spawning habitat, e.g., pools and pool tailouts.
- c. Minimize the number of temporary stream crossings; use existing stream crossings whenever reasonable.
- d. Install temporary bridges and culverts to allow for equipment and vehicle crossing over perennial streams during construction.
- e. Wherever possible, vehicles and machinery will cross streams at right angles to the main channel.
- f. Equipment and vehicles may cross the stream in the wet only where the streambed is bedrock, or where mats or off-site logs are placed in the stream and used as a crossing.
- g. Obliterate all temporary stream crossings as soon as they are no longer needed, and restore any damage to affected stream banks or channel.

25. Equipment, Vehicles and Power Tools

- a. Select, operate and maintain all heavy equipment, vehicles, and power tools to minimize adverse effects on the environment, *e.g.*, low pressure tires, minimal hard-turn paths for track vehicles, use of temporary mats or plates to protect wet soils.
- b. Before entering wetlands or working within 150 feet of a water body:
 - i. Power wash all heavy equipment, vehicles and power tools, allow them to fully dry, and inspect them for fluid leaks, and to make certain no plants, soil, or other organic material are adhering to the surface.
 - ii. Replace petroleum-based hydraulic fluids with biodegradable products¹³ in hydraulic equipment, vehicles, and power tools.
- c. Repeat cleaning as often as necessary during operation to keep all equipment, vehicles, and power tools free of external fluids and grease, and to prevent a leak or spill from entering the water.
- d. Avoid use of heavy equipment, vehicles or power tools below ordinary high water (OHW) unless project specialists determine such work is necessary, or would result in less risk of sedimentation or other ecological damage than work above that elevation.
- e. Before entering the water, inspect any watercraft, waders, boots, or other gear to be used in or near water and remove any plants, soil, or other organic material adhering to the surface.
- f. Ensure that any generator, crane or other stationary heavy equipment that is operated, maintained, or stored within 150 feet of any water body is also protected as necessary to prevent any leak or spill from entering the water.

26. Site Layout and Flagging

- a. Before any significant ground disturbance or entry of mechanized equipment or vehicles into the construction area, clearly mark with flagging or survey marking paint the following areas:
 - i. Sensitive areas, *e.g.*, wetlands, water bodies, OHW, spawning areas.
 - ii. Equipment entry and exit points.
 - iii. Road and stream crossing alignments.
 - iv. Staging, storage, and stockpile areas.
- b. Before the use of herbicides, clearly flag no-application buffer zones.

27. Staging, Storage, and Stockpile Areas

- a. Designate and use staging areas to store hazardous materials, or to store, fuel, or service heavy equipment, vehicles and other power equipment with tanks larger than 5 gallons, that are at least 150 feet from any natural water body or wetland, or on an established paved area, such that sediment and other contaminants from the staging area cannot be deposited in the floodplain or stream.
- b. Natural materials that are displaced by construction and reserved for restoration, *e.g.*, LW, gravel, and boulders, may be stockpiled within the 100-year floodplain.
- c. Dispose of any material not used in restoration and not native to the floodplain outside of the functional floodplain.

¹³ For additional information and suppliers of biodegradable hydraulic fluids, motor oil, lubricant, or grease, see, Environmentally Acceptable Lubricants by the U.S. EPA (2011a); *e.g.*, mineral oil, polyglycol, vegetable oil, synthetic ester; Mobil® biodegradable hydraulic oils, Total® hydraulic fluid, Terresolve Technologies Ltd.® bio-based biodegradable lubricants, Cougar Lubrication® 2XT Bio engine oil, Series 4300 Synthetic Bio-degradable Hydraulic Oil, 8060-2 Synthetic Bio-Degradable Grease No. 2, *etc.* The use of trade, firm, or corporation names in this opinion is for the information and convenience of the action agency and applicants and does not constitute an official endorsement or approval by the U.S. Department of Commerce or NMFS of any product or service to the exclusion of others that may be suitable.

d. After construction is complete, obliterate all staging, storage, or stockpile areas, stabilize the soil, and revegetate the area.¹⁴

28. Drilling and Boring

- a. If drilling or boring are used, isolate drilling operations in wetted stream channels using a steel casing or other appropriate isolation method to prevent drilling fluids from contacting water.
- b. If drilling through a bridge deck is necessary, use containment measures to prevent drilling debris from entering the channel.
- c. Sampling and directional drill recovery/recycling pits, and any associated waste or spoils will be completely isolated from surface waters, off-channel habitats and wetlands.
- d. All waste or spoils will be covered if precipitation is falling or imminent.
- e. All drilling fluids and waste will be recovered and recycled or disposed to prevent entry into flowing water.
- f. If a drill boring case breaks and drilling fluid or waste is visible in water or a wetland, make all possible efforts to contain the waste and contact NMFS within 48 hours.
- g. Waste containment
 - i. All drilling equipment, drill recovery and recycling pits, and any waste or spoil produced, will be contained and then completely recovered and recycled or disposed of as necessary to prevent entry into any waterway. Use a tank to recycle drilling fluids.
 - ii. When drilling is completed, remove as much of the remaining drilling fluid as possible from the casing (e.g., by pumping) to reduce turbidity when the casing is removed.

29. Pesticide and Preservative-Treated Wood¹⁵

- a. Treated wood may not be used in a structure that will be in or over water or permanently or seasonally flooded wetlands, except to maintain or repair an existing wood bridge. The following criteria in b, c, and d below apply to the use of treated wood for maintenance or repair of existing wood bridges.
- b. No part of the treated wood may be exposed to leaching by precipitation, overtopping waves, or submersion (e.g., no treated wood piles (per PDC#10, and stringers or decking of a timber bridge can be made from treated wood only if they will be covered by a non-treated wood wearing surface that covers the entire roadway width), and all elements of the structure using the treated wood are designed to avoid or minimize impacts or abrasion that could create treated wood debris or dust.
- c. Installation of treated wood
 - i. Treated wood shipped to the project area will be stored out of contact with standing water and wet soil, and protected from precipitation.
 - ii. Each load and piece of treated wood will be visually inspected and rejected for use in or above aquatic environments if visible residue, bleeding of preservative, preservative-saturated sawdust, contaminated soil, or other matter is present.

¹⁴ Road and path obliteration refers to the most comprehensive degree of decommissioning and involves decompacting the surface and ditch, pulling the fill material onto the running surface, and reshaping to match the original contour.

¹⁵ Treated woods may contain chromated copper arsenate (CCA), ammoniacal copper zinc arsenate (ACZA), alkaline copper quat (ACQ-B and ACQ-D), ammoniacal copper citrate (CC), copper azole (CBA-A), copper dimethyldithiocarbamate (CDDC), borate preservatives, and oil-type wood preservatives, such as creosote, pentachlorophenol, and copper naphthenate.

- iii. Prefabrication will be used whenever possible to minimize cutting, drilling and field preservative treatment.
- iv. When field fabrication is necessary, all cutting, drilling, and field preservative treatment of exposed treated wood will be done above OHW to minimize discharge of sawdust, drill shavings, excess preservative and other debris.
- v. Tarps, plastic tubs or similar devices will be used to contain the bulk of any fabrication debris, and any excess field preservative will be removed from the treated wood by wiping and proper disposal.
- d. Removal of treated wood
 - i. Evaluate all wood construction debris removed during a project, including pile, to ensure proper disposal of treated wood.
 - ii. Ensure that no treated wood debris falls into the water or, if debris does fall into the water, remove it immediately.
 - iii. After removal, place treated wood debris in an appropriate dry storage site until it can be removed from the project area.
 - iv. Do not leave any treated wood debris in the water or stacked on the streambank at or below OHW.

30. Erosion Control

- a. Use site planning and site erosion control measures commensurate with the scope of the project to prevent erosion and sediment discharge from the project site.
- b. Before significant earthwork begins, install appropriate, temporary erosion controls downslope to prevent sediment deposition in the riparian area, wetlands, or water body.
- c. During construction,
 - i. Complete earthwork in wetlands, riparian areas, and stream channels as quickly as possible.
 - ii. Cease project operations when high flows may inundate the project area, except for efforts to avoid or minimize resource damage.
 - iii. If eroded sediment appears likely to be deposited in the stream during construction, install additional sediment barriers as necessary.
 - iv. Temporary erosion control measures may include fiber wattles, silt fences, jute matting, wood fiber mulch and soil binder, or geotextiles and geosynthetic fabric.
 - v. Soil stabilization using wood fiber mulch and tackifier (hydro-applied) may be used to reduce erosion of bare soil, if the materials are free of noxious weeds and nontoxic to aquatic and terrestrial animals, soil microorganisms, and vegetation.
 - vi. Remove sediment from erosion controls if it reaches 1/3 of the exposed height of the control.
 - vii. Whenever surface water is present, maintain a supply of sediment control materials and an oil-absorbing floating boom at the project site.
 - viii. Stabilize all disturbed soils following any break in work unless construction will resume within four days.
- d. Remove temporary erosion controls after construction is complete and the site is fully stabilized.

31. Hazardous Material Safety

- a. At the project site:
 - i. Post written procedures for notifying environmental response agencies, including an inventory and description of all hazardous materials present, and the storage and handling procedures for their use.
 - ii. Maintain a spill containment kit, with supplies and instructions for cleanup and disposal, adequate for the types and quantity of hazardous materials present.
 - iii. Train workers in spill containment procedures, including the location and use of the spill containment kits.
 - iv. Temporarily contain any waste liquids generated under an impervious cover, such as a tarpaulin, in the staging area until the wastes can be properly transported to, and disposed of, at an approved receiving facility.

32. Barge Use. Any barge used as a work platform to support construction will be:

- a. Large enough to remain stable under foreseeable loads and adverse conditions.
- b. Inspected before arrival to ensure vessel and ballast are free of invasive species.
- c. Secured, stabilized and maintained as necessary to ensure no loss of balance, stability, anchorage, or other condition that can result in the release of contaminants or construction debris.

33. Dust Abatement

- a. Use dust abatement measures commensurate with soil type, equipment use, wind conditions, and the effects of other erosion control measures.
- b. Sequence and schedule work to reduce the exposure of bare soil to wind erosion.
- c. Maintain spill containment supplies on-site whenever dust abatement chemicals are applied.
- d. Do not use petroleum-based products.
- e. Do not apply dust-abatement chemicals, *e.g.*, magnesium chloride, calcium chloride salts, lignin sulfonate, within 25 feet of a water body, or in other areas where they may runoff into a wetland or water body.
- f. Do not apply lignin sulfonate at rates exceeding 0.5 gallons per square yard of road surface, assuming a 50:50 solution of lignin sulfonate to water.

34. Work Area Isolation

- a. Isolate any work area within the wetted channel from the active stream whenever ESA-listed fish are reasonably certain to be present, or if the work area is less than 300 feet upstream from known spawning habitats.
- b. Engineering design plans for work area isolation will include all isolation elements and fish release areas.
- c. Dewater the shortest linear extent of work area practicable, unless wetted in-stream work is deemed to be minimally harmful to fish, and is beneficial to other aquatic species.¹⁶

¹⁶ For instructions on how to dewater areas occupied by lamprey, see *Best management practices to minimize adverse effects to Pacific lamprey (Entosphenus tridentatus)* (USFWS 2010).

- i. Use a coffer dam and a by-pass culvert or pipe, or a lined, non-erodible diversion ditch to divert flow around the dewatered area. Dissipate flow energy to prevent damage to riparian vegetation or stream channel and provide for safe downstream reentry of fish, preferably into pool habitat with cover.
- ii. Where gravity feed is not possible, pump water from the work site to avoid rewatering. Maintain a fish screen on the pump intake to avoid juvenile fish entrainment.
- iii. Pump seepage water to a temporary storage and treatment site, or into upland areas, to allow water to percolate through soil or to filter through vegetation before reentering the stream channel with a treatment system comprised of either a hay bale basin or other sediment control device.
- iv. Monitor below the construction site to prevent stranding of aquatic organisms.
- v. When construction is complete, re-water the construction site slowly to prevent loss of surface flow downstream, and to prevent a sudden increase in stream turbidity.
- d. Whenever a pump is used to dewater the isolation area and ESA-listed fish may be present, a fish screen will be used that meets the most current version of NMFS's fish screen criteria (NMFS 2011a). NMFS approval is required for pumping at a rate that exceeds 3 cfs.

35. Invasive and Non-Native Plant Control

- a. **Non-herbicide methods.** Limit vegetation removal and soil disturbance within the riparian zone by limiting the number of workers there to the minimum necessary to complete manual, mechanical, or hydro-mechanical plant control (e.g., hand pulling, bending¹⁷, clipping, stabbing, digging, brush-cutting, mulching, radiant heat, portable flame burner, super-heated steam, pressurized hot water, or hot foam (Arsenault *et al.* 2008; Donohoe *et al.* 2010))¹⁸. Do not allow cut, mowed, or pulled vegetation to enter waterways.
- b. **Herbicide Label.** Herbicide applicators will comply with all label instructions
- c. **Power equipment.** Refuel gas-powered equipment with tanks larger than 5 gallons in a vehicle staging area placed 150 feet or more from any natural water body, or in an isolated hazard zone such as a paved parking lot.
- d. **Maximum herbicide treatment area.** Do not exceed treating 1.0% of the acres of riparian habitat within a 6th-field HUC with herbicides per year.
- e. **Herbicide applicator qualifications.** Herbicides may only be applied by an appropriately licensed applicator using an herbicide specifically targeted for a particular plant species that will cause the least impact. The applicator will be responsible for preparing and carrying out the herbicide transportation and safety plan, as follows.
- f. **Herbicide transportation and safety plan.** The applicator will prepare and carry out an herbicide safety/spill response plan to reduce the likelihood of spills or misapplication, to take remedial actions in the event of spills, and to fully report the event.

¹⁷ Knotweed treatment pre-treatment; See Nickelson (2013).

¹⁸ See <http://ahmct.ucdavis.edu/limtask/equipmentdetails.html>

g. **Herbicides.** The only herbicides proposed for use under this opinion are (some common trade names are shown in parentheses):¹⁹

- i. aquatic imazapyr (e.g., Habitat)
- ii. aquatic glyphosate (e.g., AquaMaster, AquaPro, Rodeo)
- iii. aquatic triclopyr-TEA (e.g., Renovate 3)
- iv. chlorsulfuron (e.g., Telar, Glean, Corsair)
- v. clopyralid (e.g., Transline)
- vi. imazapic (e.g., Plateau)
- vii. imazapyr (e.g., Arsenal, Chopper)
- viii. metsulfuron-methyl (e.g., Escort)
- ix. picloram (e.g., Tordon)
- x. sethoxydim (e.g., Poast, Vantage)
- xi. sulfometuron-methyl (e.g., Oust, Oust XP)

h. **Herbicide adjuvants.** When recommended by the label, an approved aquatic surfactant or drift retardant can be used to improve herbicidal activity or application characteristics. Adjuvants that contain alky amine ethoxylates, *i.e.*, polyethoxylated tallow amine (POEA), alkylphenol ethoxylates (including alkyl phenol ethoxylate phosphate esters), or herbicides that contain these compounds are **not** covered by this opinion. The following product names are covered by this opinion:

- | | |
|-----------------------|------------------|
| i. Agri-Dex | ii. AquaSurf |
| iii. Bond | iv. Bronc Max |
| v. Bronc Plus Dry-EDT | vi. Class Act NG |
| vii. Competitor | viii. Cut Rate |
| ix. Cygnet Plus | x. Destiny HC |
| xi. Exciter | xii. Fraction |
| xiii. InterLock | xiv. Kinetic |
| xv. Level 7 | xvi. Liberate |
| xvii. Magnify | xviii. One-AP XL |
| xix. Pro AMS Plus | xx. Spray-Rite |
| xxi. Superb HC | xxii. Tactic |
| xxiii. Tronic | |

i. **Herbicide carriers.** Herbicide carriers (solvents) are limited to water or specifically labeled vegetable oil. Use of diesel oil as an herbicide carrier is not covered by this opinion.

j. **Dyes.** Use a non-hazardous indicator dye (e.g., Hi-Light or Dynamark™) with herbicides within 100 feet of water. The presence of dye makes it easier to see where the herbicide has been applied and where or whether it has dripped, spilled, or leaked. Dye also makes it easier to detect missed spots, avoid spraying a plant or area more than once, and minimize over-spraying (SERA 1997).

k. **Herbicide mixing.** Mix herbicides and adjuvants, carriers, and/or dyes more than 150 feet from any perennial or intermittent water body to minimize the risk of an accidental discharge.

¹⁹ The use of trade, firm, or corporation names in this opinion is for the information and convenience of the action agency and applicants and does not constitute an official endorsement or approval by the U.S. Department of Commerce or NMFS of any product or service to the exclusion of others that may be suitable.

i. **Tank Mixtures.** The potential interactive relationships that exist among most active ingredient combinations have not been defined and are uncertain.

Therefore, combinations of herbicides in a tank mix are not covered by this opinion.

m. **Spill Cleanup Kit.** Provide a spill cleanup kit whenever herbicides are used, transported, or stored. At a minimum, cleanup kits will include material safety data sheets, the herbicide label, emergency phone numbers, and absorbent material such as cat litter to contain spills.

n. **Herbicide application rates.** Apply herbicides at the lowest effective label rates.

o. **Herbicide application methods.** Apply liquid or granular forms of herbicides as follows:

i. Broadcast spraying – hand held nozzles attached to back pack tanks or vehicles, or by using vehicle mounted booms.

ii. Spot spraying – hand held nozzles attached to back pack tanks or vehicles, hand-pumped spray, or squirt bottles to spray herbicide directly onto small patches or individual plants.

iii. Hand/selective – wicking and wiping, basal bark, fill (“hack and squirt”), stem injection, cut-stump.

iv. Triclopyr – will not be applied by broadcast spraying.

v. Keep the spray nozzle within four feet of the ground when applying herbicide. If spot or patch spraying tall vegetation more than 15 feet away from the high water mark (HWM), keep the spray nozzle within 6 feet of the ground.

vi. Apply spray in swaths parallel towards the project area, away from the creek and desirable vegetation, *i.e.*, the person applying the spray will generally have their back to the creek or other sensitive resource.

vii. Avoid unnecessary run off during cut surface, basal bark, and hack-squirt/injection applications.

p. **Washing spray tanks.** Wash spray tanks 300 feet or more away from any surface water.

q. **Minimization of herbicide drift and leaching.** Minimize herbicide drift and leaching as follows:

i. Do not spray when wind speeds exceed 10 miles per hour, or are less than 2 miles per hour.

ii. Be aware of wind directions and potential for herbicides to affect aquatic habitat area downwind.

iii. Keep boom or spray as low as possible to reduce wind effects.

iv. Increase spray droplet size whenever possible by decreasing spray pressure, using high flow rate nozzles, using water diluents instead of oil, and adding thickening agents.

v. Do not apply herbicides during temperature inversions, or when air temperature exceeds 80 degrees Fahrenheit.

vi. Wind and other weather data will be monitored and reported for all broadcast applications.

r. **Rain.** Do not apply herbicides when the soil is saturated or when a precipitation event likely to produce direct runoff to salmon bearing waters from the treated area is forecasted by the NOAA National Weather Service or other similar forecasting service within 48 hours following application. Soil-activated herbicides may follow label instructions. Do not conduct hack-squirt/injection applications during periods of heavy rainfall.

s. **Herbicide buffer distances.** Observe the following no-application buffer-widths, measured in feet, as map distance perpendicular to the bankfull elevation for streams, the upland boundary for wetlands, or the upper bank for roadside ditches. Widths are based on herbicide formula, stream type, and application method, during herbicide applications (Table 3). Before herbicide application begins, flag or mark the upland boundary of each applicable herbicide buffer to ensure that all buffers are in place and functional during treatment.

Table 3. Herbicide buffer distances by herbicide formula, stream type, and application method.

Herbicide	No Application Buffer Width (feet)					
	Streams and Roadside Ditches with flowing or standing water present and Wetlands			Dry Streams, Roadside Ditches, and Wetlands		
	Broadcast Spraying	Spot Spraying	Hand Selective	Broadcast Spraying	Spot Spraying	Hand Selective
Labeled for Aquatic Use						
Aquatic Glyphosate	100	waterline	waterline	50	None	none
Aquatic Imazapyr	100	15	waterline	50	None	none
Aquatic Triclopyr-TEA	Not Allowed	15	waterline	Not Allowed	None	none
Low Risk to Aquatic Organisms						
Imazapic	100	15	bankfull elevation	50	None	none
Clopyralid	100	15	bankfull elevation	50	None	none
Metsulfuron-methyl	100	15	bankfull elevation	50	None	none
Moderate Risk to Aquatic Organisms						
Imazapyr	100	50	bankfull elevation	50	15	bankfull elevation
Sulfometuron-methyl	100	50	5	50	15	bankfull elevation
Chlorsulfuron	100	50	bankfull elevation	50	15	bankfull elevation
High Risk to Aquatic Organisms						
Picloram	100	50	50	100	50	50
Sethoxydim	100	50	50	100	50	50

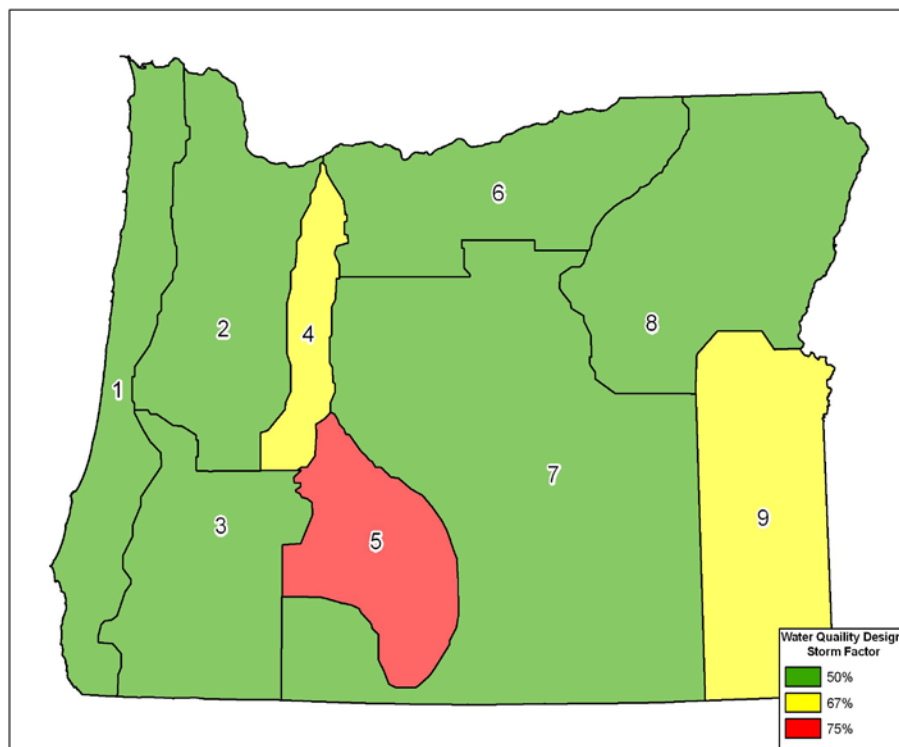
36. Actions Requiring Stormwater Management²⁰

- a. Provide stormwater management for any project that will:
 - i. Increase the contributing impervious area within the project area
 - ii. Construct new pavement that increases capacity or widens the road prism.
 - iii. Reconstructs pavement down to subgrade.
 - iv. Rehabilitate or restore a bridge to repair structural or functional deficiencies that are too complicated to be corrected through normal maintenance, except for seismic retrofits that make a bridge more resistant to earthquake damage (e.g., external post-tensioning, supplementary dampening) but do not affect the bridge deck or drainage.
 - v. Replace a stream crossing
 - vi. Change stormwater conveyance
- b. Stormwater management is not required for the following pavement actions: minor repairs, patching, chip seal, grind/inlay, overlay or resurfacing (*i.e.*, nonstructural pavement preservation, a single lift or inlay).
- c. Stormwater management plans will consist of:
 - i. Low impact development.
 - ii. Water quality (pollution reduction) treatment for post-construction stormwater runoff from all contributing impervious area.
 - iii. Water quantity treatment (retention or detention facilities), unless the outfall discharges directly into a major water body (e.g., mainstem Columbia River, Willamette River (downstream of Eugene), large lakes, reservoir, ocean, or estuary). Retention or detention facilities must limit discharge to match pre-developed discharge rates (*i.e.*, the discharge rate of the site based on its natural groundcover and grade before any development occurred) using a continuous simulation for flows between 50% of the 2-year event and the 10-year flow event (annual series).
- d. Stormwater management plans will:
 - i. Explain how runoff from all contributing impervious area that is within or contiguous with the project area will be managed using site sketches, drawings, specifications, calculations, or other information commensurate with the scope of the action.
 - ii. Identify the pollutants of concern.
 - iii. Identify all contributing and non-contributing impervious areas that are within and contiguous with the project area.
 - iv. Describe the BMPs that will be used to treat the identified pollutants of concern, and the proposed maintenance activities and schedule for the treatment facilities.

²⁰ The most efficient way for an applicant or the Corps to prepare and submit a stormwater management plan for NMFS' review is to attach a completed *Checklist for Submission of a Stormwater Management Plan* (the *Checklist*, ODEQ updated 2012, or the most recent version) with the electronic notification when it is sent to the SLOPES mailbox. However, stormwater conveyance to a DEQ permitted Municipal Separate Storm Sewer System (MS4) or consistency with any other program acknowledged by DEQ as adequate for stormwater management will not meet the requirements of this opinion unless NMFS determines that the facility accepting the stormwater will provide a level of treatment that is equivalent to that called for in this opinion. The *Checklist* and guidelines for its use are available from NMFS or the ODEQ in Portland Oregon. The latest version of the *Checklist* is also available online in a portable document format (pdf) through the ODEQ Water Quality Section 401 certification webpage (ODEQ 2014) at <http://www.deq.state.or.us/wq/sec401cert/process.htm#add> (see "Post Construction Stormwater Management Plan").

- v. Provide a justification for the capacity of the facilities provided based on the expected runoff volume, including, e.g., the design storm, BMP geometry, analyses of residence time, as appropriate.
 - vi. Include the name, email address, and telephone number of the person responsible for designing the stormwater management facilities that NMFS may contact if additional information is necessary to complete the effects analysis.
 - vii. The proposed action will include a maintenance, repair, and component replacement plan that details what needs to be done, when, and by whom for each facility.
- e. All stormwater quality treatment practices and facilities will be designed to accept and fully treat the volume of water equal to 50% of the cumulative rainfall from the 2-year, 24-hour storm for that site, except as follows: climate zone 4 – 67%; climate zone 5 – 75%; and climate zone 9 – 67% (Figure 1). (ESA-listed species considered in this opinion are unlikely to occur in Zones 5 or 9.) A continuous rainfall/runoff model may be used instead of runoff depths to calculate water quality treatment depth.

Figure 1. Water Quality Design Storm Factor – Oregon Climate Regions (Oregon Department of Transportation 2008)



f. Use low impact development practices to infiltrate or evaporate runoff to the maximum extent feasible. For runoff that cannot be infiltrated or evaporated and therefore will discharge into surface or subsurface waters, apply one or more of the following specific primary treatment practices, supplemented with appropriate soil amendments:

- i. Bioretention cell
- ii. Bioslope, also known as an “ecology embankment”
- iii. Bioswale
- iv. Constructed wetlands
- v. Infiltration pond
- vi. Media filter devices with demonstrated effectiveness. Proprietary devices should be on a list of “Approved Proprietary Stormwater Treatment Technologies” *i.e.*, City of Portland (2008) Stormwater Management Manual. Bureau of Environmental Services.
- vii. Porous pavement, with no soil amendments and appropriate maintenance
- viii. All stormwater flow control treatment practices and facilities will be designed to maintain the frequency and duration of instream flows generated by storms within the following end-points:

1. Lower discharge endpoint, by U.S. Geological Survey (USGS) flood frequency zone:

- a. Western Region = 42% of 2-year event
- b. Eastern Region
 - i. Southeast, Northeast, North Central = 48% of 2-year event
 - ii. Eastern Cascade = 56% of 2-year event

2. Upper discharge endpoint

- a. Entrenchment ratio <2.2 = 10-year event, 24-hour storm
- b. Entrenchment ratio >2.2 = bank overtopping event

g. When conveyance is necessary to discharge treated stormwater directly into surface water or a wetland, the following requirements apply:

- i. Maintain natural drainage patterns.
- ii. To the maximum extent feasible, ensure that water quality treatment for contributing impervious area runoff is completed before commingling with offsite runoff for conveyance.
- iii. Prevent erosion of the flow path from the project to the receiving water and, if necessary, provide a discharge facility made entirely of manufactured elements (*e.g.*, pipes, ditches, discharge facility protection) that extends at least to OHW.

h. **NMFS review and approval.** NMFS will review proposed stormwater treatment and new or upgraded stormwater outfalls plans.

37. Site Restoration

- a. Restore any significant disturbance of riparian vegetation, soils, stream banks or stream channel.
- b. Remove all project related waste; *e.g.*, pick up trash, sweep roadways in the project area to avoid runoff-containing sediment, *etc.*
- c. Obliterate all temporary access roads, crossings, and staging areas.
- d. Loosen compacted areas of soil when necessary for revegetation or infiltration.
- e. Although no single criterion is sufficient to measure restoration success, the intent is that the following features should be present in the upland parts of the project area, within reasonable limits of natural and management variation:
 - i. Human and livestock disturbance, if any, are confined to small areas necessary for access or other special management situations.
 - ii. Areas with signs of significant past erosion are completely stabilized and healed, bare soil spaces are small and well-dispersed.
 - iii. Soil movement, such as active rills and soil deposition around plants or in small basins, is absent or slight and local.
 - iv. Native woody and herbaceous vegetation, and germination microsites, are present and well distributed across the site; invasive plants are absent.
 - v. Plants have normal, vigorous growth form, and a high probability of remaining vigorous, healthy and dominant over undesired competing vegetation.
 - vi. Plant litter is well distributed and effective in protecting the soil with little or no litter accumulated against vegetation as a result of active sheet erosion ("litter dams").
 - vii. A continuous corridor of shrubs and trees appropriate to the site are present to provide shade and other habitat functions for the entire streambank.

38. Revegetation

- a. Plant and seed disturbed areas before or at the beginning of the first growing season after construction.
- b. Use a diverse assemblage of vegetation species native to the action area or region, including trees, shrubs, and herbaceous species. Vegetation, such as willow, sedge and rush mats, may be gathered from abandoned floodplains, stream channels, *etc.* When feasible, use vegetation salvaged from local areas scheduled for clearing due to development.
- c. Use species native to the project area or region that will achieve shade and erosion control objectives, including forb, grass, shrub, or tree species that are appropriate for the site.
- d. Short-term stabilization measures may include use of non-native sterile seed mix if native seeds are not available, weed-free certified straw, jute matting, and similar methods.
- e. Do not apply surface fertilizer within 50 feet of any wetland or water body.
- f. Install fencing as necessary to prevent access to revegetated sites by livestock or unauthorized persons.
- g. Do not use invasive or non-native species for site restoration.
- h. Conduct post-construction monitoring and treatment to remove or control invasive plants until native plant species are well-established.

39. Actions That Require Compensatory Mitigation

- a. The Corps will rely on 33 CFR 332.3 when considering appropriate mitigation. The first option for an applicant is to purchase credits from an appropriate mitigation bank. The second option is to purchase credits from an approved in-lieu-fee sponsor. The third option is Permittee-responsible mitigation. The fourth option is a combination of some or all of the above options that collectively satisfies the mitigation requirements.
- b. NMFS will review and approve compensatory mitigation plans.
- c. The following actions require compensatory mitigation:
 - i. Any stormwater management facility that requires a new or enlarged structure within the riparian zone; or that has insufficient capacity to infiltrate and retain the volume of stormwater called for by this opinion.
 - ii. Any riprap revetment that extends rock above the streambank toe extends the use of riprap laterally into an area that was not previously revetted, or revetment that does not include adequate vegetation and LW.
 - iii. Any bridge rehabilitation or replacement that does not span the functional floodplain, or causes a net increase in fill within the functional floodplain.
- d. The electronic notification (Appendix A, Part 1 with Part 4 completed) for an action that requires compensatory mitigation will explain how the Corps or applicant will complete the mitigation, including site sketches, drawings, specifications, calculations, or other information commensurate with the scope of the action.
- e. Include the name, address, and telephone number of a person responsible for designing this part of the action that NMFS may contact if additional information is necessary to complete the effects analysis.
- f. Describe practices that will be used to ensure:
 - i. No net loss of habitat function
 - ii. Completion before, or concurrent with, construction whenever possible
 - iii. Achieve a mitigation ratio that is greater than one-to-one and larger (e.g., 1.5 to 1.0 when necessary to compensate for time lags between the loss of conservation value in the project area and replacement of conservation value in the mitigation area, uncertainty of conservation value replacement in the mitigation area, or when the affected area has demonstrably higher conservation value than the mitigation area.²¹
 - iv. When practicable and environmentally sound, mitigation should be near the project impact site, or within the same local watershed and area occupied by the affected population(s) and age classes. Mitigation should be completed prior to or concurrent with the adverse impacts, or have an increased ratio as noted above.

²¹ For additional information on compensatory mitigation, see Compensatory Mitigation for Losses of Aquatic Resources (33CFR332) at www.poa.usace.army.mil/Portals/34/docs/regulatory/33cfr332.pdf. More information is available from the U.S. Army Corps of Engineers, Portland District, Portland, Oregon. See: <http://www.nwp.usace.army.mil/Missions/Regulatory/Mitigation.aspx>

- v. To minimize delays and objections during the review process, applicants are encouraged to seek the advice of NMFS during the planning and design of mitigation plans. For complex mitigation projects, such consultation may improve the likelihood of mitigation success and reduce permit-processing time.
- g. For stormwater management:
 - i. The primary habitat functions of concern are related to the physical and biological features essential to the long-term conservation of listed species, *i.e.*, water quality, water quantity, channel substrate, floodplain connectivity, forage, natural cover (such as submerged and overhanging LW, aquatic vegetation, large rocks and boulders, side channels and undercut banks), space, and free passage.
 - ii. Acceptable mitigation for riparian habitat displaced by a stormwater treatment facility is restoration of shallow-water or off-channel habitat
 - iii. Acceptable mitigation for inadequate stormwater treatment includes providing adequate stormwater treatment where it did not exist before, and retrofitting an existing but substandard stormwater facility to provide capacity necessary to infiltrate and retain the proper volume of stormwater. Such mitigation can be measured in terms of deficit stormwater treatment capacity.
- h. For riprap:
 - i. The primary habitat functions of concern are related to floodplain connectivity, forage, natural cover, and free passage.
 - ii. Acceptable mitigation for those losses include removal of existing riprap; retrofit existing riprap with vegetated riprap and LW, or one or more other streambank stabilization methods described in this opinion, and restoration of shallow water or off-channel habitats.
- i. For a bridge replacement:
 - i. The primary habitat functions of concern are floodplain connectivity, forage, natural cover, and free passage.
 - ii. Acceptable mitigation is removing fill from elsewhere in the floodplain – native channel material, soil and vegetation may not be counted as fill.
- j. Mitigation actions will meet general construction criteria and other appropriate minimization measures (dependent on the type of proposed mitigation).

1.3.1.3 Project Design Criteria - Types of Actions

40. Natural Hazard Response

a. A manager of a state, regional, county, or municipal stormwater facility, public transportation feature, or utility must initiate a natural hazard response by notifying the Corps.²² The Corps will encourage the applicant to:

- i. Act as necessary to resolve the initial natural hazard.
- ii. Without endangering human life or contributing to further loss of property or natural resources, apply all proposed design criteria from this opinion which are applicable to the response to the maximum extent possible.

b. The Corps will also contact NMFS as part of the natural hazard response.

- i. As soon as possible after the onset of the natural hazard, the Corps will require the applicant to contact the Corps and NMFS to describe the nature and location of the natural hazard, review design criteria from this opinion that are applicable to the situation, and determine whether additional steps may be taken to further minimize the effects of the initial response action on listed species or their critical habitat.

- ii. For the Oregon Coast contact Ken Phippen (541-957-3385), for the Willamette Basin contact Marc Liverman (503-231-2336), and Lower Columbia River up to and including Oregon tributaries contact Jeff Fisher (360-534-9342), and for eastern Oregon contact Dale Bambrick (509-962-8911x221).

41. Streambank and Channel Stabilization

a. The following streambank stabilization methods may be used individually or in combination:

- i. Alluvium placement
- ii. Large wood placement
- iii. Vegetated riprap with large wood
- iv. Roughened toe
- v. Woody plantings
- vi. Herbaceous cover, in areas where the native vegetation does not include trees or shrubs.
- vii. Bank reshaping and slope grading
- viii. Coir logs
- ix. Deformable soil reinforcement
- x. Engineered log jams (ELJ)
- xi. Floodplain flow spreaders
- xii. Floodplain roughness

²² Natural hazard response actions do not include federal assistance following a gubernatorial, county or local declaration of emergency or disaster with a request for federal assistance; a federal declaration of emergency or disaster; or any response to an emergency or disaster that takes place on federal property or to a federal asset because those actions are subject to emergency consultation provisions of 50 CFR 402.05

b. For more information on the above methods see Federal Emergency Management Agency (2009)²³ or Cramer *et al.* (2003).²⁴ Other than those methods relying solely upon woody and herbaceous plantings, streambank stabilization projects should be designed by a qualified engineer that is appropriately registered in the state where the work is performed.

c. Stream barbs and full-spanning weirs are not allowed for stream bank stabilization under this opinion.

d. Alluvium Placement can be used as a method for providing bank stabilization using imported gravel/cobble/boulder-sized material of the same composition and size as that in the channel bed and banks, to halt or attenuate streambank erosion, and stabilize riffles. This method is predominantly for use in small to moderately sized channels and is not appropriate for application in mainstem systems. These structures are designed to provide roughness, redirect flow, and provide stability to adjacent streambed and banks or downstream reaches, while providing valuable fish and wildlife habitat.

i. **NMFS fish passage review and approval.** NMFS will review alluvium placement projects that would occupy more than 25% of the channel bed or more than 25% of the bankfull cross sectional area.

ii. This design method is only approved in those areas where the natural sediment supply has been eliminated, significantly reduced through anthropogenic disruptions, or used to initiate or simulate sediment accumulations in conjunction with other structures, such as LW placements and ELJs.

iii. Material used to construct the toe should be placed in a manner that mimics attached longitudinal bars or point bars.

iv. Size distribution of toe material will be diverse and predominately comprised of D_{84} to D_{max} size class material.

v. Spawning gravels will constitute at least one-third of the total alluvial material used in the design.

vi. Spawning gravels are to be placed at or below an elevation consistent with the water surface elevation of a bankfull event.

vii. Spawning size gravel can be used to fill the voids within toe and bank material and placed directly onto stream banks in a manner that mimics natural debris flows and erosion.

viii. All material will be clean alluvium with similar angularity as the natural bed material. When possible use material of the same lithology as found in the watershed. Reference *Stream Simulation: An Ecological Approach to Providing Passage for Aquatic Organisms at Road-Stream Crossings* (USDA-Forest Service 2008) to determine gravel sizes appropriate for the stream.

ix. Material can be mined from the floodplain at elevations above bankfull, but not in a manner that will cause stranding during future flood events.

x. Crushed rock is not permitted.

xi. After placement in areas accessible to higher stream flow, allow the stream to naturally sort and distribute the material.

²³ http://www.fema.gov/pdf/about/regions/regionx/Engineering_With_Nature_Web.pdf

²⁴ <http://wdfw.wa.gov/publications/00046/wdfw00046.pdf>

xii. Do not place material directly on bars and riffles that are known spawning areas, which may cause fish to spawn on the unsorted and unstable gravel, thus potentially resulting in redd destruction.

xiii. Imported material will be free of invasive species and non-native seeds. If necessary, wash prior to placement.

e. **Large Wood Placements** are defined as structures composed of LW that do not use mechanical methods as the means of providing structure stability (*i.e.*, large rock, rebar, rope, cable, *etc.*). The use of native soil, alluvium with similar angularity as the natural bed material, large wood, or buttressing with adjacent trees as methods for providing structure stability are authorized. This method is predominantly for use in small to moderately sized channels and is not appropriate for application in mainstem systems. These structures are designed to provide roughness, redirect flow, and provide stability to adjacent streambed and banks or downstream reaches, while providing valuable fish and wildlife habitat.

i. **NMFS fish passage review and approval.** NMFS will review LW placement projects that would occupy greater than 25% of the bankfull cross section area.

ii. Structure shall simulate disturbance events to the greatest degree possible and include, but not be limited to, log jams, debris flows, wind-throw, and tree breakage.

iii. Structures may partially or completely span stream channels or be positioned along stream banks.

iv. Where structures partially or completely span the stream channel LW should be comprised of whole conifer and hardwood trees, logs, and rootwads. LW size (diameter and length) should account for bankfull width and stream discharge rates.

v. Structures will incorporate a diverse size (diameter and length) distribution of rootwad or non-rootwad, trimmed or untrimmed, whole trees, logs, snags, slash, *etc.*

vi. For individual logs that are completely exposed, or embedded less than half their length, logs with rootwads should be a minimum of 1.5 times bankfull channel width, while logs without rootwads should be a minimum of 2.0 times bankfull width.

vi. Consider orienting key pieces such that the hydraulic forces upon the LW increase stability.

f. Vegetated riprap with large wood (LW)

i. NMFS will review and approve bank stabilization projects that use vegetated riprap with LW.

ii. When this method is necessary, limit installation to the areas identified as most highly erodible, with highest shear stress, or at greatest risk of mass-failure, and provide compensatory mitigation. The greatest risk of mass-failure will usually be at the toe of the slope and will not extend above OHW elevation except in incised streams.

iii. Do not use invasive or non-native species for site restoration.

iv. Remove or control invasive plants until native plant species are well-established.

v. Do not apply surface fertilizer within 50-feet of any stream channel.

- vi. Install fencing as necessary to prevent access to revegetated sites by livestock or unauthorized persons.
- vii. Vegetated riprap with LW will be installed as follows:
 - 1. When present, use natural hard points, such as large, stable trees or rock outcrops, to begin or end the toe of the revetment.
 - 2. Develop rock size gradations for elevation zones on the bank, especially if the rock will extend above OHW – the largest rock should be placed at the toe of the slope, while small rock can be used higher in the bank where the shear stress is generally lower. Most upper bank areas will not require the use of any rock but can depend on the vegetation for erosion protection.
 - 3. For bank areas above OHW where rock is still deemed necessary, mix rock with soil to provide a better growing medium for plants.
 - 4. Minimum amount of wood incorporated into the treated area, for mitigation of riprap, is equal to the number of whole trees whose cumulative summation of rootwad diameters is equal to 80% of linear-feet of treated streambank or 20% of the treated area (square feet) of streambank, whichever is greater.
 - 5. Where whole trees are not used (*i.e.*, snags, logs, and partial trees) designers are required to estimate the dimensions of parent material based on rootwad diameter, and calculating a cumulative equivalency of whole trees.
 - 6. LW should be distributed throughout the structure (not just concentrated at the toe) to engage flows up to the bankfull flow. LW placed above the toe may be in the form of rootwad or non-rootwad, trimmed or untrimmed, whole trees, logs, snags, slash, *etc.* Maximize the exposure of wood to water by placing and orienting wood to project into the water column up to the bankfull elevation.
 - 7. Develop an irregular toe and bank line to increase roughness and habitat value.
 - 8. Use LW and irregular rock to create large interstitial spaces and small alcoves to create planting spaces and habitat to mitigate for flood-refuge impacts – do not use geotextile fabrics as filter behind the riprap whenever possible, if a filter is necessary to prevent sapping, use a graduated gravel filter.
 - 9. Structure toe will incorporate LW with intact rootwads. Minimum spacing between rootwads placed at the toe will be no greater than an average rootwad diameter.
 - 10. Minimum rootwad diameter for LW placed at the toe of the structure shall be 1.0 times the bankfull depth, unless LW availability constrains the project to a smaller rootwad size. Where rootwad size is constrained due to availability, the largest diameter rootwads available should be used.
 - 11. LW placed at the toe will be sturdy material, intact, hard, and undecayed and should be sized or embedded sufficiently to withstand the design flood.
 - 12. Space between root wads may be filled with large boulders, trimmed or untrimmed, whole trees, logs, snags, slash, *etc.*

When used, diameter of boulders placed between toe logs with rootwads should be 1.5 to 2.0 times log diameter at breast height (dbh) of adjacent toe logs. A reasonable maximum rock size is 5-6 feet in diameter.

13. Plant woody vegetation in the joints between the rocks to enhance streambank vegetation.

14. Where possible, use terracing, or other bank shaping, to increase habitat diversity.

15. When possible, create or enhance a vegetated riparian buffer.

viii. Monitor vegetated riprap each year following installation by visual inspection during low flows to examine transitions between undisturbed and treated banks to ensure that native soils above and behind the riprap are not collapsing, sinking, or showing other evidence of piping loss or movement of rock materials; and the overall integrity of the riprap treatment, including:

1. Loss of rock materials
2. Survival rate of vegetation
3. Anchoring success of LW placed in the treatment.
4. Any channel changes since construction.

g. Roughened toe

i. Where designs use any of the approved streambank stabilization methods outlined in this section, in lieu of lining the bank with riprap above the toe, the design of any rock-filled toe will adhere to project criteria outlined in (f) Vegetated riprap with large wood (7-15, from above).

ii. Minimum amount of wood incorporated into the treated area, for mitigation of riprap, is equal to the number of whole trees whose cumulative summation of rootwad diameters is equal to 80% of linear-feet of treated streambank.

h. **Engineered log jams (ELJ).** ELJs are structures composed of LW with at least three key members and incorporating the use of any mechanical anchoring system (*i.e.*, rebar, rope, angular or large rock, *etc.*). Native soil, simulated streambed and bank materials, wood, or buttressing with adjacent trees, are not mechanical anchoring systems. ELJs are designed to redirect flow, provide roughness, and provide stability to adjacent streambed and banks or downstream reaches, while providing valuable fish and wildlife habitat.

i. **NMFS fish passage review and approval.** NMFS will review proposed ELJ projects.

ii. ELJs will be patterned, to the greatest degree possible, after stable natural log jams.

iii. Stabilizing or key pieces of LW will be intact and solid (little decay). If possible, acquire LW with untrimmed rootwads to provide functional refugia habitat for fish.

i. If LW mechanical anchoring is required, a variety of methods may be used. These include large angular rock, buttressing the wood between adjacent trees, the use of manila, sisal or other biodegradable ropes for lashing connections. If hydraulic conditions warrant use of structural connections, rebar pinning or bolted connections, may be used. Use of cable is not covered by this opinion.

j. When a hole in the channel bed caused by local scour will be filled with rock to prevent damage to a culvert, road, or bridge foundation, the amount of rock will be limited to the minimum necessary to protect the integrity of the structure.

k. When a footing, facing, head wall, or other protection will be constructed with rock to prevent scouring or down-cutting of, or fill slope erosion or failure at, an existing culvert or bridge, the amount of rock used will be limited to the minimum necessary to protect the integrity of the structure. Whenever feasible, include soil and woody vegetation as a covering and throughout the structure.

42. Road Maintenance, Rehabilitation and Replacement

a. All maintenance and rehabilitation actions shall observe applicable criteria detailed in the most recent version of NMFS fish passage criteria

i. Projects affecting fish passage shall adhere to industry design standards found in the most recent version of any of the following:

1. *Water Crossings Design Guidelines* (Barnard *et al.* 2013)²⁵
2. *Part XII, Fish Passage Design and Implementation, Salmonid Stream Habitat Restoration Manual* (California Department of Fish and Game 2009)²⁶
3. *Stream Simulation: An Ecological Approach to Providing Passage for Aquatic Organisms at Road-Stream* (USDA-Forest Service 2008)²⁷
4. Or other design references approved by NMFS.

ii. Routine road surface, culvert and bridge maintenance activity will be completed in accordance with the *ODOT Routine Road Maintenance: Water Quality and Habitat Guide Best Management Practices* (ODOT 2009) or the most recent version approved by NMFS, unless maintenance activities and practices in that manual conflict with PDC in this opinion.

1. Any conflict between ODOT (2009) and this opinion (e.g., stormwater management for maintenance yards, erosion repair related to use of riprap, dust abatement, and use of pesticides) will be resolved in favor of PDC in this opinion.

b. Grade stabilization

i. Grade control materials may include both rock and LW. Material shall not in any part consist of gabion baskets, sheet piles, concrete, articulated concrete blocks, or cable anchors.

ii. Grade control shall be provided using morphologically-appropriate constructed riffles for riffle-pool morphologies, rough constructed riffles/ramps for plane bed morphologies, wood/debris jams, rock bands, and boulder weirs for step-pool morphologies, and roughened channels for cascade morphologies.

iii. LW placements and ELJs may be used to control grade individually or together with other grade control methods by simulating natural log jams and debris accumulation that traps sediment and creates forced, riffle-pool, step-pool, or cascade-pool morphologies.

²⁵ <http://wdfw.wa.gov/publications/01501/>

²⁶ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=12512>

²⁷ http://stream.fs.fed.us/fishxing/aop_pdfs.html

- iv. Stream banks and bed shall be designed to be immobile at the design event to reduce undermining and flanking.
- v. The crest of channel spanning structures will be slightly sloped on either side, with the low point in the center, to direct flows to the middle of channel and away from streambanks. Install these structures low in relation to channel dimensions so that they are completely overtopped during channel-forming flow events (approximately a 1.0- to 1.5-year flow event).
- vi. Construct boulder weir structures in a 'V' or 'U' shape, oriented with the apex upstream.
- vii. Key all structures into the streambed at a depth which minimizes structure undermining due to scour, at least 2.5 times their exposure height, or the Lower Vertical Adjustment Potential (LVAP) line with an offset of 2 times D_{90} , whichever is deeper.
 - 1. LVAP, and 2 times D_{90} offset, as calculated in *Stream Simulation: An ecological approach to providing passage for aquatic organisms at road crossings* (USDA-Forest Service 2008).
- viii. Structures should be keyed into both banks—if feasible greater than 8 feet.
- ix. If several drop structures will be used in series, space them at the appropriate distances to promote fish passage of target species and life histories. Incorporate NMFS (2011a) fish passage criteria (jump height, pool depth, etc.) in the design of drop structures.
- x. Recommended spacing for boulder weirs should be no closer than the net drop divided by the channel slope (for example, a one-foot high step structure designed with a project slope of two-percent gradient will have a minimum spacing of 50-feet [$1/0.02$]). Maximum project slope for boulder weir designs is 5%.
- xi. A series of short steep rough ramps/chutes, cascades, or roughened channel type structures, broken up by energy dissipating pools, are required where project slope is greater than 5%.
- c. Rock Structures
 - i. Rock structures will be constructed out of a mix of well-graded boulder, cobble, and gravel, including the appropriate level of fines, to allow for compaction and sealing to ensure minimal loss of surface flow through the newly placed material.
 - ii. Rock sizing depends on the size of the stream, maximum depth of flow, plan form, entrenchment, and ice and debris loading.
 - iii. The project designer or an inspector experienced in these structures should be present during installation.
 - iv. To ensure that the structure is adequately sealed, no sub-surface flow will be present before equipment leaves the site.
 - v. Rock shall be durable and of suitable quality to assure long-term stability in the climate in which it is to be used.
 - i. Where feasible, channel spanning structures should be coupled with LW to improve habitat complexity of riparian areas.
- d. Structure Stabilization

- i. When a footing, facing, head wall, or other protection will be constructed with rock to prevent scouring or down-cutting of, or fill slope erosion or failure at, an existing culvert or bridge, the amount of rock used is limited to the minimum necessary to protect the integrity of the structure. Include soil, vegetation, and wood throughout the structure to the level possible.
- e. Road-stream crossing replacement or retrofit
 - i. Projects shall adhere to industry design standards found in the most recent version any of the following:
 - 1. *Water Crossings Design Guidelines* (Barnard *et al.* 2013)²⁸
 - 2. *Part XII, Fish Passage Design and Implementation, Salmonid Stream Habitat Restoration Manual* (California Department of Fish and Game 2009)²⁹
 - 3. *Stream Simulation: An Ecological Approach to Providing Passage for Aquatic Organisms at Road-Stream* (USDA-Forest Service 2008)³⁰
 - 4. Or other design references approved by NMFS.
 - i. General road-stream crossing criteria
 - 1. Span
 - a. Span is determined by the crossing width at the proposed streambed grade.
 - b. Single span structures will maintain a clear, unobstructed opening above the general scour elevation that is at least as wide as 1.5 times the active channel width.³¹
 - c. Multi-span structures will maintain clear, unobstructed openings above the general scour elevation (except for piers or interior bents) that are at least as wide as 2.2 times the active channel width.
 - d. Entrenched streams: If a stream is entrenched (entrenchment ratio of less than 1.4), the crossing width will accommodate the flood prone width. Flood prone width is the channel width measured at twice the maximum bankfull depth (Rosgen 1996).
 - e. Minimum structure span is 6 feet.
 - 2. Bed Material
 - a. Install clean alluvium with similar angularity as the natural bed material, no crushed rock.
 - b. Bed material shall be designed based on the native particle size distribution of the adjacent channel or reference reach, as quantified by a pebble count.
 - c. Rock band designs as detailed in *Water Crossings Design Guidelines* (Barnard *et al.* 2013) are authorized.
 - d. Bed material in systems where stream gradient exceeds 3% may be conservatively sized to resist movement.

²⁸ <http://wdfw.wa.gov/publications/01501/>

²⁹ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=12512>

³⁰ http://stream.fs.fed.us/fishxing/aop_pdfs.html

³¹ Active channel width means the stream width measured perpendicular to stream flow between the OHW lines, or at the channel bankfull elevation if the OHW lines are indeterminate. This width includes the cumulative active channel width of all individual side- and off-channel components of channels with braided and meandering forms, and measure outside the area influence of any existing stream crossing, e.g., five to seven channel widths upstream and downstream.

3. Scour Prism

a. Designs shall maintain the general scour prism, as a clear, unobstructed opening (*i.e.*, free of any fill, embankment, scour countermeasure, or structural material to include abutments, footings, and culvert inverts). No scour or stream stability countermeasure may be applied above the general scour elevation.³²

a. The lateral delineation of the scour prism is defined by the criteria span.

b. The vertical delineation of the scour prism is defined by the Lower Vertical Adjustment Potential (LVAP) with an additional offset of 2 times D_{90} , as calculated in *Stream Simulation: An ecological approach to providing passage for aquatic organisms at road crossings* (USDA-Forest Service 2008).

b. When bridge abutments or culvert footings are set back beyond the applicable criteria span they are outside the scour prism.

4. Embedment

a. All abutments, footings, and inverts shall be placed below the thalweg a depth of 3 feet, or the LVAP line with an offset of 2 times D_{90} , whichever is deeper.

i. AP, and 2 times D_{90} offset, as calculated in *Stream Simulation: An ecological approach to providing passage for aquatic organisms at road crossings* (USDA-Forest Service 2008).

b. In addition to embedment depth, embedment of closed bottom culverts shall be between 30% and 50% of the culvert rise.

5. Bridges

a. Primary bridge structural elements will be concrete, metal, fiberglass, or untreated timber. The use of treated wood for bridge construction or replacement is not part of this proposed action. The use of treated wood for maintenance and repair of existing wooden bridges is part of the proposed action if in conformance with project design criterion 29.

b. All concrete will be poured in the dry, or within confined waters not connected to surface waters, and will be allowed to cure a minimum of 7 days before contact with surface water as recommended by Washington State Department of Transportation (2010).

c. Riprap may only be placed below bankfull height of the stream when necessary for protection of abutments and pilings. The amount and placement of riprap will not constrict the bankfull flow.

d. Temporary work bridges will also meet the latest version of NMFS (2011a) criteria.

³² For guidance on how to complete bridge scour and stream stability analysis, see Lagasse *et al.* (2012) (HEC-20), Lagasse *et al.* (2001) (HEC-23), Richardson and Davis (2001) (HEC-18), ODOT (2011), and AASHTO (2013).

- iii. The electronic notification for each permanent stream crossing replacement will contain the following:
 - 1. Site sketches, drawings, aerial photographs, or other supporting specifications, calculations, or information that is commensurate with the scope of the action, that show the active channel, the 100-year floodplain, the functional floodplain, any artificial fill within the project area, the existing crossing to be replaced, and the proposed crossing.
 - 2. A completed scour and stream stability analysis for any crossing that includes scour or stream stability countermeasures within the crossing opening that shows the general scour elevation and the local scour elevation for any pier or interior bent.
 - 3. The name, address, and telephone number of a person responsible for designing this part of the action that NMFS may contact if additional information is necessary to complete the effects analysis.
- f. **NMFS fish passage review and approval.** The Corps will not issue a permit to install, replace, or improve a road-stream crossing, step structure, fish ladder, or projects containing grade control, stream stability, or headcut countermeasures, until the action has been reviewed and approved by NMFS for consistency with NMFS's fish passage criteria (NMFS 2011a).

43. Utility Line Stream Crossings

- a. Design utility line stream crossings in the following priority:
 - i. Aerial lines, including lines hung from existing bridges.
 - ii. Directional drilling, boring and jacking that spans the channel migration zone and any associated wetland.
 - iii. Trenching – this method is restricted to intermittent streams and may only be used when the stream is naturally dry, all trenches will be backfilled below the OHW line with native material and capped with clean gravel suitable for fish use in the project area.
- b. Align each crossing as perpendicular to the watercourse as possible. Ensure that the drilled, bored or jacked crossings are below the total scour prism.
- c. Any large wood displaced by trenching or plowing will be returned as nearly as possible to its original position, or otherwise arranged to restore habitat functions.
- d. Any action involving a stormwater outfall will meet the stormwater management criteria.³³
- e. NMFS will review new or upgraded stormwater outfalls.

³³ The most efficient way for an applicant or the Corps to prepare and submit a stormwater management plan for NMFS' review is to attach a completed *Checklist for Submission of a Stormwater Management Plan* (the *Checklist*, ODEQ updated 2012, or the most recent version) with the electronic notification when it is sent to the SLOPES mailbox. However, stormwater conveyance to a DEQ permitted Municipal Separate Storm Sewer System (MS4) or consistency with any other program acknowledged by DEQ as adequate for stormwater management will not meet the requirements of this opinion unless NMFS determines that the facility accepting the stormwater will provide a level of treatment that is equivalent to that called for in this opinion. The *Checklist* and guidelines for its use are available from NMFS or the ODEQ in Portland Oregon. The latest version of the *Checklist* is also available online in a portable document format (pdf) through the ODEQ Water Quality Section 401 certification webpage (ODEQ 2014) at <http://www.deq.state.or.us/wq/sec401cert/process.htm#add> (see "Post Construction Stormwater Management Plan").

Action Completion Reporting. It is the applicant's responsibility to submit this form to the Corps within 60 days of completing all work below ordinary high water (OHW). Upon receipt, the Corps will resubmit this form with the Action Completion Report portion completed to NMFS at slopes.nwr@noaa.gov. If it is a Corps project, the Corps shall complete and submit this form within 60 days of completing the project.

Major hazard response reporting. It is the applicant's responsibility to submit this form to the Corps within 30 days of completing all work below OHW. Upon receipt, the Corps will resubmit this form with the Action Completion Report portion completed to NMFS at slopes.nwr@noaa.gov. If it is a Corps project, the Corps shall complete and submit this form within 30 days of completing the project.

Fish Salvage Reporting. It is the applicant's responsibility to submit this form to the Corps within 60 days of completing a capture and release as part of an action completed under SLOPES V Transportation. Upon receipt, the Corps will resubmit this form with the Fish Salvage Report portion completed with the following information to NMFS at slopes.nwr@noaa.gov. If it is a Corps project, the Corps shall complete and submit this form within 60 days of completing fish salvage operations.

1. ACTION COMPLETION REPORT

The applicant shall submit this form to the Corps within 60 days of completing all work below ordinary high water (OHW). The Corps shall submit this form to NMFS at slopes.nwr@noaa.gov upon receipt from the applicant. If it is a Corps project, the Corps shall submit this form within 60 days of completing all work below OHW.

Actual Start and End Dates for the Completion of In-water Work:	Start:	End:
Actual Linear-feet of Riparian and/or Channel Modification within 150 feet of OHW		
Actual Acreage of Herbicide Treatment		
Turbidity Monitoring/Sampling Completed	<input type="checkbox"/> Yes (include details below)	<input type="checkbox"/> No

Please include the following:

1. Attach as-built drawings for any action involving a riprap revetment, stormwater management facility, or a bridge rehabilitation or replacement.
2. Attach photos of habitat conditions before, during, and after action completion.
3. Describe compliance with fish screen criteria, as defined below, for any pump used.
4. Summarize results of pollution and erosion control inspections, including any erosion control failure, contaminant release, and correction effort.
5. Describe number, type and diameter of any pilings removed or broken during removal.
6. Describe any riparian area cleared within 150 feet of OHW.
7. Describe turbidity monitoring (visual or by turbidimeter) including dates, times and location of monitoring and any exceedances and steps taken to reduce turbidity observed.
8. Describe site restoration.

If the project was a Major Hazard Response, ALSO include the following:

1. Name of the major hazard event.
2. Type of major hazard.
3. Name of the public transportation district manager that declared the response necessary.
4. NMFS staff contacted, with date and time of contact.
5. Description of the amount and type of riprap or other material used to repair a culvert, road, or bridge.
6. Assess the effects of the initial response to listed species and critical habitats.
7. Summary of the design criteria followed and not followed.
8. Remedial actions necessary to bring the initial response into compliance with design criteria in this opinion.

2. FISH SALVAGE REPORT

If applicable: The applicant shall submit a completed Fish Salvage Report and Fish Salvage Data Table (see below) to the Corps within 60 days of completing a capture and release as part of an action completed under SLOPES V Transportation. The Corps will submit the report to NMFS at slopes.nwr@noaa.gov upon receipt from the applicant. If it is a Corps project, the Corps shall submit this form to NMFS within 60 days of completing a capture and release event.

**Date(s) of Fish Salvage
Operation(s):**

Supervisory Fish Biologist:

Address

Telephone Number

Describe methods that were used to isolate the work area and remove fish

Fish Salvage Data

Water Temperature:

Air Temperature:

Time of Day:

ESA-Listed Species	Number Handled		Number Injured		Number Killed	
	Juvenile	Adult	Juvenile	Adult	Juvenile	Adult
Lower Columbia River Chinook						
Upper Willamette River Chinook						
Upper Columbia River spring-run Chinook						
Snake River spring/summer run Chinook						
Snake River fall-run Chinook						
Chinook, unspecified						
Columbia River chum						
Lower Columbia River Coho						
Oregon Coast Coho						
Southern Oregon/Northern California Coasts Coho						
Snake River sockeye						
Lower Columbia River steelhead						
Upper Willamette River steelhead						
Middle Columbia River steelhead						
Upper Columbia River steelhead						
Snake River Basin steelhead						
Steelhead, unspecified						
Southern green sturgeon						
Eulachon						

3. SITE RESTORATION/ COMPENSATORY MITIGATION

By December 31 of any year in which the Corps approves that the site restoration or compensatory mitigation is complete, the Corps, will submit a complete a Site Restoration/Compensatory Mitigation Reporting Form, or its equivalent, with the following information to NMFS at slopes.nwr@noaa.gov.

Describe location of mitigation or restoration work.

Summarize the results of mitigation or restoration work completed.

PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD: August 9, 2017

B. NAME AND ADDRESS OF PERSON REQUESTING PJD: Devin Patterson
Clackamas County DTD 2051 Kaen Road Oregon City, OR 97045

C. DISTRICT OFFICE, FILE NAME, AND NUMBER: CENWP-OD-G, Amisigger Road
Brudge Scour, NWP-2017-168

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:
(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AT DIFFERENT SITES)

State: Oregon County: Clackamas City: Barton

Center coordinates of site (lat/long in degree decimal format):

Latitude: 45.390833 ° North, Longitude: -122.390277° West

Universal Transverse Mercator: (see Lat/Long above)

Name of nearest waterbody: Deep Creek

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☒ Office (Desk) Determination.
☐ Field Determination.

Date: May 30, 2017
Date(s): *Date*

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION.

Site Number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimate amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resource (i.e., wetland vs. non-wetland)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
Deep Creek	45.390833	-122.390277	0.2 acre	non-wetland waters	Section 404
				---	---
				---	---
				---	---
				---	---
				---	---

- 1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.
- 2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "preconstruction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there "*may be*" waters of the U.S. and/or that there "*may be*" navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for PJD (check all that apply)

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:

- ☒ Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:
Map:
- ☐ Data sheets prepared/submitted by or on behalf of the PJD requestor.
 - ☐ Office concurs with data sheets/delineation report.
 - ☐ Office does not concur with data sheets/delineation report. Rationale:
- ☐ Data sheets prepared by the Corps:
- ☐ Corps navigable waters' study:
- ☒ U.S. Geological Survey Hydrologic Atlas:
 - ☒ USGS NHD data
 - ☐ USGS 8 and 12 digit HUC maps.
- ☐ U.S. Geological Survey map(s). Cite scale & quad name:
- ☐ Natural Resources Conservation Service Soil Survey. Citation:
- ☐ National wetlands inventory map(s). Cite name:
- ☐ State/local wetland inventory map(s):
- ☐ FEMA/FIRM map(s):
- ☐ 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- ☒ Photographs ☒ Aerial (Name & Date): Google Earth
or ☐ Other (Name & Date):
- ☐ Previous determination(s). File no. and date of response letter:
- ☐ Other information (please specify):

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

Signature and date of Regulatory
staff member completing PJD

Signature and date of person requesting
PJD (REQUIRED, unless
obtaining the signature is impracticable)¹

¹ Districts may establish timeframes for requester to return signed PJD forms. If the requester does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Clackamas County DTD		File Number: NWP-2017-186	Date: August 16, 2017
Attached is:			See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A	
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B	
	PERMIT DENIAL	C	
	APPROVED JURISDICTIONAL DETERMINATION	D	
X	PRELIMINARY JURISDICTIONAL DETERMINATION	E	

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found in Corps regulations at 33 CFR Part 331, or at <http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/FederalRegulation.aspx>

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

Mr. Shawn H. Zinszer
U.S. Army Corps of Engineers
Portland District Office
PO Box 2946

Portland, OR 97208-2946 Telephone: (503)808-4373

If you only have questions regarding the appeal process you may also contact:

Melinda M. Witgenstein, Regulatory Appeals Review Officer
U.S. Army Corps of Engineers, Northwestern Division
P.O. Box 2870
Portland, OR 97208-2870 Telephone: (503) 808-3888

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or agent.

Date:

Telephone number:



US Army Corps
of Engineers®
Portland District

Compliance Certification

1. **Permit Number:** NWP-

2. **Permittee Name:**

3. **County Location:**

Upon completing the activity authorized by the permit, please complete the sections below, sign and date this certification, and return it to the U.S. Army Corps of Engineers, Portland District, Regulatory Branch. The certification can be submitted by email at cenwp.notify@usace.army.mil or by regular mail at the following address:

U.S. Army Corps of Engineers
CENWP-OD-GL
P.O. Box 2946
Portland, OR 97208-2946

4. **Corps-required Compensatory Mitigation (see permit special conditions):**

a. Mitigation Bank / In-lieu Fee Credit Transaction Documents:

☐ Not Applicable ☐ Submitted ☐ Enclosed

b. Permittee-responsible mitigation (e.g., construction and plantings) has been constructed (not including future monitoring). As-built report:

☐ Not Applicable ☐ Submitted ☐ Enclosed

5. **Endangered Species Act – Standard Local Operating Procedures (SLOPES)**
(see permit special conditions):

a. SLOPES Action Completion Report:

☐ Not Applicable ☐ Submitted ☐ Enclosed

b. SLOPES Fish Salvage Report:

☐ Not Applicable ☐ Submitted ☐ Enclosed

c. SLOPES Site Restoration / Compensatory Mitigation Report:

☐ Not Applicable ☐ Submitted ☐ Enclosed

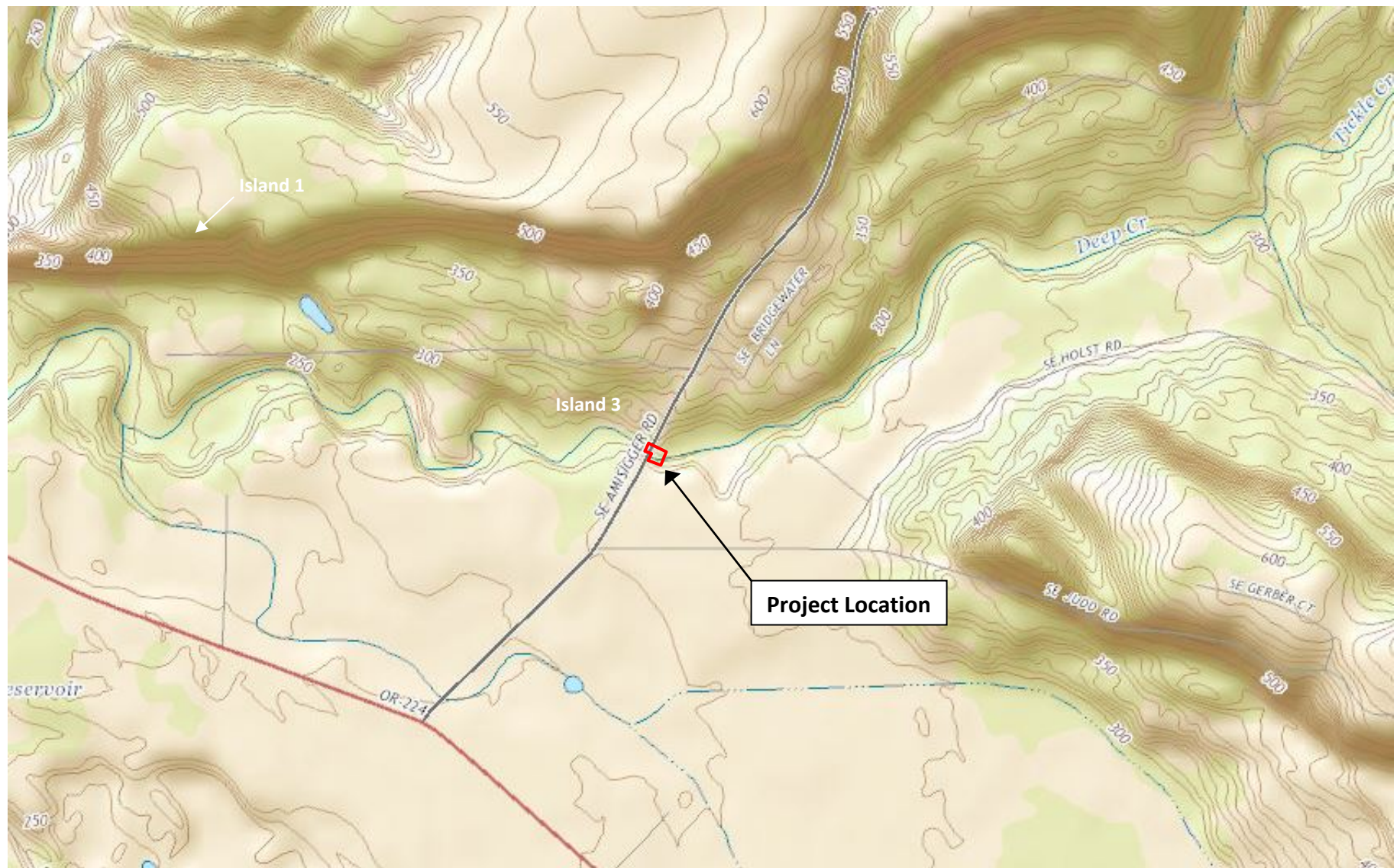
I hereby certify the work authorized by the above-referenced permit has been completed in accordance with all of the permit terms and conditions.

Signature of Permittee

Date

NWP-

Enclosure



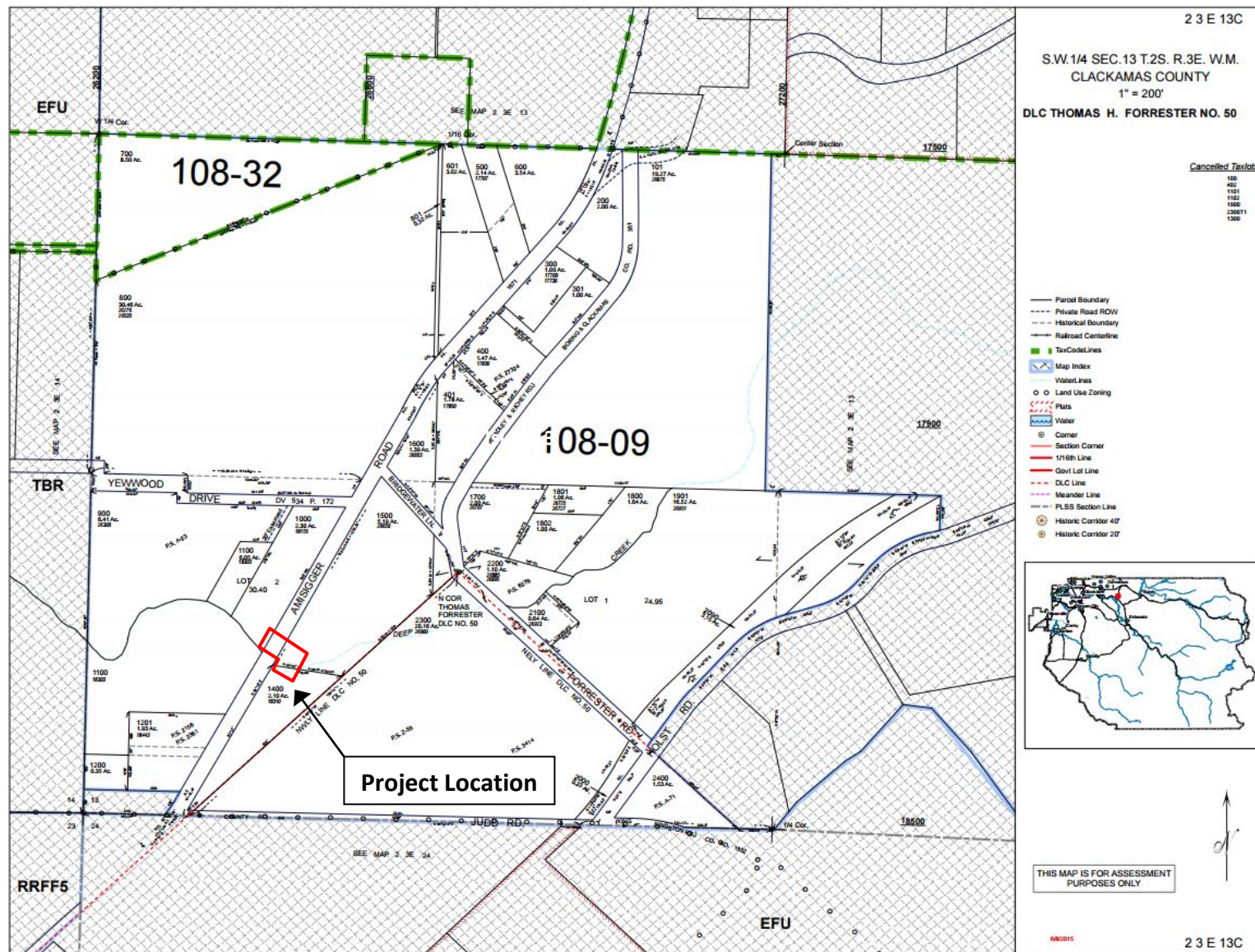
5124
1/7/16




Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

General Location and Topography
Deep Creek (Amisigger Rd) Bridge Scour Protection Project
(USGS: Boring, OR 2015)

FIGURE
1



5124
1/7/16


Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Tax Lot Map
Deep Creek (Amisigger Rd) Bridge Scour Protection Project
(Ormap.net 2015)

FIGURE
2



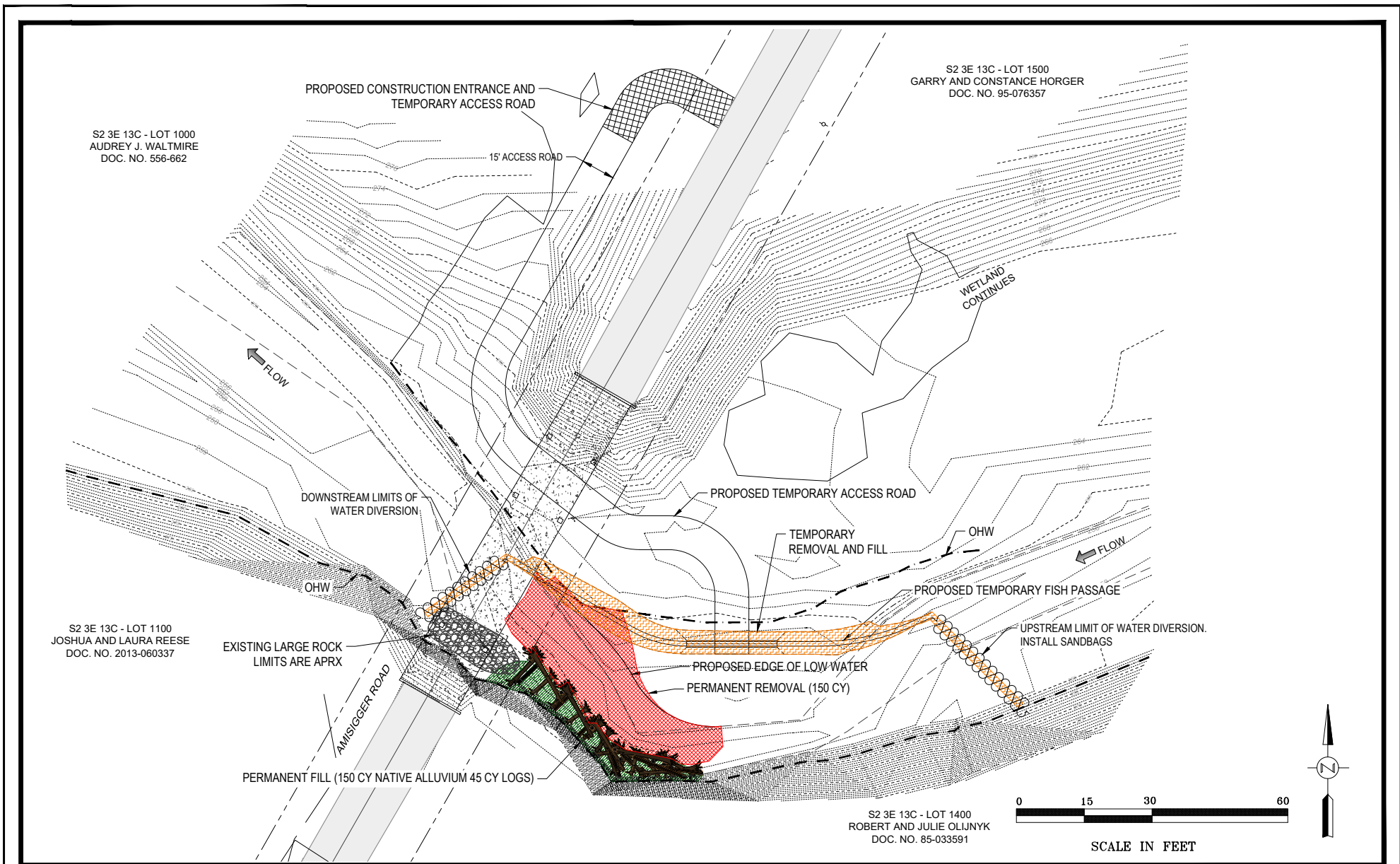
5124
1/7/16



Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, OR 97070

Aerial Photograph
Deep Creek (Amisigger Rd) Bridge Scour Protection Project
(Google earth 2015)

FIGURE
3

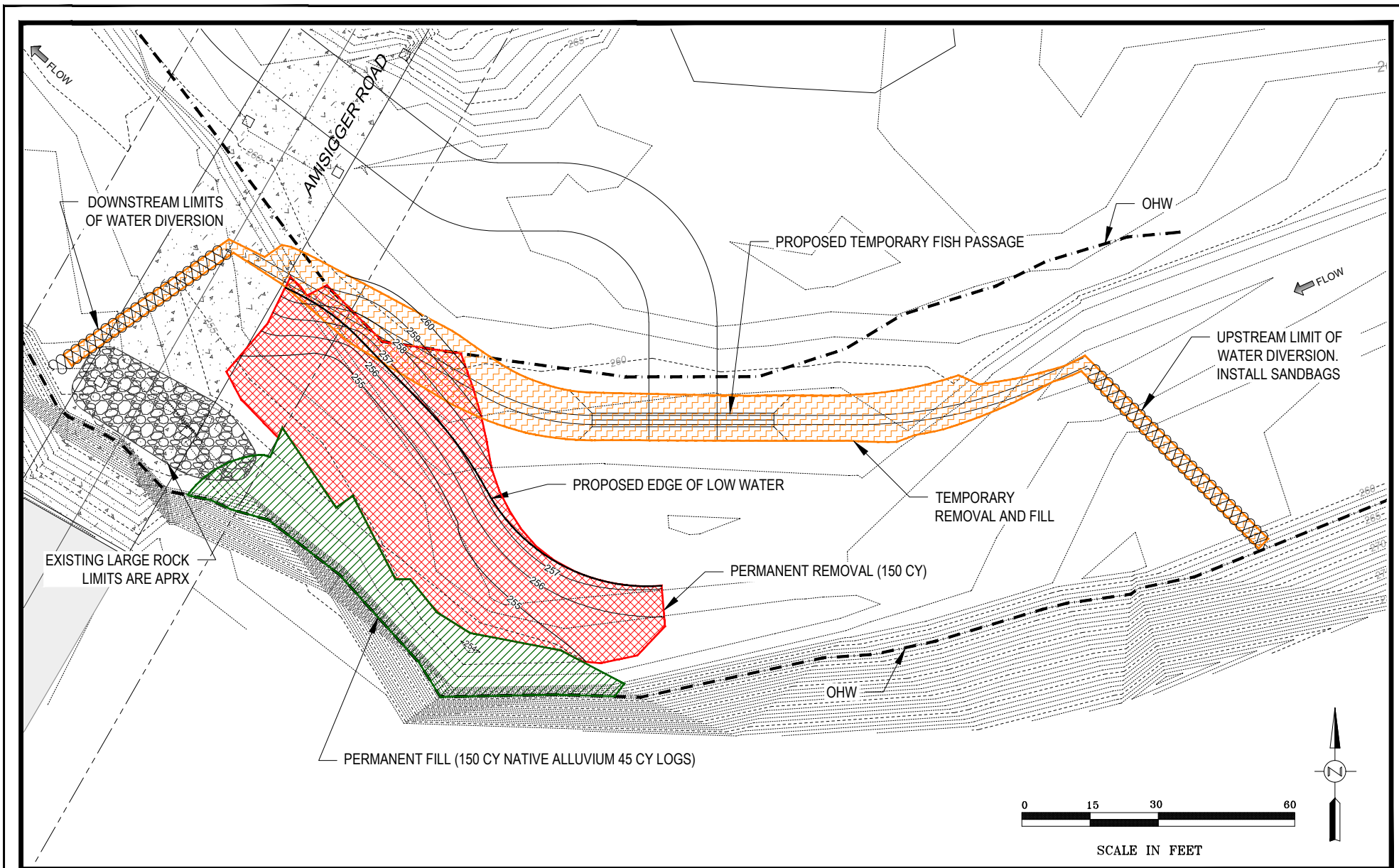


Plans Provided by Cardno.

Site Plan - Overview
 Amisigger Road - Deep Creek Revetment - Clackamas County, Oregon

FIGURE
4

4-12-2017

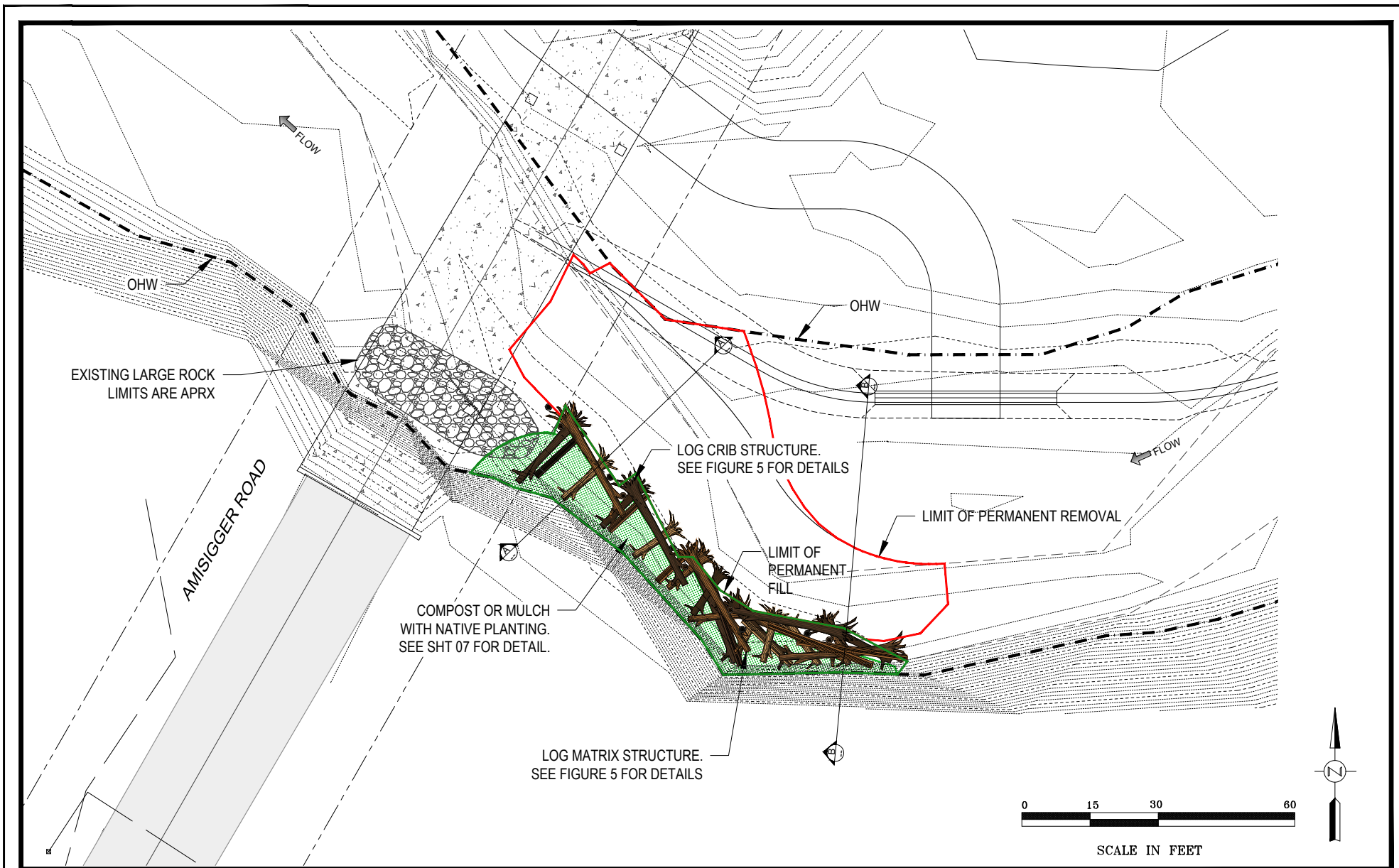


Plans Provided by Cardno.

Site Plan Impacts - Cut/Fill
Amisigger Road - Deep Creek Revetment - Clackamas County, Oregon

FIGURE
4A

4-12-2017



Plans Provided by Cardno.

Log Matrix Structure
Amisiger Road - Deep Creek Revetment - Clackamas County, Oregon

FIGURE
4B

4-12-2017

NOTES:

- LOGS AND LOGS WITH ROOT WADS SHALL BE DOUGLAS FIR, OR APPROVED EQUAL. SEE SPECIAL PROVISIONS.
- CARE SHALL BE TAKEN WHEN HANDLING LOG TO MINIMIZE DAMAGE SUCH AS ABRASION, SPLITTING, CRUSHING AND SHEARING.
- EACH LARGE TOP LOG SHALL BE CONNECTED IN AT LEAST TWO PLACES WITH THREADED ROD TO ADJACENT LOGS AND/OR PILES OR AS APPROVED BY THE ENGINEER.
- RODS SHALL BE 1-INCH DIAMETER MINIMUM FULLY THREADED STEEL RODS (ASTM A193, GRADE B7) WITH STEEL NUTS (ASTM A194, GRADE 2H) AND 4-INCH WASHERS (ASTM F436) ON EACH END. VISIBLE PORTIONS OF HARDWARE SHALL BE GREY OR OTHER APPROVED NEUTRAL COLOR. RODS SHALL BE FLUSH CUT AT THE NUTS AND SHARP EDGES GROUND FLUSH.
- ALL EXPOSED LOG ENDS SHALL HAVE BROKEN ENDS RATHER THAN SAW CUT ENDS.
- OVERALL NEW CHANNEL EXCAVATION IS APPROXIMATE AND IS TO BE EQUAL TO TOTAL COMBINED FILL OF LOG CRIB AND LOG MATRIX STRUCTURES.
- FOR VERTICAL LOGS, REMOVE BARK AND TRIM AS NEEDED ON END TO BE INSERTED INTO HOLE. THIS END MUST BE STRAIGHT.
- PLACE 2" THICKNESS COMPOST OR MULCH. FURNISH AND INSTALL NATIVE PLANTS IN ACCORDANCE WITH SCHEDULE ON SHEET 10

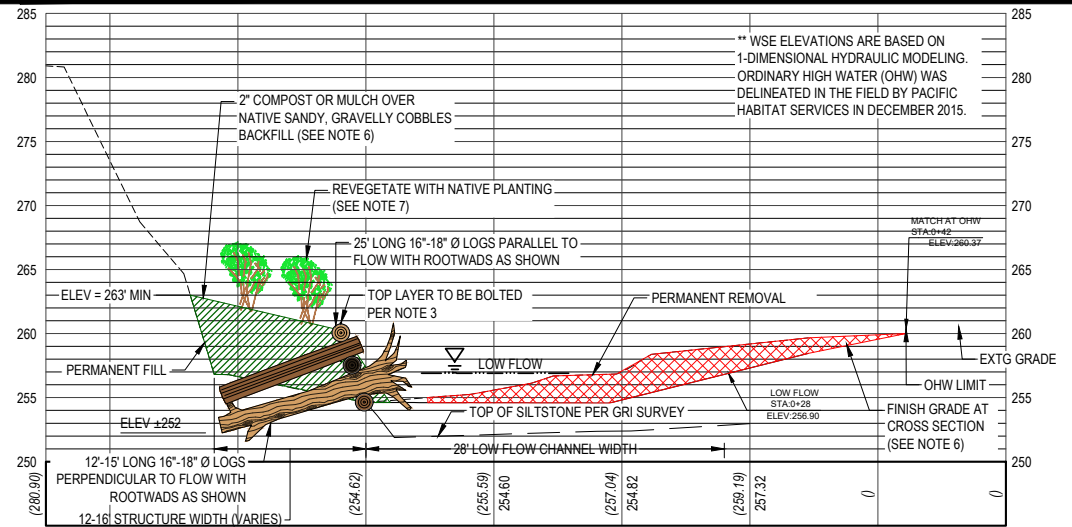
1 GENERAL LOG STRUCTURE NOTES

LOG CRIB LOG SCHEDULE						
TYPE	ORIENTATION	DIAMETER	LENGTH	BRANCHES	ROOTWAD	NUMBER
HORIZONTAL TYPE 1	PARALLEL TO FLOW	16"-18"	25'	NO	YES	4
HORIZONTAL TYPE 1	PARALLEL TO FLOW	16"-18"	25'	NO	NO	2
HORIZONTAL TYPE 2	PERPENDICULAR TO FLOW	16"-18"	12'-15'	NO	YES	4
HORIZONTAL TYPE 2	PERPENDICULAR TO FLOW	16"-18"	12'-15'	NO	NO	3
X LOGS	VERTICAL (±15 DEG)	12"-13"	20'	NO	NO	6
SLASH	NA	VARIES	VARIES	-	-	15CY

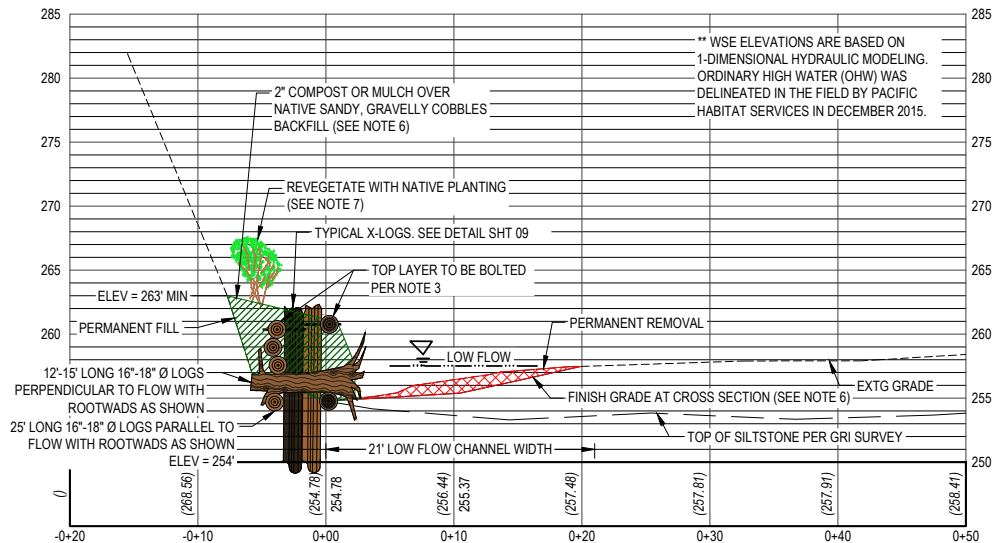
2 LOG CRIB - LOG SCHEDULE

LOG MATRIX LOG SCHEDULE						
TYPE	ORIENTATION	DIAMETER	LENGTH	BRANCHES	ROOTWAD	NUMBER
HORIZONTAL TYPE 1	PARALLEL TO FLOW	16"-18"	25'	NO	YES	6
HORIZONTAL TYPE 1	PARALLEL TO FLOW	16"-18"	25'	NO	NO	4
HORIZONTAL TYPE 2	PERPENDICULAR TO FLOW	16"-18"	12'-15'	NO	YES	7
HORIZONTAL TYPE 2	PERPENDICULAR TO FLOW	16"-18"	12'-15'	NO	NO	1
X LOGS	VERTICAL (±15 DEG)	12"-13"	20'	NO	NO	4
SLASH	NA	VARIES	VARIES	-	-	20 CY

3 LOG MATRIX - LOG SCHEDULE



A LOG CRIB - ELEVATION



B LOG MATRIX - ELEVATION



Plans Provided by Cardno.

Log Structure Detail
Amisigger Road - Deep Creek Revetment - Clackamas County, Oregon

FIGURE
5

4-12-2017

Department of State Lands
775 Summer Street, Suite 100
Salem, OR 97301-1279
☎ 503-986-5200

NOTICE:
This Permit
Must Be On
Work Site

Permit No.: 60122-RF
Permit Type: Removal/Fill
Waterway: Deep Creek
County: Clackamas
Expiration Date: July 12, 2018

CLACKAMAS COUNTY DTD

IS AUTHORIZED IN ACCORDANCE WITH ORS 196.800 TO 196.990 TO PERFORM THE OPERATIONS DESCRIBED IN THE ATTACHED COPY OF THE APPLICATION, SUBJECT TO THE SPECIAL CONDITIONS LISTED ON ATTACHMENT A AND TO THE FOLLOWING GENERAL CONDITIONS:

1. This permit does not authorize trespass on the lands of others. The permit holder shall obtain all necessary access permits or rights-of-way before entering lands owned by another. For new linear facility projects, the removal-fill activity cannot occur until the permit holder obtains either the landowner's consent, a right, title or interest with respect to the property that is sufficient to undertake the removal or fill activity, or a court order or judgment authorizing the use of the property.
2. This permit does not authorize any work that is not in compliance with local zoning or other local, state, or federal regulation pertaining to the operations authorized by this permit. The permit holder is responsible for obtaining the necessary approvals and permits before proceeding under this permit.
3. All work done under this permit shall comply with Oregon Administrative Rules, Chapter 340; Standards of Quality for Public Waters of Oregon. Specific water quality provisions for this project are set forth on Attachment A.
4. Violations of the terms and conditions of this permit are subject to administrative and/or legal action, which may result in revocation of the permit or damages. The permit holder is responsible for the activities of all contractors or other operators involved in work done at the site or under this permit.
5. Employees of the Department of State Lands (DSL) and all duly authorized representatives of the Director shall be permitted access to the project area at all reasonable times for the purpose of inspecting work performed under this permit.
6. Any permit holder who objects to the conditions of this permit may request a hearing from the Director, in writing, within twenty-one (21) calendar days of the date this permit was issued.
7. In issuing this permit, DSL of State Lands makes no representation regarding the quality or adequacy of the permitted project design, materials, construction, or maintenance, except to approve the project's design and materials, as set forth in the permit application, as satisfying the resource protection, scenic, safety, recreation, and public access requirements of ORS Chapters 196, 390, and related administrative rules.
8. Permittee shall defend and hold harmless the State of Oregon, and its officers, agents, and employees from any claim, suit, or action for property damage or personal injury or death arising out of the design, material, construction, or maintenance of the permitted improvements.
9. Authorization from the U.S. Army Corps of Engineers may also be required.

NOTICE: If removal is from state-owned submerged and submersible land, the permittee shall comply with leasing and royalty provisions of ORS 274.530. If the project involves creation of new lands by filling on state-owned submerged or submersible lands, you shall comply with ORS 274.905 to 274.940 if you want a transfer of title; public rights to such filled lands are not extinguished by issuance of this permit. This permit does not relieve the permittee of an obligation to secure appropriate leases from DSL of State Lands, to conduct activities on state-owned submerged or submersible lands. Failure to comply with these requirements may result in civil or criminal liability. For more information about these requirements, please contact Department of State Lands, 503-986-5200.

Lori Warner-Dickason, Northern Region Manager
Aquatic Resource Management
Oregon Department of State Lands

Lori Warner-Dickason
Authorized Signature

July 12, 2017
Date Issued

ATTACHMENT A

Permit Holder: Clackamas County DTD

Project Name: Deep Creek Bridge Scour Protection

Special Conditions for Removal/Fill Permit No. 60122-RF

READ AND BECOME FAMILIAR WITH CONDITIONS OF YOUR PERMIT.

The project site may be inspected by the Department of State Lands (DSL) as part of our monitoring program. DSL has the right to stop or modify the project at any time if you are not in compliance with these conditions. A copy of this permit shall be available at the work site whenever authorized operations are being conducted.

1. **Responsible Party:** By signature on the application, Devin Patterson is acting as the representative of Clackamas County DTD. By proceeding under this permit, Clackamas County DTD agrees to comply with and fulfill all terms and conditions of this permit, unless the permit is officially transferred to another party as approved by DSL.
2. **Authorization to Conduct Removal and/or Fill:** This permit authorizes the placement of up to 225 cubic yards and removal of up to 120 cubic yards of material in T02S R03E Section 13, Tax Lot(s) 1000, 1400, 1500, within Deep Creek, in Clackamas County, as described in the attached revised permit application, map and drawings, received June 21, 2017. In the event information in the application conflicts with these permit conditions, the permit conditions prevail. See Attachment B for project location(s).
3. **Work Period in Jurisdictional Areas:** Fill or removal activities below the ordinary high water elevation of Deep Creek shall be conducted between July 15 and August 31, unless otherwise coordinated with Oregon Department of Fish and Wildlife and approved in writing by DSL. Work is prohibited when fish eggs are present within the reach where the authorized activities are being conducted.
4. **Changes to the Project or Inconsistent Requirements from Other Permits:** It is the permittee's responsibility to ensure that all state, federal and local permits are consistent and compatible with the final approved project plans and the project as executed. Any changes made in project design, implementation and/or operating conditions to comply with conditions imposed by other permits resulting in removal/fill activity must be approved by DSL prior to implementation.
5. **DSL May Halt or Modify:** DSL retains the authority to temporarily halt or modify the project or require rectification in case of unforeseen damage.
6. **DSL May Modify Conditions Upon Permit Renewal:** DSL retains the authority to modify conditions upon renewal, as appropriate, pursuant to the applicable rules in effect at the time of the request for renewal or to protect waters of this state.

Pre-Construction

7. **Stormwater Management Approval Required Before Beginning Work:** Prior to the start of construction, the permittee shall obtain a National Pollution Discharge Elimination System

(NPDES) permit from the Oregon Department of Environmental Quality (DEQ), if one is required by DEQ.

8. **Pre-construction Resource Area Fencing or Flagging:** Prior to any site grading, the boundaries of the avoided wetlands, waterways, and riparian areas adjacent to the project site must be surrounded by noticeable construction fencing or flagging. The marked areas must be maintained during construction of the project and be removed immediately upon project completion.

General Construction Conditions

9. **Water Quality Certification:** The Department of Environmental Quality (DEQ) may evaluate this project for a Clean Water Act Section 401 Water Quality Certification (WQC). If the evaluation results in issuance of a Section 401 WQC, that turbidity condition will govern any allowable turbidity exceedance and monitoring requirements.
10. **Erosion Control Methods:** The following erosion control measures (and others as appropriate) shall be installed prior to construction and maintained during and after construction as appropriate, to prevent erosion and minimize movement of soil into waters of this state.
- a. All exposed soils shall be stabilized during and after construction in order to prevent erosion and sedimentation.
 - b. Filter bags, sediment fences, sediment traps or catch basins, leave strips or berms, or other measures shall be used to prevent movement of soil into waterways and wetlands.
 - c. To prevent erosion, use of compost berms, impervious materials or other equally effective methods, shall be used to protect soil stockpiled during rain events or when the stockpile site is not moved or reshaped for more than 48 hours.
 - d. Unless part of the authorized permanent fill, all construction access points through, and staging areas in, riparian and wetland areas shall use removable pads or mats to prevent soil compaction. However, in some wetland areas under dry summer conditions, this requirement may be waived upon approval by DSL. At project completion, disturbed areas with soil exposed by construction activities shall be stabilized by mulching and native vegetative plantings/seeding. Sterile grass may be used instead of native vegetation for temporary sediment control. If soils are to remain exposed more than seven days after completion of the work, they shall be covered with erosion control pads, mats or similar erosion control devices until vegetative stabilization is installed.
 - e. Where vegetation is used for erosion control on slopes steeper than 2:1, a tackified seed mulch shall be used so the seed does not wash away before germination and rooting.
 - f. Dredged or other excavated material shall be placed on upland areas having stable slopes and shall be prevented from eroding back into waterways and wetlands.
 - g. Erosion control measures shall be inspected and maintained as necessary to ensure their continued effectiveness until soils become stabilized.
 - h. All erosion control structures shall be removed when the project is complete and soils are stabilized and vegetated.
11. **Hazardous, Toxic, and Waste Material Handling:** Petroleum products, chemicals, fresh cement, sandblasted material and chipped paint, wood treated with leachable preservatives or other deleterious waste materials shall not be allowed to enter waters of this state. Machinery refueling is to occur at least 150 feet from waters of this state and confined in a designated area to prevent

spillage into waters of this state. Barges shall have containment system to effectively prevent petroleum products or other deleterious material from entering waters of this state. Project-related spills into waters of this state or onto land with a potential to enter waters of this state shall be reported to the Oregon Emergency Response System (OERS) at 1-800-452-0311.

12. **Federally Listed Endangered or Threatened Species:** When listed species are present, the authorization holder shall comply with the Federal Endangered Species Act. If previously unknown listed species are encountered during construction, all construction activity shall immediately cease and the permit holder shall contact DSL.
13. **Archaeological Resources:** If any archaeological resources and/or artifacts are encountered during construction, all construction activity shall immediately cease. The State Historic Preservation Office shall be contacted (phone: 503-986-0674).
14. **Hazards to Recreation, Navigation or Fishing:** The activity shall be timed so as not to unreasonably interfere with or create a hazard to recreational or commercial navigation or fishing.
15. **Construction Corridor:** There shall be no removal of vegetation or heavy equipment operating or traversing outside the designated construction corridor or footprint (Figures 3-4).
16. **Fluids, Maintenance of Equipment, and Cleaning:** All machinery operated below OHW must use vegetable-based hydraulic fluids, be steam cleaned and inspected for leaks prior to each use, and be diapered to prevent leakage of fuels, oils, or other fluids below OHW. Any equipment found to be leaking fluids must be immediately removed from and kept out of OHW until repaired. Equipment staging, cleaning, maintenance, refueling, and fuel storage must be separated from OHW and wetlands at a sufficient distance to prevent contaminants from entering waters of the state.
17. **Operation of Equipment in the Water:** Heavy equipment may be positioned below ordinary high water or highest measured tide if the area is isolated from the waterway and aquatic organism salvage is completed, as shown in Figure 4 of the application.
18. **Work Area Isolation:** The work area shall be isolated from the water during construction by using a coffer dam or similar structure in accordance with the work area isolation plan in the application. All structures and materials used to isolate the work area shall be removed immediately following construction and water flow returned to pre-construction conditions.
19. **Fish Salvage Required:** Fish must be salvaged from the isolation area. Permits from NOAA fisheries and ODFW Fish Research are required to salvage fish. Fish salvage permit information may be obtained by contacting ODFW Research at 503-947-6254 or Fish.Research@state.or.us
20. **Fish Passage Required:** The project shall meet Oregon Department of Fish and Wildlife requirements for fish passage.
21. **Raising or Redirecting Water:** The project must not cause water to rise or be redirected and result in damage to structures or property on the project site as well as adjacent, nearby, upstream, and downstream of the project site.

22. **Trenching in Wetlands:** During trenching or excavation, the top layer of soil shall be separated from the rest of the excavated material and put back on top when the trench or pit is back-filled. If the native underlying soils are not used as bedding material and a coarser, non-native soil or other material is used, preventative measures such as clay or concrete plugs shall be used so that underground hydraulic piping does not dewater the site and adjacent wetlands.
23. **Temporary Ground Disturbances:** All temporarily disturbed areas shall be returned to original ground contours at project completion, as proposed in the application.

